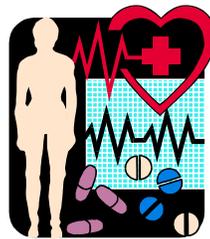




# **ATLANTIC DIVISION SAFETY PROGRAM HANDBOOK**



**Distributed by:**

**Safety Office, Code 09K  
Atlantic Division  
Naval Facilities Engineering Command  
Building N-26, Naval Station  
Norfolk, Virginia 23511-6287**

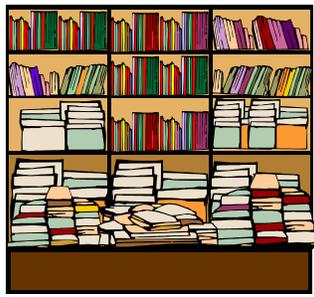
**Prepared by:**

**Martin P. Clark, P.E., CSP**

**Revised May, 2002**

# **FOREWARD**

The intent of this handbook is to pass along information on a variety of safety topics in an informal manner, addressing as many day-to-day subjects as possible. This guidance represents the current thinking of the Atlantic Division Safety Offices, and offers practical advice that may help in safety reviews, meetings, phone consultations, and overall program implementation. Recipients are free to accept any or all of this guidance as deemed advantageous.



Although safety answers are of greatest value when provided promptly, answers are frequently hard to come by due to the vast quantity of applicable safety publications, codes, and standards. In other cases, current safety standards do not specifically address the topic and general information is needed. This Office will consider this Safety Handbook successful to the extent that it provides consolidated safety topic summaries and assists the individual safety office in their day-to-day responsibilities.

Thank you for considering this Handbook for your safety library. Your comments would be appreciated, and should be forwarded to LANTNAVFACENGCOM Code 09K.

**Martin P. Clark, Safety Manager  
Atlantic Division, Naval Facilities Engineering Command  
May, 2002**



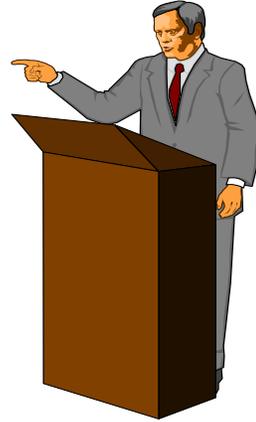
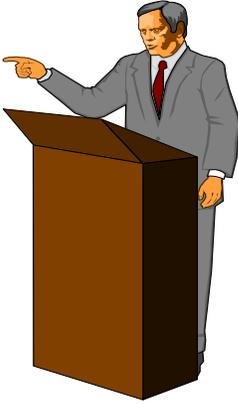
# ATLANTIC DIVISION SAFETY PROGRAM HANDBOOK

## CONTENTS

<u>SAFETY SUBJECT</u>	<u>PAGE</u>
Basic Safety Principles .....	6
Access Walkways .....	8
Acupuncture .....	8
Airport Safety – Accident Avoidance .....	10
Alcohol – Drugs .....	10
Anger Management .....	11
Animal/Car Accident Procedures .....	12
Ankle Injuries .....	13
Anthrax .....	14
Arthritis .....	15
Auto Breakdowns .....	17
Auto Repairs .....	17
Back Injury Prevention .....	18
Back Support Belts .....	19
Battery Charging Rooms .....	20
Bicycle Safety .....	20
Burns .....	22
CPR Training .....	23
Carbon Monoxide .....	24
Carpal Tunnel Syndrome .....	25
Colds .....	25
Color Coding .....	26
Confined Space Safety .....	27
Contact Lenses .....	29
Dehydration .....	30
Dental Care .....	31
Depression .....	32
Diabetes .....	33
Dog Bite Prevention .....	34
Domestic Violence .....	35

Driving Safety . . . . .	36
Electrical Safety . . . . .	40
Electro-magnetic Field Exposures . . . . .	41
Emergency Lights . . . . .	41
Emergency Procedures . . . . .	42
Ergonomics . . . . .	45
Excavation Safety . . . . .	47
Exercise . . . . .	48
Exit Signs . . . . .	49
Eye Protection . . . . .	49
Eyewash/Safety Showers . . . . .	50
Fainting . . . . .	50
Fatigued at Work . . . . .	51
First Aid Kits . . . . .	53
Fitness . . . . .	55
Fitness Center Safety . . . . .	56
Flashlights . . . . .	57
Flammable Liquid Dispensing and Storage . . . . .	57
Floor Waxes . . . . .	58
Foodborne Illness . . . . .	59
Foot Care . . . . .	60
Fueling Safety . . . . .	61
Gallbladder Problems . . . . .	61
Garage Door Safety . . . . .	61
Glass Safety Requirements . . . . .	61
Hammer Safety . . . . .	62
Hand Safety . . . . .	63
Headaches . . . . .	64
Hearing Conservation . . . . .	65
Heart Health . . . . .	67
Heat Stress . . . . .	68
Hedge Trimming Safety . . . . .	69
Hepatitis . . . . .	70
Herbal Remedies . . . . .	71
Hernias . . . . .	72
High Blood Pressure . . . . .	73
HIV/AIDS . . . . .	75
Holiday Safety . . . . .	76
Home Fire-Safety Survey . . . . .	76
Horseback Riding . . . . .	79
Indigestion . . . . .	80
Insect Problems . . . . .	81
Inspections . . . . .	82
Investigation Suggestions . . . . .	84
Kidney Stones . . . . .	86
Knee Problems . . . . .	87
Knife Safety . . . . .	89
Ladders . . . . .	90

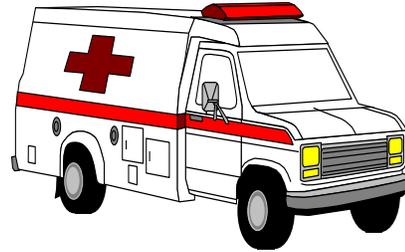
Lawn Mowers . . . . .	91
Lead . . . . .	91
Life Safety . . . . .	92
Lifting Aids . . . . .	93
Lighting Levels . . . . .	93
Liver Facts . . . . .	94
Lyme Disease . . . . .	95
Manhole Covers . . . . .	96
Microwave Ovens . . . . .	97
Moped Safety . . . . .	98
Motion Sickness . . . . .	99
Muscle Cramps . . . . .	100
Neck Care . . . . .	101
New Employee Safety Orientation . . . . .	101
Nose Bleeds . . . . .	102
Nutrition . . . . .	103
Obstacles – Getting Past . . . . .	104
Osteoporosis . . . . .	106
Pain Relief . . . . .	107
Pedestrian Safety . . . . .	108
Personal Protective Equipment (PPE) . . . . .	109
Pink Eye . . . . .	110
Pre-Training Questionnaires . . . . .	111
Prostrate Problems . . . . .	112
Recreation Safety . . . . .	112
Rodent Control and Safeguards . . . . .	114
Safety Committees . . . . .	115
Safety Policy Councils . . . . .	116
Safety Training . . . . .	117
Scissors Safety . . . . .	119
Shoe Facts . . . . .	120
Skateboards/In-line Skates . . . . .	121
Skin Care Safety . . . . .	122
Sleep . . . . .	123
Slips, Trips, & Falls . . . . .	124
Smoke Detectors . . . . .	125
Smoking . . . . .	126
Strains & Sprains . . . . .	128
Stress . . . . .	129
Suicide Prevention . . . . .	130
Temperature/Humidity Preferred Ranges for Office Workers . . . . .	130
Tinnitus . . . . .	131
Vaccinations . . . . .	132
Vein Problems . . . . .	132
Vending Machine Safety . . . . .	133
Weight Loss . . . . .	134
Wellness . . . . .	135
Windy Weather . . . . .	135



## **BASIC SAFETY PRINCIPLES**

- 1. The Safety Program belongs to every Atlantic Division employee, not just to the Safety Office. Every employee is a shareholder in the success of the program.**
- 2. Our Safety Program is functioning at its best when it shows our employees that the Command cares about them.**
- 3. Our Safety Program will succeed to the extent that it is perceived by our employees as positive.**
- 4. Safety Program goals are essentially the same as other Command goals - excellent customer service and continuous improvement.**
- 5. The personal involvement of managers and supervisors is essential to Safety Program success.**
- 6. A hazard noted and corrected is an accident prevented.**
- 7. Mishaps, with their associated costs, lost time, pain, and disruption to work and home life are largely preventable. We will continue to strive for zero mishaps to the benefit of our organization and employees.**

**Creating a culture that aggressively pursues a goal of zero mishaps can eliminate not only the tragedy of human suffering following a mishap, but also the associated medical cost, lost time and work disruption.**



**We are disturbed when one of our own gets hurt. Not only are we sorry for the employee and their family, but we may get angry when it appears that the accident could have been easily prevented. We often are disappointed when the Safety Office was unaware of the conditions that caused the accident, and therefore could not take steps to prevent it.**

**It is not enough for management, supervisors, and workers to agree in principle that accidents must be prevented. They also must be willing to spend the necessary time to detect and report conditions that may cause the accident.**

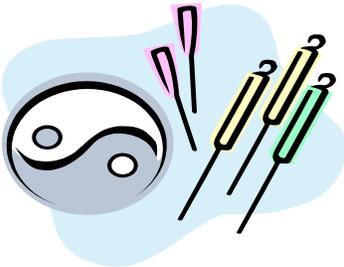
**It is difficult to substantiate the claim of a quality organization when employees are having lots of accidents. Production, quality, and morale all improve when the number of accidents goes down. It takes less time and costs less money to prevent accidents than it does to have them. Just as quality production results from doing things the right way the first time, so is safety the result of doing things safely the first time.**

**Never assume that the fastest way to do a job is the safest way. In the time it takes to blink an eye, a simple five minute task done unsafely can turn into a painful disaster with effects that will last a lifetime.**



## ALPHABETICAL LISTING OF SAFETY SUBJECTS BY TOPIC

**Access Walkways-** Maintenance/Repair personnel need safe access to elevated industrial equipment or utilities, (i.e. - Lights, fans, motors, etc.). These walkways, which may also include access stairs, ramps, and platforms, are intended for use by able bodied personnel only - not to exceed 20 people. Minimum width of all access components is 22" per NFPA - 101, Table 28-2.5.6. All components which are 4 feet or more above grade or an adjacent floor must be provided with standard guard rails.



**Acupuncture-** Acupuncture has been practiced in China for over 2,500 years, and has enthusiasts in the USA as well. In 1997, the 12-member National Institute of Health issued a consensus statement citing strong evidence that acupuncture is an effective treatment for post operative pain and nausea, and for some problems with chemotherapy. Some patients also report that acupuncture relieves chronic pain and digestive problems.

Doctors who have studied acupuncture believe that it stimulates release of the body's natural painkillers known as endorphins. They agree that acupuncture is safe, as long as a licensed acupuncturist is used. The American Academy of Acupuncture, at 800-521-2262, can help locate qualified acupuncturists. Persons considering acupuncture should be aware that many insurance plans do not cover this treatment.

### **Airport Safety – Accident Avoidance**

Travelling by air these days can be difficult, even under the best of circumstances. Many of our employees travel overseas, and foreign travel increases the potential for delays and frustration which can lead to accidents.

Air travel following the 11 SEP 01 terrorist actions now often involves:

1. Arising before dawn to catch an early flight.
2. Potential traffic delays near airports.
3. Possible car searches before you are allowed to park, and restrictions on allowable parking areas.
4. Long lines at ticket counters/baggage check-ins.
5. ID checks, which may require you to produce 2 forms of identification.

6. Personal searches, which may involve removing your shoes for scanning.
7. Scanning of your carry-on bags.
8. Greater potential for flights to be delayed or cancelled in the event of threats or suspicious activities.
9. Ground transportation difficulties or delays.



In a word, travelling by air these days is **STRESSFUL**. Air travellers may feel that they are fatigued and stressed out even before they get to board their plane! These conditions create the potential for accidents at the airport. Several of our employees have been injured while rushing through airports to catch their plane or retrieve their luggage.

Although unforeseen circumstances can cause stress and force you to change your plans, travellers can reduce their chances for airport accidents by observing the following:

1. You should not take your first trip to an unfamiliar destination alone. Schedule your trip with a co-worker who has been there before when possible.
2. Make sure that your travel agent or office allows you enough time at connecting airports if you have to change planes. If you do, obtain and review airport maps of connecting stops, as needed, so you will have an idea of the airport layout and where you need to go.
3. Taking the last flight of the day from an airport to your destination is risky, and may mean a stay overnight somewhere enroute if either that flight or a connecting flight is cancelled or delayed. It is better to take the next-to-last flight, or an even earlier one, and use later flights as possible alternatives in the event of cancellations.
4. Non-stop flights should be selected when possible.
5. Try to start your trip well-rested so that you are better equipped to put your problem-solving skills to work when needed.
6. Wear sturdy, slip-resistant, comfortable shoes on the day of your flight. **NO HIGH HEELS OR FLIP-FLOPS !!!!!** Airports are often quite large, and your connecting flight might be at the last gate at the farthest terminal from you !
7. Plan your trip to allow for delays. Arrive at the airport early to avoid the rush, unforeseen parking challenges, and security backlogs.

8. Whenever possible, have an alternate plan in the event that your planned flight schedule is disrupted for some reason. Delays and flight cancellations are becoming more common.

9. Bring a book, newspaper, or magazine to read, and stay as relaxed as possible. If you are required to make flight or gate changes on short notice, take care to lift and carry things correctly and walk, don't run to your destination. Airports can be congested places, filled with people and luggage, and you want to avoid an accident or injury at all costs ! So, try to maintain your sense of humor and to keep things in perspective – in time virtually every traveller gets where they are going !

10. On the flight, don't hesitate to inquire of your fellow passengers that you talk with whether they have been to your destination recently. If so, you may be able to obtain information about airport layout and conditions, what ground transportation is available, etc. Good advice is free, and it may be possible to learn something that will save you time and money.



**Alcohol-Drugs-** It is generally accepted that employee alcoholism or drug dependence will probably result in:

- \* Unsafe work practices
- \* Increased potential for accidents
- \* More absences from work
- \* Lower productivity

When a person drinks, alcohol rapidly enters the bloodstream and circulates to all parts of the body in a few minutes. Alcohol and some drugs act as depressants, slowing brain activity and "knocking out" brain control centers. The stages of intoxication are:

Stage 1 - Erratic behavior, impaired thinking, loss of control

Stage 2 - Confusion, disorientation, slurred speech

Stage 3 - Stupor. Unable to walk or stand

Stage 4 - Unconsciousness. Few or no reflexes.

The powerful effect that alcohol and illegal drugs have on our society should not be underestimated. Between 6-8 million adults, or 3-5% of the US population, are considered alcoholics. And alcoholism costs our nation billions of dollars each year in lost productivity and employment. Also, side effects from alcohol use may include

automobile accidents, marital problems, spousal abuse, financial difficulty, unhealthy lifestyles, unwanted weight gain, and depression as the drinker realizes that alcohol use is taking over his/her life. Alcohol use can also cause a loss of coordination that may result in accidents.

It has been proven that alcohol lowers inhibitions, causing some people to ignore their own common sense and values. It also may impair the drinker's judgement, causing them to feel that they are more powerful and able to take foolish chances. Also, alcohol is sometimes used as an excuse to do things that the drinker knows are wrong.

To your body, alcohol is a poison that destroys cells. It can eventually damage your brain, liver, heart, and stomach.

Navy safety professionals should be role-models, setting a good example for others to follow. It would probably be best if we are among the millions of Americans who choose not to drink at all. If we do choose to drink, however, let's drink responsibly and safely, letting someone else do the driving.

### **Anger Management -**



Anger is one of the most poorly handled emotions in society today, and may be related to our lifestyles to some extent. People exposed to traffic jams, money problems, marital problems, deadlines at work, frustrations, etc. are encountering some of the more common causes of anger. And many people who appear irritable or hot-tempered may be overtired, stressed out, or have other reasons for acting the way that they do.

It is common and normal to feel anger once in awhile, because being angry is a very human experience. But the way that you react and control your anger can make a big difference. Anger triggers certain bodily reactions such as adrenaline release, faster heart pumping, increased blood pressure, and muscle tension. These reactions can be helpful by causing an immediate burst of energy and strength which you could use, for example, in warding off an attack. But uncontrolled anger can be very dangerous, causing people to become violent, hurting others, destroying property, saying and doing things that they would not do otherwise, etc. Also, just attempting to "cover-up" or ignore your anger does not work. It is far better to take whatever positive steps you can to resolve the problem that caused your anger.

Experts recommend the following to people who have problems dealing with other's anger, or controlling their own:

- Keep things in perspective. Don't waste your energy becoming angry over minor problems that can't be helped.
- If possible, try to find the humor in the situation. Laughter is a great stress-buster.
- Any kind of physical activity such as walking, golfing, bowling, etc. can be an excellent outlet for angry feelings.
- Rest and relaxation can help. Try to get enough quality sleep each night.
- Take time out to calm down and think. Angry exchanges or arguments are virtually never helpful in resolving the situation.
- Try not to answer anger with anger.
- Try to be considerate to others around you. Allow the angry person to "have their say". A good listener may be all that is needed.
- **Do not take chances!** Despite your best efforts, another person may start to show signs of getting out of control. If your safety appears to be threatened, get help immediately !



### **Animal/Car Accident Procedures**

It is estimated to happen about a million times a day in the USA – an unsuspecting animal is hit and killed or injured on our nation's highways. Also, an unknown number crawl or limp back into their natural habitat – wounded and in pain.

You may be one of the unlucky drivers who accidentally hit an animal, or may just come upon an injured animal while driving, bicycling, or walking. It may be a wild animal such as a deer, fox, or bird. Or it could be your neighbor's dog or cat. Granted, we're not talking about an injured person here. But you may be in a position to help the injured animal – instead of choosing to "look the other way".

The first thing to do may be to contact your local Animal Control Officer, Police Department, or Humane Society. These folks can probably offer some good advice and recommendations, and the Police may respond promptly – particularly if a large animal such as a deer is lying in the road and blocking traffic.

The next thing that you might do is to try and alert approaching motorists by putting out flares or reflective triangles. This may prevent a bad situation from getting worse, and may prevent the injured animal from being hit again by another vehicle.

Some sources on this subject recommend moving an injured animal to the side of the road, and others do not. You will have to decide whether this should be attempted, but I personally would avoid touching or attempting to move an injured animal. I have read accounts of "Good Samaritans" being struck and killed by oncoming drivers. Even if oncoming traffic is not a hazard, an injured and frightened animal may not understand that you are trying to help and may bite, scratch, or kick you.

Despite the above risks, either you or your friends or family may decide that getting an injured animal to safety is worth the risk and must be done. This may be especially true if the animal that is injured is your dog or cat. If you decide to attempt rescue, oncoming drivers must be alerted and stopped before you venture out onto the roadway. Small mammals and birds may be transported in a cardboard box with a towel or blanket in the bottom, and air holes for ventilation. Larger animals require some form of "stretcher". You may use a blanket or a sheet of plywood slid under the animal. Do not just try to get pull the animal off the road by its legs – you will probably cause excruciating pain to an animal that is already suffering.

Perhaps the best advice for all of us is to try and avoid car/animal collisions in the first place. Slow down and increase alertness while driving near fields and forests.



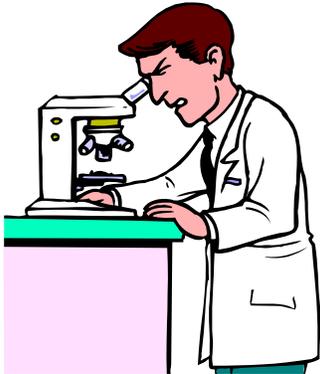
**Ankle Injuries** - Your ankles must be both strong and flexible - strong enough to support the weight of your entire body yet flexible enough to permit a wide range of motion. Many ankle injuries occur during pickup basketball games, while jogging, by stepping into a hole or depression unexpectedly, falling on stairs, stepping on something in the dark, or when you're carrying a package and can't see where you're going. Suddenly twisting your foot inward can sprain ligaments on the outer side of your ankle.

Ligaments stabilize your ankle and tendons provide for ankle motion by connecting muscles in the lower leg to bones in the ankle and foot. Your ligaments on the inside of your ankle are stronger than those on the outside. Although strains and sprains sound alike, they are quite different. Strains occur when muscles or tendons are stretched or torn. Sprains occur when ligaments are stretched or torn. A sprain is more serious than a strain.

Ankle sprains are classified as either mild, moderate, or severe. Mild sprains involve only slight stretching or tearing of ligaments, pain and swelling is minor, and walking is often possible. For mild sprains, treatment by applying an ice pack and elevating may be all that is necessary.

Ankle fractures occur when one or more bones are broken, and are usually caused by either a hard blow or a sudden, forceful twist. Fractures may require surgery, and a cast is almost always necessary.

The achilles tendon at the back of the foot and ankle is the strongest tendon in the body, but it can be injured by overuse or sudden exertion. Overuse may result in swelling or inflammation. A total or partial achilles tendon rupture is a serious injury and makes continued movement impossible. Surgical repair may be necessary.



Anthrax- Since the US anthrax concerns that began in the Fall of 2001 relate to bioterrorism, this discussion will focus on that subject and not on the naturally occurring anthrax spores which can live in the soil or be present in warm-blooded animals in certain countries.

Anthrax spores which are produced in dry form and stored can cause respiratory failure and death within a week if inhaled by humans. Consequently, if anthrax is suspected in a letter or package, it is most important NOT to open or handle it – possibly making the powder airborne. If anthrax powder is found on employee's clothes, it should NOT be brushed off since this action may make the substance airborne.

If a person is infected by breathing anthrax, cold symptoms usually appear within 48 hours of the exposure, but can appear anytime between 1 and 6 days. After cold symptoms appear, more severe breathing problems may develop rapidly. Shock follows, and death usually occurs within one to two days after the cold-like symptoms began.

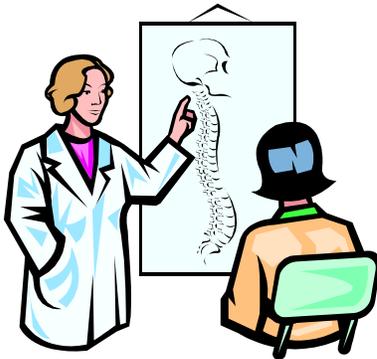


If anthrax spores get into a person's body through the skin, symptoms may include an itchy rash that turns into a painless sore that appears black in the center. Prompt medical attention is **ESSENTIAL** for skin rashes of this type.

It is extremely rare for a person to become infected by anthrax through the consumption of contaminated meat, although it is possible. Symptoms that occur when the anthrax spores have entered the body by the intestinal route may include acute inflammation of the intestines, nausea, loss of appetite, vomiting, fever, and severe diarrhea. Intestinal anthrax results in death in 25% to 60% of cases.

Symptoms normally appear within 7 days after the anthrax infection. Direct person-to-person spread of anthrax most likely does not occur.

Doctors can prescribe one of several antibiotics for anthrax treatment, and these antibiotics are almost always effective. Also, anthrax vaccine is available for people considered at higher risk for coming into contact with anthrax spores. This vaccine is FDA-approved and has been in use for the last 30 years in the USA.



**Arthritis**- Some facts about arthritis are:

- The word arthritis means joint inflammation, and actually is a symptom and not a diagnosis
- There are more than 100 different types of arthritis
- Virtually anyone, no matter what their age, can have arthritis.
- Approximately 40 million Americans are estimated to have arthritis, and almost everyone over 60 has some degree of arthritis.
- In most cases there is no cure for arthritis

Osteoarthritis, also known as "wear and tear" arthritis, most commonly occurs in the hands, hips, knees, neck, and lower back. It is caused by a breakdown of cartilage, a smooth covering at the ends of bones that covers and cushions the bones and allows the

joint to move smoothly and easily. Also assisting in smooth joint movement is the synovium, a fibrous envelope which surrounds the joint and which produces a fluid that helps to reduce friction and wear.



Over the years, wear and tear or injury can cause the smooth cartilage to soften and become pitted and frayed. Then, the cartilage loses its elasticity and is more easily damaged. With time, sections of cartilage may wear away completely and allow the bones to rub together. As the cartilage breaks down, the joint may lose its normal shape. The bone ends thicken and the bone at the edge of the joint may grow outward and form bony spurs. Fluid-filled cysts may form in the bone near the joint, and bits of bone or cartilage may float loosely in the joint space. The joint then becomes swollen and damaged and can be painful and difficult to move.

In contrast to osteoarthritis which is non-inflammatory and primarily affects one part of the body, rheumatoid arthritis is an inflammatory disease that can affect many joints in your body. It also can affect your blood, lungs, and heart, and generally affects both sides of your body at the same time. With rheumatoid arthritis, white blood cells that are part of the normal immune system travel to the synovium and cause it to become inflamed. The cells of the synovium grow and divide abnormally, leading to thickening of the normally thin synovium. The joint(s) become swollen and puffy to touch. This inflammation causes the warmth, redness, swelling, and pain that are typical symptoms of rheumatoid arthritis. As the disease progresses, abnormal synovial cells begin to invade and destroy the cartilage and bone within the joint. Eventually, the joint may become weak, deformed, and unable to work normally.

Nonsteroidal anti-inflammatory drugs are used for the treatment of both types of arthritis. They can reduce inflammation and relieve pain by inhibiting an enzyme in the body called cyclooxygenase, (COX). This enzyme is produced when the joints are injured or inflamed, and it contributes to further arthritis pain and inflammation.



Many companies now offer arthritis "cures", pills, potions, and other products that

are controversial at best and harmful at worst. Yet, over 40 million Americans suffer from arthritis, at least to some extent, and a certain percentage are willing to try anything – even controversial "treatments", to escape the discomfort and limitations that arthritis causes.

While there are no known cures for arthritis, you can reduce your chances of getting it, or at least reduce its effects by:

- Eating a healthy diet and limiting consumption of alcohol.
- Controlling your weight to limit stress on your joints.
- Including healthy seafood such as tuna, salmon, mackerel, and herring in your diet.
- Including stretching and muscle-strengthening exercises in your routine.
- Getting aerobic exercise several days of the week.



**Auto Breakdowns - What To Do** - Weekly auto inspections for worn or underinflated tires, corroded battery terminals, proper fluid levels, good belt and hose condition, etc. can reduce your chances of an auto breakdown. If your car should break down however, try and get your vehicle over to the far edge of the right shoulder of the road. Activate your emergency flashers, raise your hood, and tie a white cloth to the door handle or radio antenna. Use reflector triangles to attract extra attention, placing one in front of the vehicle, one just behind the vehicle, and one 100 feet behind the vehicle. Your car emergency kit should contain an adjustable wrench, screwdrivers, pliers, a flashlight, reflective triangles, a first aid kit, and duct tape for temporarily securing leaks.



**Auto Repairs for the Weekend Mechanic** - Scraped knuckles and annoying cuts are minor injuries compared to what can happen to amateur mechanics who fail to

observe basic safety precautions. Don't even think of working under a car that is supported only by a jack. Use jack stands or ramps that are rated for the car or truck being worked on and make sure that they are on a flat, secure surface. Muddy ground or a sloping parking lot won't do. Also, do not use hollow concrete blocks that can crack and fail without warning. Beware of spinning fans which can cut or slice off fingers and turn dropped tools into missiles. Wear gloves whenever possible to protect your hands from burns caused by contact with hot exhausts or intake manifolds.



**Back Injury Prevention-** Virtually every safety professional knows the high cost, pain, suffering, and long recovery times associated with back injuries. A common misconception among some U.S. adults is that your back is made to last a lifetime - even with no care or attention. Actually, your back is a powerful, yet complicated machine needing regular exercise and proper nourishment to keep it running smoothly and trouble-free. Some reasons for back pain include:

- \* Poor posture
- \* Lack of flexibility
- \* Lack of exercise
- \* Arthritis
- \* Being overweight
- \* Tension
- \* Improper lifting
- \* Emotional problems
- \* Auto accidents

It is also important to remember that most back problems are cumulative- the result of many years of incorrect lifting, poor posture, etc. Some other points about your back to remember are:

- Your back is the most injury-prone part of your body.
- Being overweight causes your chances of a back injury to skyrocket.
- The stages of back injury progression are fatigue -- discomfort -- pain -- injury -- disability.
- In the past 7 years, the average adult weight has increased by about 10 lbs. Approximately 50% of American adults are estimated to be overweight.



### **Recommended steps for safe lifting are:**

1. Look over the object to be lifted. Shift or slide it enough to determine the approximate weight and whether it is balanced or not.
2. Stand close to the load with your feet about shoulder width apart. Make sure that your footing is secure, and that you are well-balanced.
3. Bend your knees and "straddle" the load somewhat. Drop your hips, and keep your lower back bowed in.
4. Make sure that you have a good grip, and that you are comfortable lifting the load. Lift gradually, using your leg muscles.
5. Keep the load close to you and hold so that you have good vision and can see where you're going.
6. Do not twist your body during the move. Change directions by moving your feet. Also, it is not recommended that you change your grip while carrying the load since it could slip or fall.
7. Face the spot on which the load will rest. Bend your knees, lower your hips, and keep your lower back bowed in. If your hands or fingers are under the load, be careful when setting it down to avoid "pinching" your hands or fingers.
8. Slide the load into tight spaces rather than lifting.
9. If placing the load on a bench or table, place the load on the edge and slide it forward using your arms and body.
10. Make a final check to ensure that the load is secure and won't tip or fall.

**Back Support Belts-** Back belts are also called back supports or abdominal belts, and have been used in numerous industries in an attempt to prevent worker injury during lifting. There are more than 70 types available, and over 4 million are purchased each year. One of the most popular is the lightweight stretchable nylon style.

**UNFORTUNATELY, THERE IS NO SCIENTIFIC EVIDENCE THAT BACK BELTS ARE EFFECTIVE IN PREVENTING BACK INJURIES.** This was confirmed in 1994 by a NIOSH study, and more recently by a 1996-1998 American Medical Association study. Also, about the same number of employees wearing back belts every day reported back pain as employees who rarely or never wore back belts.

Navy studies have indicated that as many as 90% of workers lift incorrectly, at least occasionally. Therefore, safe lifting techniques should be learned and consistently practiced regardless of whether you choose to wear a back belt or not.



**Battery Charging Rooms-** OSHA 1926.403 lists requirements for battery charging rooms and workers. Some key considerations for these rooms are:

\* Ventilation - Exhaust air should be taken from high within the room and exhausted directly to the outside. The ventilation system should provide at least 4 air changes per hour. Interconnect the exhaust system with the battery chargers so that the ventilation system is always running when the batteries are under charge.

\* Personal Protective Equipment - Face shields, aprons, and rubber gloves must be provided for workers handling acids or batteries.

\* An emergency shower/eyewash is required within 25 feet of the work area for emergency use.

\* When charging batteries, the vent caps must be kept in place to avoid electrolyte spray. Also, precautions must be taken to prevent open flames, sparks, or electric arcs.



**Bicycle Safety** - Bicycles are a nice way to get around. You can use them for short trips to the store, for a leisurely ride to the park, and also for good exercise. Getting out in the fresh air on a bike can create a feeling of freedom and well-being as you pedal along and enjoy the day. An added bonus is the fact that a bicycle is very environmentally friendly. It does not produce the noise pollution of cars, trucks, and motorcycles, and also does not produce harmful exhaust emissions that can impact human health or damage the environment.

Biking can be a very safe way to travel if you follow a few basic precautions:

1. Start by choosing the right type of bike, or evaluating the one that you are now using. Does your bike choice match your choice of activities? Lightweight 3, 5, or 10 speed bikes allow you to shift gears and are good for distance riding and hilly areas but are not as good for carrying groceries home from the store. They also require considerably more maintenance than more sturdy middleweight bicycles. The middleweight bicycle can be a "workhouse" type of bicycle - stable and strong with a coaster brake and single speed. Middleweight bicycles will also accommodate a basket

which can be very useful for carrying items. A chain guard will keep your clothing from being caught, and fenders will keep road spray from flying up on you as you ride.

2. If you are inexperienced at riding a bike or are out of practice, start by riding your bike under favorable conditions in a location where there is minimal or no traffic. (i.e. a vacant parking lot or bike path).

3. Make sure that your bike has reflective material on the front, back, and sides, and that you can be seen from all directions by approaching cars. A bicycle headlight is recommended. Also, wearing reflective or light colored clothing will enable you to be better seen by drivers.

4. Do not bicycle while barefoot! Also, slip-ons and sandals may be dangerous and may slip off the brake pedals. Wear shoes or sneakers that offer good traction.

5. Take good care of your bike. Good brakes are essential. All mechanical parts, especially axle nuts, should be secure. The seat saddle should be at the right height for comfort, and tires should be in good condition and at the correct air pressure. Lubricate the chain and all bearings regularly, and keep your bike clean to be more easily seen.



6. **Never ride double!** Unless you are riding a tandem bicycle, your bicycle was not designed for the extra person and the extra weight could throw you off balance with painful results. A second person can also obstruct your vision or damage your bike.

7. Always watch where you are going! This may seem obvious, but many bicycle accidents occur due to hitting a rut, hole, or loose ground.

8. Carry basic tools with you on longer bike trips. These should include a wrench, screwdriver, pliers, and a tire patch kit.

9. As a general rule, do not journey further from home on a bicycle that you could walk. You may have to walk your bike home in the event of a flat tire or other malfunction.

10. At intersections, proceed with caution even with a green light. Some drivers will turn corners in front of you and others may fail to notice you at all.

11. Plan your route to avoid heavy traffic and night riding. Also, it is best for both you and your bicycle not to ride in the rain, fog, or snow.

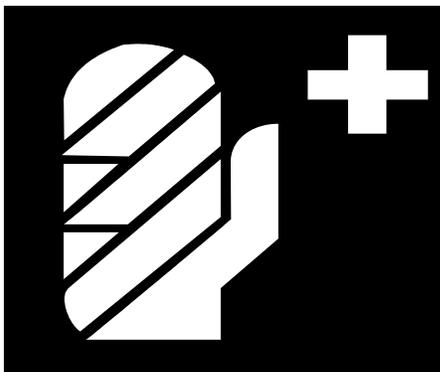
12. Wearing a good quality bike helmet will protect your head in the event of an accident, and may save you serious injury.

Riding a bicycle helps you to stay fit, and is very environmental-friendly. So, think safety-first and **HAPPY BIKING!**



**Burns**- Employees and their family members can be burned from a number of sources including hot pots/pans, boiling liquids, hot engine manifolds, fireplaces, space heaters, etc. Burns must be treated promptly and correctly to minimize skin damage - recommended first aid procedures are indicated below:

1. **SECONDS COUNT!** Immediately try to break contact between the heat source and the skin to minimize the damage.
2. Cool every burn as soon as possible. The body holds heat and the skin suffers continued injury until it cools.
3. Wash small first or second degree burns with mild soap and water
4. Protect the burn with a clean, dry dressing loosely bandaged in place.





5. Seek medical attention if:

- Moderate or severe burns are noted over an area larger than the victim's palm
- The head or neck is burned
- The burn is on the hands, feet, or groin
- The victim is over age 60 or under age 5
- The victim shows symptoms of shock or has trouble breathing



**CPR Training-** The Atlantic Division has avoided mandatory CPR training requirements for any of our employees, opting instead for encouraging employees to participate in this training. Suggested sources for CPR training are Naval Medical Commands, the American Heart Association, the Red Cross, and local hospitals. CPR training classes typically require between 4 and 8 hours and include the following topics:

- \* Human anatomy
- \* Heart attacks
- \* Stroke
- \* Health risk factors
- \* Legal considerations
- \* Emergency situations
- \* Helmick maneuver
- \* "Hands-on" CPR performance and testing
- \* Defibrillation

There are a lot of good reasons for safety personnel to become CPR-qualified. One is that your employees usually expect that you are an emergency resource, and may come to you if someone is injured.



### **Carbon Monoxide - Odorless, Colorless, Tasteless, Deadly -**

Carbon monoxide is a colorless, odorless, deadly gas. Since you can't see, taste, or smell it, CO can kill you before you know its there. It is attracted to hemoglobin in the bloodstream, bonding with it and displacing the oxygen which cells need to function. Eventually it will displace enough oxygen in your system to suffocate you from the inside out, resulting in brain damage or death.

Each year in the US, carbon monoxide causes nearly 300 deaths and 10,000 hospital visits from breathing the gas in residential settings. Symptoms of carbon monoxide poisoning are as follows:

Mild Levels - Can cause shortness of breath, mild headache, and nausea

Moderate Levels - Can cause severe headaches, dizziness, mental confusion, nausea, or fainting.

Severe Levels - Can cause death within minutes.

Possible CO sources are stoves, furnaces, fireplaces, clothes dryers, vehicles, and space heaters. Any appliance or vehicle that runs on oil, natural gas, kerosene, propane, coal, wood, or gasoline can produce CO. This gas is a result of incomplete combustion of whatever fuel source is used.

Carbon monoxide detectors are highly recommended, and should be provided near sleeping areas. Adding an additional detector near the home's heating source adds an extra measure of safety. The July 1995 issue of "Consumer Reports" rated the various makes/models of CO detectors and is a good source of information.



### Carpal Tunnel Syndrome (CTS)-

The carpal tunnel is a narrow space inside the wrist. This space lets tendons and the median nerve pass from the forearm into the hand. This nerve conducts sensation from the hand, up the arm, to the central nervous system. This nerve and 9 flexor tendons pass through a narrow carpal tunnel of bone and ligament at the wrist. If repeated or prolonged motions of the fingers and wrist, bending, or extending of the wrist, or exposure to vibration causes swelling in the carpal tunnel, pressure on the median nerve can occur. This can result in numbness, tingling, and pain in the middle and index fingers and thumb, and sometimes all 5 fingers. This condition is called carpal tunnel syndrome, and can interfere with the use of your hand. CTS risks can be minimized by:

- Working with your wrists in a straight, neutral position whenever possible.
- Resting your hands periodically
- Changing positions often
- Varying your work routine
- Exercising your wrists



Colds- What's easy to get, hard to get over, & everyone has at one time or another? You guessed it - the common cold. Colds are sometimes accompanied by a sore

throat, runny nose, coughing, sneezing, and congestion. Young children generally have between 3 and 8 colds per year, while adults have between 2 and 4 colds per year.

Colds are viral infections and can be caused by any of several hundred different viruses. These viruses are not airborne - you can catch a cold if someone sneezes or coughs next to you but not if they sneeze or cough across the room. The cold virus is most often picked up by touching things that people with colds have touched. The virus can survive for hours on surfaces such as doorknobs, light switches, phones, etc., but can be destroyed by washing your hands with hot soapy water or disinfectant.



People with colds are infectious from 24 hours before they notice symptoms until 5 days after the cold starts. Adults have fewer colds since we develop immunity after infection from a particular virus.

There is no cure for the common cold. The millions of dollars spent each year in the U.S. for cold remedies merely improve common symptoms. They do not attack the cold viruses. But low tech. - low cost relief for cold symptoms is available and includes:

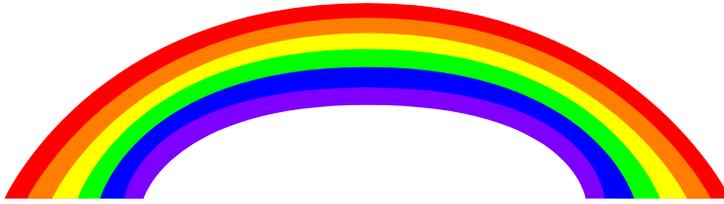
- Gargling with salt water.
- Drinking hot tea made with echinacea, lemon, and honey. This soothing drink will coat your throat, reducing some of the irritation that causes coughing.
- Increasing the humidity in your house by putting a pan of water on the stove to evaporate or taking a warm shower.

The best cold remedy may be to avoid catching one in the first place. You should:

- \* Eat well-balanced, nutritious meals
- \* Control your stress levels
- \* Exercise regularly
- \* Wash your hands vigorously with soap and water for 10 - 20 seconds
- \* Drink more fluids to help flush toxins from your body
- \* Get 7 - 8 hours of sleep each night
- \* Buy a new toothbrush after your cold
- \* Avoid crowds when you can

**Color Coding-** Navy and Marine Corps building designs normally use specific colors to:

1. Identify building interiors and general equipment
2. Mark hazards and identify specific equipment.
3. Identify the content of piping systems, and
4. For accident prevention signs



The following list of colors is commonly used to identify specific hazards or safety equipment and instructions:

**Red:** Fire protection signs, DANGER, or STOP

**Orange:** Indicate the dangerous parts of machines and electrical equipment; also emergency controls.

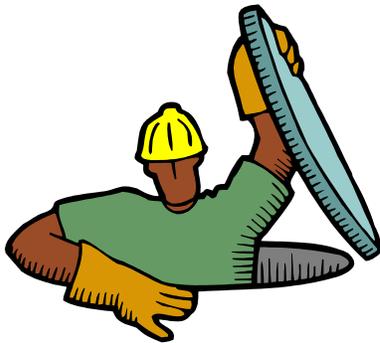
**Yellow:** Caution signs for marking physical hazards

**Green:** Safety and first aid equipment locations

**Blue:** Operation warnings

**Purple:** Radiation hazards

**Black and white:** Traffic and housekeeping



**Confined Space Safety-** According to OSHA, all confined spaces have the following 3 characteristics:

1. They are large enough for a person to enter and do work.
2. They have limited entrances and exits. Normally you must climb or crawl into a confined space.
3. The space is not intended for continuous human occupancy.

Confined spaces include manholes, storage tanks, underground utility vaults, tunnels, boilers, pipelines, and crawl spaces. The Atlantic Division strongly prefers that our employees **NOT** enter confined spaces at all if it can possibly be avoided. Instead, we encourage employees to make observations from outside the confined space, have someone else use a video camera, etc. One reason for this is that errors in judgement, electrical arcs, steam line ruptures, hazardous atmospheres, and a variety of other conditions can cause serious injury or death in occupied, confined spaces, while they may be less hazardous under other conditions. Also, NAVFACENGCOM employees normally would be required to enter confined spaces very infrequently, and could be

expected to be somewhat less familiar with confined space hazards than employees who enter these spaces regularly as part of their jobs.

Employees can be injured or killed in a confined space as the result of asphyxiation, engulfment, electric shock, falls, or heat stress. It is much more difficult and time-consuming for rescue personnel to respond and remove injured or incapacitated employees from confined spaces than from ordinary work environments.

Some basic requirements that must be met before Atlantic Division personnel are allowed to enter confined spaces include:

- \* Proper training
- \* A full-time, dedicated attendant
- \* Proper attire
- \* Space tested for safe atmosphere
- \* Entry permit issued
- \* Continuous ventilation, when required

Entrants should evacuate the confined space immediately upon noting:

- Entrant feels dizzy, weak, unusually drowsy, or nauseated
- Entrant begins to have trouble breathing for any reason
- A tingling, itching, or burning sensation is noticed on the skin or eyes
- Entrant's monitor sounds an alarm, indicating an unsafe atmosphere
- The attendant orders an evacuation for any reason



In purging or ventilating a confined space, it has been proven more effective to "blow air into" rather than "draw air out of" the space. The reasons for this include:

1. Blowing air into the confined space causes turbulence which tends to dislodge pockets of contaminated air
2. Applying positive pressure to the confined space helps to eliminate the chance of gas seepage through crevices or ducts back into the work area
3. Blowing air into the confined space may aid in temperature control within the confined space, and may give the entrant(s) a sense of well-being.



**Contact Lenses** - The subject of contact lenses is both important and directly related to eye safety because:

- So many people wear them.
- Wearers must be willing to devote a certain amount of time to their care.
- Failure to clean and disinfect contact lenses may lead to severe eye infections.

People of all ages make the decision to wear contact lenses instead of glasses. Some reasons are:

- \* They are involved in athletic activities where glasses might get in the way.
- \* Glasses might not be comfortable for some people.
- \* Peripheral vision is frequently better with contact lenses.
- \* You can wear regular sunglasses with contacts instead of needing prescription sunglasses.
- \* Some people feel that they look better without glasses.

Not everyone can wear contact lenses. People with severe allergies, low tear production, or chronic eye infections may not be suitable.

Your employees who wear contact lenses are probably wearing either soft or rigid gas-permeable, (RGP) lenses. These types are characterized as follows:

**Soft Lenses** - These are initially more comfortable than rigid types, seldom popping out of the eye or slipping off center. They also are available as disposable lenses, and are less likely than rigid lenses to trap particles under the lens. **BUT** - they are harder to clean, are less durable, wear out faster, and may rip or tear.

**Rigid Gas-Permeable (RGP) Lenses** - These offer the advantages of greater durability, easier cleaning, sharper vision, and less expense. **BUT** they are harder to adapt to, more likely to pop out or to slip off-center, more likely to trap particles under the lenses, and may chip or scratch.

Contact lenses need to be cleaned and disinfected each time they're removed. If not, bacteria, viruses, and fungi can grow on the lenses and cause a severe eye infection. Other problems that can occur include a scratched cornea, swelling due to too little oxygen, or irritation caused by either the lenses or their solutions. Fortunately, problems are uncommon and most people adjust to and wear their contacts without any difficulty.



**Dehydration**: Most of us have suffered at least mild dehydration at one time or another, and it may have been caused by simply being unaware of how much water we need in various circumstances. Relying on your thirst mechanism to let you know when you are becoming dehydrated isn't always reliable. And by the time that you start to feel the effects of dehydration, its symptoms may stay with you for some time since it can take your body an hour or more to recover – even if you start drinking water right away.

Through the activities of daily living, the average day's loss of fluid is four liters, which is generally replaced by the fluids that we drink and the food that we eat. But the amount of fluid required can be significantly increased by exercise, sweating, air temperature, or altitude. During heavy exertion while running, hiking, playing vigorous sports, etc., we can easily lose from one to three liters of water per hour, which may mean a loss of from 8-10 liters of fluid over an afternoon of exercise. Most of this fluid is lost from the body through perspiration, and must be replaced.

As you read this you may be thinking "When I perspire a lot from daily activities, I'll just drink more water and everything will be fine". This rationale may be okay in most situations, but what if you are not near a drinking fountain or a source of clean water? Let's say that you start out on a day hike carrying only a liter of water and find that the hike is more strenuous than you thought. Or, maybe the weather later in the day becomes hot and humid. Or your car breaks down in the middle of nowhere on a hot day and you must walk to get help. Under these conditions, you may not be able to get enough water to drink so it is important to understand dehydration and what to do.

Unfortunately, untreated dehydration may lead to heat exhaustion or heat stroke. The effects of even mild dehydration are decreased coordination, fatigue, and impairment of judgement. These could lead to a mishap, or perhaps getting lost. If you do not or cannot replenish the water that your body is losing, you may start to experience signs of heat exhaustion. These signs include nausea and light-headedness. Eventually you may begin to show signs of heat stroke, which may include red, hot skin, being disoriented and argumentative, and starting to hallucinate. It is important to understand that **the primary cause of dehydration symptoms is the amount of sodium and chloride ions lost through sweating, rather than the amount of water.** Heat exhaustion can often be treated rapidly by drinking an electrolyte solution consisting of one teaspoon of salt dissolved in a liter of water. This should be slowly sipped over a period of about an hour. Add a tablespoon of sugar or a sweet drink powder to replenish energy stores. Do **NOT** take salt tablets, which are too concentrated and draw water to the stomach to dilute the salt. (You need this water out in your circulatory system, not in your stomach)



**Dental Care:** Like other parts of your body, your teeth are essential components of good health and are designed to last a lifetime. You need healthy teeth to maintain your facial structure, chew your food, and help you speak.

Clean, white teeth and a pleasant smile make a good impression on everyone around you. But, neglecting to take care of teeth could cause you to lose some forever.

The enemies of healthy teeth are sticky deposits of bacteria called plaque. Plaque is constantly forming on teeth, and the bacteria in plaque produces acids and irritants when sugar is present. These acids attack the tooth enamel and may eventually break it down. Also, plaque accumulations at the gum line can irritate and inflame gums causing gum disease and eventual tooth loss.

While bacterial actions normally damage teeth slowly, accidents of various types can seriously damage your teeth. Auto accidents, rough horseplay, or participating in contact sports without wearing a mouthpiece can make you vulnerable to accidental tooth damage. You can also chip or break your teeth on very hard candy, etc. The proper procedure for accidental tooth damage is to place a cold compress on your face in the area of your injury and to see your dentist immediately.

Part of your program for healthy teeth should be good nutrition. Avoid sticky, sugary foods. Instead, indulge your taste for sweet foods with fruits like apples, oranges, and grapes. Also, a diet rich in dairy products provides a good source of calcium for healthy teeth and bones.

Your dental self-care should include:

- Ensure that your toothbrush and toothpaste is approved by the American Dental Association. (ADA)
- If you are only able to brush your teeth once a day, it probably should be before you go to bed. Also, dental floss should be used.
- Use a fluoride mouthwash regularly
- See your dentist every 6 months, or as often as recommended

The results of neglecting basic oral hygiene can be painful, expensive, unsightly, and irreversible. So take good care of your teeth and they will serve you well.



**Depression-** Clinical depression is a biological disorder linked primarily to an imbalance of brain chemicals and millions of Americans are affected by depression each year. Depression occurs most frequently between the ages of 25 and 44, but affects the young and old in all walks of life.

Depression affects the way that you feel, think, and act. It can drain all the joy out of life and leave you feeling helpless, worthless, and unable to cope. Signs of depression include excessive crying, persistent feelings of guilt or hopelessness, negative feelings, headache, and digestive trouble. Some experts believe that recognizing negative thoughts and replacing them with rational ones is the first step toward controlling mild depression. Other good techniques for easing mild depression include:

- Learn to accept occasional failures and disappointments
- Don't blame yourself for your depression. It's not your fault.
- Exercise regularly. It can alleviate some symptoms and increase energy.
- Try not to expect so much of yourself.
- Find a good way to vent your emotions. Tears can be healing.
- Trust in your own strength to get through troubled times, but don't be afraid to ask for help.

Since depression feeds on loneliness and isolation, build a support group that you can count on when you feel blue.

- \* Nurture your friendships. Stay in touch with people you can trust & laugh with.
- \* Strengthen family bonds.
- \* Get involved. Join a club for your favorite hobby or take a class.

Sources of help for depression include:

- \* Community mental health centers
- \* General hospitals
- \* Mental health clinics
- \* Family service agencies
- \* Self-help groups
- \* Crisis centers

**Diabetes:** Diabetes is the 4th leading cause of death by disease in the United States, and deserves our attention since it is growing at an epidemic rate. The chances are good that you know someone who has Type II diabetes, and you may have someone in your family with this disease. Since the 1950's, the number of Americans with Type II diabetes has tripled. The chief reason for this huge increase is obesity. You are at greater risk for diabetes if you are:

1. Showing any of the following symptoms - Unusual thirst or fatigue, frequent urination, unexplained weight loss, or blurry vision.
2. Over 30 years old. (The older that you get, the greater the risk)
3. More than 20% over your desirable weight
4. Getting little or no exercise
5. African-American, Hispanic, or Native American
6. The son or daughter of a parent who has diabetes
7. The brother or sister of someone with diabetes

Of the above factors, one of the most important is weight control. Approximately 80 to 90% of people with Type II diabetes are overweight. Another key fact is that half of the people with diabetes don't know that they have it.

Type II diabetes occurs when the body can't make or properly use insulin. Insulin is needed to utilize glucose, the body's primary fuel. Inadequate insulin causes the level of sugar in the body to rise, which can lead to serious complications from damaged blood vessels, nerves, and organs. Diabetes also raises the risk of a heart attack by 400%, and increases the risk of having a stroke by 600%. It also is a leading cause of blindness, kidney failure, and mild to severe forms of nerve damage.

It is estimated that, as the number of baby-boomers age, the number of Americans with diabetes will rise from 16 million to 21 million in the next 10 years. Many will develop diabetes but will not know that they have it because symptoms often develop gradually and, initially, may be hard to identify. An estimated 150,000 Americans die each year as the result of diabetes or its complications. The good news is that if you have a proper diet, healthy weight, and good physical fitness, your chances of getting diabetes are greatly reduced.

Early diagnosis is important because the longer diabetes goes untreated, the greater the damage and risk for disability and early death. Progress in the treatment of diabetes includes improved oral medications and an inhaled insulin that is to be ready soon and will replace daily injections.



**Dog Bite Prevention:** In spite of leash laws in most parts of the country, it is very common to find abandoned, lost, or unsupervised dogs out and about on occasion. Also, pet owners often like to take their dogs out with them when they do yard work, home repairs, or other projects. But the dog that seems so friendly and obedient with their owners inside may be unpredictable when a stranger passes or approaches, and may not come back to their owner when they are called.

Dealing with a strange dog in unfamiliar surroundings can be a frightening experience, but you can improve your chances of walking away unharmed by using one of the following techniques:

1. If the dog seems to be passing through the area and does not approach you, it may be best to seem to ignore them and walk on slowly. Do not look at, or talk to them.
2. If the dog approaches you at a distance and starts barking, but does not appear to be a threat, you may talk to it in a friendly voice. BUT, you should keep on walking and avoid eye contact.
3. If another person is in the area and might know the dog, don't be afraid to ask them for help. They might know the dog's name or might summon the owner for you.
4. Dogs show threatening signs by growling, snarling, barking, showing their teeth, staring directly at you, or standing stiff and still – sometimes with their hair up. If a dog should approach you and you think that it might attack, or if you're not sure of what to do:
  - \* Stand still. Stop what you are doing. Position yourself so that the dog is in front of you.
  - \* Do NOT stare directly into the dog's eyes. That is how dogs challenge each other to fight, and it can stimulate an attack.
  - \* If you say anything, speak calmly and firmly. Tell the dog "NO"! Make the dog respect your voice.
  - \* After a few seconds, the dog may think that either you are not a threat, or decide to leave you alone. Try to stay still until the dog leaves, then back away slowly until it is out of sight. Do NOT turn your back on a hostile dog or attempt to run away – You will trigger the dog's chase response and quite possibly be bitten.
  - \* If the dog comes up to sniff you, experts say that it is probably best to let it. In most cases, the dog will then decide that you are not a threat and will go away.
  - \* Be prepared to put something between you and the dog if it should attack. This may be a clipboard, briefcase, or the jacket that you are holding.



## **Domestic Violence** -

Although our nation has made great progress in many areas, many US families experience the pain and humiliation of domestic violence. In fact, nearly **one-third** of all American women report being abused by a husband or boyfriend at some point in their lives. In addition, child abuse also occurs in these same homes.

Domestic violence can take several forms:

**Physical** - Pushing, slapping, hitting, kicking, holding, restraining, wielding a weapon, or refusing to get help when a victim needs it.

**Emotional** - Threatening with actions or words, controlling a victim's activities, constant put-downs, name-calling, or criticism.

**Sexual** - Any type of forced sexual activity.

The factors in a relationship that increase the risk of abuse include:

- \* Age 17-28
- \* Pregnancy
- \* History of Abusive Relationships
- \* Financial Problems
- \* Alcohol/Drug Abuse
- \* Work or Family Stress

There are many reasons for spousal abuse, and the results are often tragic. Family violence costs our nation from **\$5 to 10 billion annually** in medical expenses, police and court costs, shelters, foster care, sick leave, absenteeism, and non-productivity.

The sad fact is that the husband's or boyfriend's promises to "change" are almost always NOT kept. Also, **the cycle of spousal abuse almost always requires help from outside the family for conditions to improve.**

Since safety professionals may see employees with apparent signs of abuse, it is helpful to be able to offer some sources of help. These may include shelters for battered women, abuse hotlines, and the local social services agencies. Also, the National Domestic Violence Hotline is available 24 hours a day at (800) 799-7233.

If you happen to witness instances of domestic abuse, these should be reported to the police. This could prevent serious injury and encourage the couple to get help.



**Driving Safety-** Year after year, motor vehicle accidents are the major cause of accidental death of active duty Navy personnel. As you drive to and from work, you will probably notice that:

- There continues to be an ever-increasing number of vehicles on our highways.
- The average speeds on our roadways continue to increase, allowing less margin for error and lowering reaction times.
- Many aggressive drivers do not obey posted speed limits. Also, they may run red lights, not stop fully at "stop" signs, fail to use turn signals, not maintain safe following distances, cut abruptly in front of other cars with no warning, weave in and out of traffic, etc.
- A certain percentage of drivers, mainly young males, choose to drive at 20 mph or more over the posted speed limits. This not only imperils their safety, but also the safety of others around them, and creates a large variance in driving speeds which may cause accidents.

Each year, traffic accidents are responsible for more than 40,000 deaths, 1.5 million serious injuries, and \$40 billion in lost wages, medical costs, and other expenses. It is apparent that we, as safety professionals, need to do a better job of spreading the driving safety message among our employees. Most automobile-related deaths and injuries are preventable. Realizing that the odds are very good that if you're not a better-than-average driver you will be involved in a crash at some point in your driving lifetime is an important first step to avoiding a crash.

You may be a great driver, but is everyone else on the road? No matter how carefully you drive, being at the wrong place at the wrong time on the roadways may involve you in a serious crash that won't necessarily be your fault. One solution is to limit your exposure by limiting the number of miles that you drive. Joining a carpool, using public transportation, combining errands, etc. can reduce your annual mileage.

One reason for the high number of motor vehicle accidents, particularly while driving at high speeds, is that making decisions and reacting in a moving vehicle needs to happen much faster than at home or in the office. Driving decisions must be made in seconds or fractions of seconds. A half-second delay in your reaction could result in a disabling injury or death.

To improve your odds, stay alert. Fatigue, stress, anger, drugs, and alcohol can impair your senses and slow your reaction time. To react as quickly as possible:

- Avoid alcohol, drugs, and over-the-counter medications such as antihistamines that could affect your decisions and reactions on the road.
- Stop for a little fresh air, a nap, or a short walk if you feel sleepy.
- On longer trips, take frequent rest breaks - about one per hour.
- Choose light energizing snacks such as fruits and vegetables. Avoid large meals - they can make you sleepy.

About 85% of automobile crashes are the result of lack of attention, human error, and poor judgement. To take charge and avoid crashes while driving, require that people riding with you refrain from distracting you. Also, avoid trying to eat, smoke, drink, read, or groom while driving.

Obedying the speed limit means that you choose to drive at or below the speed established by highway safety experts as appropriate. Adjust your speed downward from the speed limit if conditions warrant. Abiding by posted speed limits allows you more time to slow down to avoid a collision or road hazard. People who speed face:

- \* Speeding tickets
- \* Increased insurance premiums
- \* Fines and court costs
- \* Possible jail time
- \* Loss of License



Driving in excess of the speed limit may save you less time than you think. For example, driving at 65 mph over a 20 mile distance instead of the 55 mph speed limit only saves 3 1/2 minutes. On shorter trips, starting just a few minutes earlier can allow you to relax and drive safely, avoiding worries about arriving late. On longer trips, it is good practice to stop and call your destination when you realize that you will be delayed for some reason. This courtesy will avoid the tendency among some drivers to speed and "make up" time. An accident or speeding ticket is certain to cause you to arrive late, or not at all if the accident is bad enough.

Tailgating- Following too closely is a factor in a high percentage of auto accidents. Recent studies indicate that nearly three-fourths of interstate drivers in Norfolk, VA tailgate, and this is probably comparable with the rest of the US. Some reasons that experts give for driver tailgating include:

- \* Drivers mistakenly believe that tailgating will get them there faster. (It won't)

- \* Some drivers seem to be impatient – always in a hurry.
- \* More congestion and traffic may prompt some people to tailgate.



Traffic laws in most states indicate that drivers shall not follow another vehicle more closely than is reasonable and prudent, considering vehicle speed, traffic, road conditions, weather, visibility, etc. Police can and do ticket drivers who follow less than one second behind other vehicles. (Where the following driver reaches the spot of the driver ahead in a second or less). At least a 2-second following distance is recommended, and 3 or 4 seconds is preferred. Tractor-trailers are a particular hazard when they follow too closely, due to their greater stopping distance requirements.

Turn Signals- Since other drivers cannot read your mind, it is important that you communicate your intentions well in advance. You should try to signal at least 3 seconds before you make your move.

A less-known fact about driving is that driving while fatigued is almost as serious a problem as drunken driving on US roadways. Fatigue and alcohol can have similar effects. Being awake for 17-19 hours is roughly equivalent to a blood alcohol content of 0.05.! Driver reaction times on some tests is up to 50% worse while fatigued than while under the influence of alcohol.

Driver fatigue can be caused by long distance driving without sufficient rest or breaks, driving at times when you normally are sleeping, bad weather, or by long work hours. Signs of fatigue behind the wheel include yawning, drowsiness, drifting out of your lane, or struggling to keep your eyes open. Any of these signs could mean that you're about to fall asleep behind the wheel and risk killing yourself or others. Your response should be prompt - find a safe place to pull off the road and rest. A 20 minute nap can provide about a 4-hour boost in alertness - afterward you typically feel wide awake, refreshed, and ready to continue your trip. Stay alert behind the wheel by starting your trip well rested, taking a break every 2 hours or so, and traveling with companions who can share the driving whenever possible.

Some of your fellow drivers leave for work at the last minute possible, and rely on speeding to make up for the extra time that they should have allowed for their commute.

Drivers of this type are likely to be aggressive and impatient, speeding, tailgating, and changing lanes frequently. Avoid eye contact with an aggressive driver, choosing instead to stay away from them whenever possible. Avoid problems from drivers who tailgate by pulling over and letting them pass. When you change lanes for this or any other reason, try to signal your intentions well in advance. It is a good idea to signal enough in advance so that your turn signal blinks 6 times or more before your lane change or turn.

**"Beware the simultaneous lane change!"** Let's say that you are driving in the left hand lane in congested 3-lane expressway traffic and notice that the center lane is moving faster. You spot an opening and abruptly change lanes without signalling - not realizing that the driver in the right lane alongside you has the same idea. The result - - a broadside collision in the center lane that could result in a multi-vehicle pileup and injury or death to you and your passengers. Changing lanes always involves an element of risk. Minimize yours by signaling your intentions well in advance and ensuring that the space you are changing into will remain free of traffic for the time that it will take you to make the transition. Reduce the number of lane changes that you make as much as possible to lessen the chances of a collision.



Many drivers are obtaining cellular phones and using them while driving. A new study indicates that using of cellular phones while driving more than quadruples your chances of having an accident. Safe driving requires your total attention and awareness of what is happening around you and your vehicle. While cellular phones are very valuable in summoning emergency assistance when needed, they should be used only after you have pulled off the road or into a rest area.

The Atlantic Division has established a work-drive limitation so that an employee's work and vehicle operation time within a 24-hour period is never scheduled for more than 12 hours, and never actually exceeds 14 hours. The extra 2 hours is for contingencies such as traffic problems, breakdowns, and other delays. The intent is for our drivers to be alert and refreshed, to handle the sometimes stressful and demanding job of driving on our highways. This work-drive limitation cannot be waived by another passenger assuming the driving, since it is recognized that passengers will also be fatigued from the long trip. Both driver and passengers need to stop for the night and get a good night's sleep before continuing.

An often overlooked accidental potential while riding is your seating position, and also how you get into and out of a vehicle. If you are driving for long distances

and sit with your head, shoulders, and hips in general alignment and with your lower back supported, you will probably arrive much less fatigued than if you have been sitting leaning forward over the wheel, etc.. Also, if you have been sitting for awhile and have to get out a two door car from the back seat, you will need to move somewhat carefully and to make sure that your feet are secure before you transfer your weight to them. And, those of you that have ridden in Government vans can attest to the fact that they can be very tiring to ride in. But leaning back in the seat and resting your knees on the metal backing of the seat in front of you can result in a painful jolt if the van hits a pothole or raised road surface, since the stiff suspension may allow lots of force to be transmitted directly to your knees. I would recommend bringing and using a seat and back cushion while riding in this type of vehicle.



**Electrical Safety** - Although electricity is virtually indispensable to our way of life, it does expose people to such dangers as electrical shock, electrocution, burns, and electrical fires. Electrocutions rank 4<sup>th</sup> among causes of industrial fatalities. We all must treat electricity with the respect that it deserves.

Electrical shock occurs when current enters the body at one point and leaves at another. This can happen if a person in contact with the ground contacts either both wires of an electrical circuit, one wire of an energized circuit, or a metallic part that has become "hot" by contact with an energized conductor. A relatively small amount of current can pose serious danger to a shock victim. A difference of less than 100 milliamperes exists between a current that is barely perceptible and one that can kill.

Electrical insulation safeguards people from electrically energized wires and parts. The insulation of flexible cords is particularly vulnerable to damage.

An important circuit protection device is the ground-fault circuit interrupter or GFCI. It is designed to shut off electrical power within as little as 1/40 of a second. It works by comparing the amount of current going to electrical equipment against the amount of current returning from the equipment along the circuit conductors. If the current difference exceeds 6 milliamperes, the GFCI interrupts the current quickly enough to prevent electrocution. GFCI circuits are used in wet locations, construction sites, and other high-risk areas.

A recent design issue involved placement of electrical receptacles near safety showers/eyewashes, with the concern of electrical shock to users if the receptacles were too close. This issue is not known to be addressed in the National Electrical Code.

However, the Code does require that electrical receptacles be at least 10 feet from pools, spas, and fountains. Also, these circuits should be GFCI-protected.

A required electrical feature that is sometimes overlooked in Navy/Marine Corps buildings is the National Electrical Code (NEC) requirement for accessible circuit breaker panels and current disconnects. These must be readily accessible and disconnect all hot conductors, and the occupants must have access. "Readily accessible" means that employees must not be required to climb onto their desks or use a ladder to reach the electrical disconnects.



**EMF From Video Display Terminals , (VDTs)-** NIOSH and others have measured electromagnetic field exposures, (EMF's), emitted by VDT's. The tests show that levels for all types of radiation emitted by VDTs are below those allowed in current standards. In fact, some measurements show radiation emissions so low that they cannot be distinguished from background radiation. There is general agreement among experts that exposure to the electric and magnetic fields from VDTs is not harmful.

**Emergency Light Spacing and Testing-** Emergency lighting must be provided where required by NFPA-101. Emergency lights are generally provided as follows:

- In exit corridors, spaced roughly 75 feet apart.
- In exit stairways at every floor level.
- Throughout large open bay areas, (i.e. aircraft hangars, warehouses, industrial shops, etc.) to illuminate exit access routes and to provide the required one footcandle illumination throughout the egress route.
- Where normally occupied rooms have an intervening room between the room and the corridor, emergency lights are frequently provided in the intervening room. Emergency lighting units are normally not provided in individual rooms unless the rooms are of moderate-large size.
- Throughout places of assembly, educational, health care, and mercantile occupancies, windowless buildings/sections, and buildings occupied at night.

Building emergency lighting may be provided using individual battery pack units, central batteries, emergency generators, or battery backup/inverters on selected lighting fixtures. Many modern exit lighting fixtures have battery backup, with down lights to illuminate the immediate area surrounding the exit sign.

Emergency lights must be tested for at least 30 seconds every 30 days, and for

1 1/2 hours on an annual basis.

### Emergency Procedures for You and Your Family

1. PRE-PLAN- Decide what you and your family will do in the various situations noted in this section. Prepare yourself by considering on emergency supplies that you might need, such as:

- \* Non-perishable food
- \* A portable radio that operates on batteries
- \* Flashlights and candles
- \* A portable electric generator
- \* A first aid kit and other medical supplies
- \* A cellular phone



Please note that some of the above supplies are very handy in the event of a power failure. In serious weather-related conditions, electrical power is often the first utility to fail and may be out of service for days or even weeks.

2. STAY INFORMED- It is a good idea to listen to daily news and weather reports. Stay tuned to your favorite TV and radio station if a storm or other weather emergency is predicted.

3. HOLD HOME SAFETY DISCUSSIONS/DRILLS- These can range from informal questions at the dinner table about emergency procedures to actual practice under a simulated "emergency". Regardless of how your family elects to prepare, please consider:

- Every person should have a primary and a secondary escape route from every room in the house.
- Your family should designate a meeting place outside so each family member can be accounted for.
- If adverse weather conditions are predicted, it is a good idea to keep the family together as much as possible. Certainly you should be aware of where other family members are at all times before and during a storm. Having family members, particularly younger children, away from home when a

storm strikes is certain to increase stress. Children may try to rush home either just before or during a storm and risk an accident or injury.

Emergency equipment such as fire extinguishers should be inspected regularly to ensure a readily accessible location and good condition. Smoke detectors should be tested each month, with batteries replaced twice a year. Also, don't forget to test any carbon monoxide detectors that you may have.

#### 4. FOR ANY EMERGENCY YOU MUST:

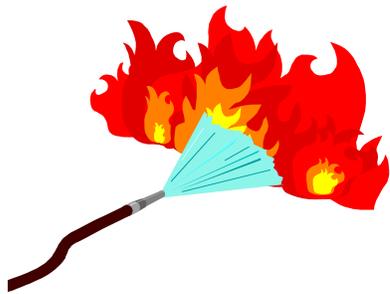
- Resist the urge to panic. In an emergency situation, it is vital to think clearly. A person who panics is using emotions rather than rational thought to make decisions. If you and your family has planned ahead, you will not be caught unprepared and will be ready to cope. Resolve to put into practice what you have decided in advance to do. Perform without fail what you resolve.

- Act quickly! Once you have decided on the best action in a particular situation, DO IT! People need leaders in an emergency. Be one.



#### 5. IN A THUNDERSTORM:

- It is desirable to be aware of the weather forecasts whenever you venture outdoors. This is particularly true when you are planning a boating trip, or know in advance that you will be hiking in remote areas, away from shelter
  - Make it a point to always keep an eye on the weather so that you are not caught unawares by an approaching thunderstorm.
  - If you are swimming or boating, get out of the water immediately.
  - Do not remain outside - Get into a building, car, or shelter if at all possible.
  - In a forest, pick a low area under thick, small trees.
  - Stay away from tall trees, elevated areas, flag poles, overhead wires, metal pipes, and clothes lines.
  - Do NOT touch metal objects such as bicycles and fences



#### 6. IN A FIRE:

- Get all family members out of the house as soon as possible
- Call the fire department from a neighbor's house or other safe location
- Extinguish a small contained fire, (i.e. Smaller than a basketball or one which you can safely approach to within 10 feet), using a fire extinguisher, garden hose, wet rug, or wet blanket.
- Turn off gas sources and electricity, if possible
- For a grease fire, smother with a pan lid. Do NOT attempt to carry the pan outside or use water on burning grease.



#### 7. IN A WINTER STORM:

- One or more emergency heat sources for your home is highly desirable in case the primary heat source fails. Emergency heat sources can include wood burning stoves, fireplaces, kerosene heaters, etc. Keep several day's supply of good quality fuel on hand.
- Have an adequate supply of warm clothing and winter footwear available.
- Know the symptoms and first aid procedures for hypothermia and frostbite, and take precautions.
- Stock up on food. Have a battery operated radio, flashlight, and spare batteries on hand.
- Try to keep your car well-fueled and in a heated garage. Parking in your driveway or off public roadways is preferred - this allows snowplows better access and safeguards your vehicle from possible damage.
- Avoid travel unless absolutely necessary. Public transportation should be used if possible.



## 8. HURRICANES OR HIGH WINDS

- Listen to radio and television for advance warnings. Consider evacuation if recommended and appropriate. Your belongings can be replaced - you and other family members cannot.
- Secure outdoor furniture and trash cans or bring inside.
- Consider going to public shelters if the situation warrants.
- Stay indoors, away from windows.

## 9. IN AN EARTHQUAKE

- The greatest danger is from building collapse or from falling debris.
- The safest place is often outdoors, away from buildings and overhead wires.
- If inside, stand in a doorway or get under heavy furniture
- If outdoors, stay away from buildings and power lines.
- If driving, pull over and park in the safest possible place.
- Be careful after a quake. Aftershocks may occur for several days.

**ERGONOMICS** - The subject of ergonomics is too broad and existing guidance much too extensive to be covered adequately in this Handbook section. However, some basic ergonomic facts may be of interest and will be presented here.

The term "ergonomics" is derived from the 2 Greek words "ergos" and "nomos". and literally means the laws or management of work - how people work and how their working conditions can be improved to:

- Make them more comfortable
- Make them more productive
- Reduce or eliminate cumulative trauma claims

Ergonomics is a bottom-line issue. Primary payoffs of addressing ergonomics in the workplace include higher morale and productivity. Ergonomics, however, is not a "one-way street" where the employer is totally the active party, with employees as passive recipients. Employees must play a role in the Ergonomics Program by becoming more familiar with and practicing ergonomically-sound work techniques, adjusting their

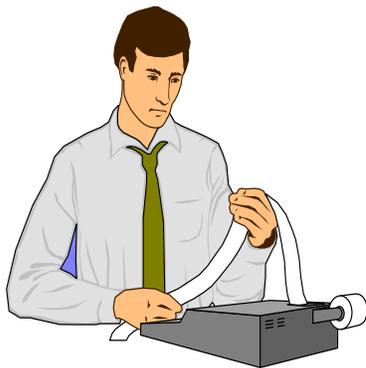
work stations to avoid repetitive stress, changing positions frequently, using correct posture while standing or sitting, etc.



Often an employee's lifestyle, hobbies, and experiences outside of the work environment affect the level of comfort that they will experience at work. Any of the following off-work factors may greatly impact the employee's comfort level:

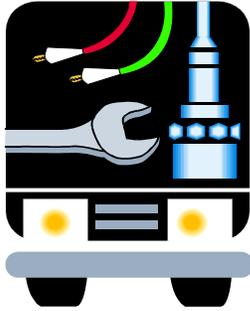
- Amount of sleep each night, and mattress quality
- Previous accident history - particularly automobile accidents
- Employee's exercise program - especially if the employee regularly does exercises that maintain or increase muscle flexibility
- Employee's diet. Good nutrition is absolutely necessary for good health.

MAN VS. MACHINE - In examining possibilities for working smarter - not harder, the question is sometimes raised as to whether some of the employee's work could be better performed by a machine. Humans excel in tasks which:



- Require judgement. (i.e. When events cannot be completely defined)
- Involve improvising and adopting flexible procedures
- Sometimes require devising alternate solutions
- May involve fine manipulation

Machines excel in:



- Performing routine, repetitive, or very precise operations
- Exerting great force - smoothly and with precision
- Doing many things at one time
- Being insensitive to extraneous factors
- Operating in environments where are hostile to man or beyond human tolerance



**Excavation Safety:** A major danger of excavation is cave-ins, which can crush or suffocate workers, even if the trenches are no more than 5 feet deep. Other excavation hazards are falls into improperly guarded trenches, lack of oxygen, build-up of poisonous gases, or employees being killed or injured when machinery or piping topples or slides into the excavation. Some important elements of excavation safety include:

- Shoring the sides of the trench with metal hydraulic, mechanical, or timber bracing systems. A shoring system may include timber or steel sheeting, bracing, and screw or hydraulic jacks.
- Daily inspections by authorized, competent personnel
- Ground sloping to prevent cave-ins
- A trench shield or box
- Physical protection, including fences, covers for manhole openings, barricades, warning signs, guard rails, flags, etc.
- Placing ladders within 25 feet of any workers in trenches 4 feet deep or more
- Employees wearing personnel equipment protection



**Exercise** - The jobs of yesterday that involved lots of exercise like farming, commercial fishing, logging, etc. have been replaced to some extent by today's office jobs that offer little or no exercise on the job. Busy lifestyles and extensive work schedules cause some people to hire housecleaners, yard workers, etc. to do the jobs that they used to do themselves. Also, the advent of modern transportation systems makes it more convenient than ever to ride rather than walk. Employees who are able to walk to work now are almost a thing of the past. And parents that walked a few blocks to school every day when they were young now see their kids hop on the bus that stops at every corner.

The lack of a regular exercise program can cause our muscle tone to decrease and our weight to slowly increase. It is MUCH easier to gain weight than it is to lose it, especially as you get older. And more than half of American adults are considered overweight. As we become more sedentary, it becomes an effort to do almost any form of physical activity, so we don't bother. But there is a price to be paid. Being overweight or out of shape can cause our chances of injury to skyrocket.

Many people look forward to their exercise routine and find that it gives them peace of mind and a sense of accomplishment. Exercise can pay dividends such as:

- \* Good health
- \* Greater heart and lung efficiency
- \* Lower blood pressure
- \* You sleep better
- \* Better ability to fight off disease
- \* Weight control
- \* More positive self-image



New studies suggest that losing weight and keeping it off requires that an average person burn roughly 400 calories a day through exercise. This requires about 40-60 minutes a day exercise. **But don't panic!** A lot of your activities each day can be counted as exercise, and your daily exercise can be accomplished in INCREMENTS throughout the day. For example, the time that you spend mowing the lawn, raking leaves, walking the dog, cleaning house, etc. all count towards your daily exercise total.

**Exit Signs-** The Life Safety Code requires that all exits be marked with an approved sign readily visible from any direction of exit access, except for main exterior doors that obviously and clearly are identifiable as exits. Also, exit access signs are required in all cases where the exit, or the way to reach it, is not readily apparent to occupants. No point in the exit access corridor should be more than 100 feet from the nearest sign.

Radioluminous signs using materials that are slightly radioactive have been used in the past for some Navy buildings due to the lack of electrical power, hazardous building environments, etc. Although the low radioactivity emitted by these signs is not a hazard to personnel, disposal at the end of their useful life can be a problem. The use of this type of sign is, therefore, discouraged.

A better choice for a non-powered exit sign is the photoluminescent type. Photoluminescence is caused by inorganic zinc-sulphide pigments imbedded in the sign lettering. These pigments are non-toxic and free from radioactivity, and absorb and store light energy contained in daylight or artificial light. When it is dark, the stored energy is released gradually in the form of green light.

New Navy buildings are making increasing use of light emitting diode, (LED), type exit signs due to their low maintenance requirements and long life. Battery life expectancy for these units is from 8 to 15 years. LED type exit signs are a good choice as replacement units for conventional signs.



**EYE PROTECTION-** Vision is a precious gift that must be maintained. Our eyes are not only marvelous instruments of vision, but irreplaceable, so all of us must take necessary, simple precautions to protect our vision. These precautions include:

- Eye examinations as recommended by your doctor.
- Wearing safety goggles while using power tools in your workshop, pounding nails or spikes, spraying harsh cleaning solvents, sharpening tools, etc.
- Never looking at the arc of a welding torch

- Wearing sunglasses that absorb at least 99% of all ultraviolet light, and that are dark enough to block from 75% - 90% of visible light, whenever the light is bright enough to make you squint.
- Choosing polycarbonate plastic eye glass lenses for their high impact strength. Other common eye glass lense materials such as allyl resin plastic, heat tempered glass, and chemically tempered glass can shatter when struck by baseballs, golf balls, or even a tennis ball.



**EYEWASH/SHOWERS**- Since most safety professionals are familiar with the requirements of OSHA 1910.151 (c) and ANSI 358.1, they will not be repeated here. Rather, the following observations and comments are offered:

- Become familiar with the operation of eyewash/showers before you need one.
- Each unit must be activated weekly.
- Assistance should be provided immediately. The injured person is likely to be in great pain, may have a partial or total vision impairment, and may be suffering from shock.
- OSHA is not specific about the location of eye washes and showers. But because the first 15 seconds after an injury involving corrosives is the most important, eye washes/showers should be no more than 25 feet from any hazardous work station.
- The best eyewash/shower arrangements have alarm systems activated by unit waterflow.
- If you are outside and dust particles, a small insect, etc. happens to blow into your eye, an eyewash may not be available. In this case, either a drinking fountain might be useful, or you can wet a cotton-tipped swab and roll it gently along your upper and lower eyelids to pick up any foreign substances.



**FAINING** - This sudden loss of consciousness, most often occuring when the

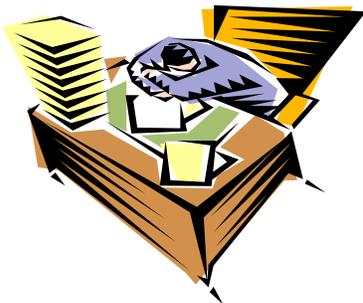
heart does not pump a normal supply of oxygen to the brain, is known medically as syncope. A normal fainting episode will last only a few seconds or perhaps a minute or two, then the person regains consciousness. About one-third of us will faint at least once in our lifetime. Safety concerns with regard to fainting are apparent when we realize that **between 16% and 35% of people who faint injure themselves when they fall**. Relatively minor injuries, such as cuts and bruises, are most common, but more serious injuries such as bone fractures or head injuries are possible.

Fainting causes include standing for long periods or standing up fast, working or playing hard – especially if its very hot, hyperventilating, emotional upset that affects the nerves controlling your blood pressure, or some high blood pressure medications. A drop in your blood sugar can also cause you to faint. This can happen if you have diabetes, but also may happen if you don't eat for a long time. Alcohol or drug use may also cause fainting in some individuals.

The signs that a person may be about to faint include complaints of feeling dizzy or light-headed, or pale, cool, or clammy skin. But YOU may experience the hazards of fainting yourself instead of a co-worker or friend. If you feel like you're going to faint, the recommended procedure is to lie down, preferably with your feet elevated. If this is not possible, sit and bend forward with your head between your knees. Either of these actions should help get more blood flowing to your brain.

If you are near a person who has fainted, check for breathing and feel carefully for a pulse. If you cannot detect a heartbeat or breathing, emergency personnel should be contacted immediately and CPR should be started. If breathing and pulse are present, try to elevate the person's feet and loosen any tight clothing, especially neckties, etc. When the person revives, they should lie or sit quietly for a few minutes before attempting to stand. Although actors/actresses in movies splash cold water on the unconscious person's face, **DON'T!** A cold compress may be applied to the person's forehead instead.

The person that fainted may not need to seek medical attention if they have only fainted this one time and are in otherwise good health. Fainting is common and usually not serious. But fainting which affects the person's speech, occurs more than once in a month, affects vision, or is accompanied by an irregular heartbeat, chest pain, or shortness of breath should prompt a visit to your medical provider immediately.



**FATIGUED AT WORK** - Study after study confirms that Americans are

sleep-deprived, and an overwhelming majority of us agree that inadequate sleep impairs our work performance. A lack of sufficient sleep also puts us at increased risk for accidents, injuries, and health problems. Researchers and industry experts estimate that fatigue in the workplace costs American industry at least **\$77 BILLION PER YEAR !!** And employees with shiftwork operations believe that employee fatigue is the direct cause of at least 18% of all accidents and injuries suffered in their facilities.

Fatigue behind the wheel can be deadly, and accounts for about 11% of fatal accidents in the US. But even worse is the fact that fatigue is estimated to account for **over 33%** of the costs of all vehicle accidents involving commercial drivers. Part of the reason for this is that, unlike private vehicle drivers, commercial drivers often cannot choose when they're "on the road".

The problem of fatigued workers has become so bad that a majority of Americans now support increased regulation on the number of hours worked by Americans in demanding professions – such as doctors, nurses, pilots, and truck drivers. All of these professions demand concentration for long periods of time, and may involve night work.

Employees have primary responsibility for coming to work as well-rested as possible. For this to happen, employees must:

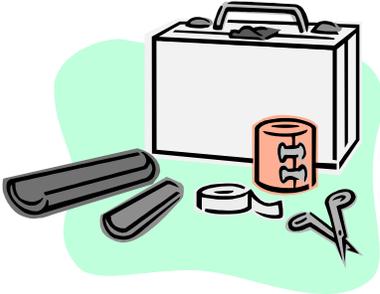
1. Resist the temptation to "cheat" on the hours of sleep that they know they need each night. "Cheating" may take the form of staying up late to watch a favorite TV program, to play cards, or to attend a meeting or social event.
2. Try to go to bed and get up at about the same time each day.
3. Resolve any problems or issues before going to bed.
4. Use their beds only for sleeping, not for watching TV or eating.

Shiftworkers are about twice as likely as the average American to suffer from sleep apnea, which results in constantly interrupted sleep. Sleep apnea is characterized by loud snoring and numerous instances of pauses in breathing during sleep. Shiftworkers can generally get better quality sleep by:

- \* Requesting that family members help by keeping noise levels lower during the shiftworker's "sleep time", even if this is during the day.
- \* Unplugging the bedroom phone while sleeping, and letting family members take messages for the shift worker if calls are received.
- \* Operating an air conditioner or box fan in the bedroom when necessary, or keeping an "easy-listening" radio station on while sleeping. This "background" noise may drown out other unwanted, intermittent sound from inside and outside the house
- \* Limiting caffeine-containing drinks, especially before bedtime.
- \* Sleeping in darkened bedrooms with curtains provided to block out sunlight.
- \* Ensuring that their bedroom is cool enough.
- \* Buying and using a quality mattress

Safety professionals can assist employees in combatting the problem of fatigue at work by:

- \* **Establishing and enforcing work-drive limitations.**
- \* **Supporting "light-duty" programs and reduced hours for employees who are recovering from accidents/illnesses and cannot work a complete shift until they are recovered.**
- \* **Being alert for fatigued employees on the job, and advising supervisors when this is noted.**



**FIRST AID KITS** - Many of the Safety Offices that do not provide any first aid supplies to employees also adopt the concept that first aid kits are also undesirable. Some reasons given for this include:

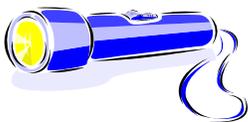
- Kit supplies may have a "shelf life" and expiration dates, and outdated supplies may be retained and used.
- Kits may be depleted of necessary supplies and not restocked, thereby providing a false sense of security.
- Employees with no medical training may use supplies incorrectly, delaying a trip to seek professional medical attention and increasing the possibility of complications.

The arguments for first aid kits are similar to those given above for the Safety Office making some first aid supplies available. Our Command assigns "Safety Coordinators" who assist with the Safety program and also monitor first aid kits and their supplies. We consider first aid kits optional, but desirable. Small first aid kits for autos and offices are available for less than \$15, and are easily maintained.

You, as a Safety Professional, may have made your decision about whether to accept or reject first aid kits at work a long time ago, or you may not have considered this issue. Regardless of your feelings, most of your employees probably have a small supply of medicines and self-care supplies in their offices, and both you and they certainly maintain first aid supplies at home. The question, then, is just exactly WHAT should you keep on hand ? Experts suggest the following:

- \* [Adhesive Strips in assorted sizes](#)

- \* Adhesive Tape, (One-inch wide), to fasten gauze dressings
- \* Antacid for heartburn or indigestion
- \* Antibiotic Ointment to prevent wound infections
- \* Antihistamine for allergies, itching, or hives
- \* Antiseptic for cleansing abrasions, suts, and scrapes
- \* Cold Gel Pack in your freezer to reduce swelling of bumps, bruises, or sprains
- \* Cold medicines such as decongestants or sore throat lozenges
- \* Cotton balls to cleanse wounds
- \* Diarrhea medicine
- \* Elastic Wrap, (3 inches wide), for sprains or other injuries



- \* Flashlight or penlight to inspect sore throats, rashes, or other injuries
- \* Heating Pad to increase blood flow and speed healing of sore muscles
- \* Ipecac to induce vomiting. (Only when instructed by a doctor or local poison control center)
- \* Pain Reliever such as aspirin, acetaminophen, or ibuprofen



- \* Scissors to cut adhesive tape
- \* Sterile Gauze for dressing cuts, scrapes, and burns
- \* Thermometer – as recommended by a pharmacist or physician for checking body temperature
- \* Tweezers to help remove splinters



For everyday aches and pains, its quicker to run to your bathroom cabinet than to the drugstore. However, when you do visit the drugstore I would not hesitate to ask questions of your local pharmacist, who is usually glad to help and may have some good suggestions that will save time and money.



**FITNESS** – Almost everyone can attest that its a lot harder to get into shape than it is to get out of it. But Americans invest billions of dollars each year in making their lives easier and more convenient. Its certainly a lot easier to just jump into your car and drive to the store than to walk or bike. Taking the elevator is easier than walking up the stairs. And it is more comfortable to come home at night and flop down in your easy chair with the TV remote in hand than to get out and exercise.

People with poor or no exercise habits generally have lots of "reasons" or excuses for their sedentary lifestyles. These may include:

- \* I'm too tired
- \* I don't have time
- \* I find exercise boring
- \* I have health problems
- \* I find exercise uncomfortable

If you feel yourself thinking this way, from time to time, please remember that **many people pay a price each year for their sedentary lifestyles.** They often carry extra pounds, don't sleep as well, have less energy, tend to have higher blood pressure, get out of breath easier, and are at greater risk for a heart attack or a stroke. Additional health risks include higher cholesterol, diabetes, and arthritis.

Some experts feel that some of the greatest reasons for the decline of fitness in American adults and children are the television, VCR, and the computer. These devices take up LOTS of sedentary time in the lives of many Americans, requiring almost no physical effort and offering no health benefits.

Recent fitness studies of the American adult population are disturbing, and indicate that:

- Roughly 50% of women and 60% of men are overweight and in poor physical condition
- In the last 7 years, the average weight of an adult has increased by about 10 pounds

In addition to overall poor fitness, many employees have other personal risk factors including smoking, alcohol, poor dietary habits, stress, higher risk habits, (i.e. sky diving, scuba diving, riding motorcycles) etc.

Statistics continue to show that employees in poor physical condition suffer illnesses and injuries much more often than their physically fit co-workers. Recovery times for overweight employees may be considerably longer than for fit workers.

So what is the Safety Office to do? We certainly cannot mandate fitness standards like our military counterparts. Some pro-active ideas in this area include:

- Sponsor or participate in health fairs where fitness tips and information are presented.
- Make information available to employees on diet, exercise, fitness, smoking cessation, etc.
- Try to set a good example yourself.

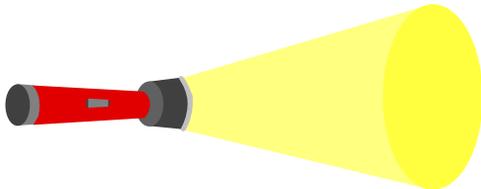


**FITNESS CENTER SAFETY** - You may not be involved at all with fitness centers, or may wonder how this curious topic found its way into this handbook. One reason is that the concept of "fitness buffs" getting together and establishing exercise rooms or small "fitness centers" is gaining popularity. These centers may have free weights, and exercise machines which may not be labeled or have instruction plates. But the users should be able-bodied and physically fit, so what is the problem?

- 1) These centers may never be locked, and access may not be controlled. Therefore, we have no idea of who may be using the fitness equipment at any given time.
- 2) Some centers do not have trained attendants on duty.
- 3) Smaller centers may not have telephones to call for emergency assistance.
- 4) Persons using the center may not be aware of how to safely use all equipment.

5) If there is no requirement for a "buddy" system, employees may work out alone. No one will, therefore, be available if the employee suffers a mishap, becomes ill, feels faint from overexertion, etc.

If you are involved with fitness centers, please review the above and ensure that your center(s) do not have these problems.



**FLASHLIGHTS** - These relatively simple devices have been around for many years - so long in fact that we forget how valuable they can be in many situations. Although virtually everyone has at least one flashlight at home, many employees overlook the value of a flashlight at work, and on TDY assignments. If your office or home loses electrical power in a fire or storm, a flashlight can light your way out and may keep you from falling over obstacles along the way.

Some field assignments call for you to enter confined spaces or unlit areas, and a flashlight may be almost essential. Also, many of us walk for fitness and a flashlight is most valuable after dark to illuminate the path ahead. Keeping a flashlight nearby when you go to bed at night is recommended, both for security reasons and to prevent tripping over objects in a darkened room. And when you travel, having a flashlight handy in your hotel room is a good idea. You should also carry a flashlight in your car at all times as part of your emergency supplies.



**FLAMMABLE LIQUID DISPENSING AND STORAGE** - A flammable liquid such as gasoline or paint thinner is one which could be expected to be at its flash point during normal conditions. This means that the liquid is giving off vapors that can ignite, and special precautions are necessary.

Three of the largest manufacturers of safe flammable liquid storage and handling equipment are Eagle, Justrite, and Protectoseal. The Justrite publication, "How to Handle Flammable Liquids Safety" is highly recommended, and may be obtained by calling

-(800) - 798-9250, FAX 1 (708) - 298 - 3429, or by writing to the Justrite Manufacturing Co., 2454 Dempster Street, Des Plaines, IL 60016. This publication covers virtually everything that you need to know about flammable liquid storage and handling.

NFPA - 30, Flammable and Combustible Liquids Code, specifies quantities of flammable liquids that are permitted buildings. Flammable liquid hazards include:

- Most flammable liquids readily emit flammable and potentially explosive vapors that can travel far from their source and become ignited.
- The flammable liquids themselves tend to spread rapidly if leaked or spilled from a container, increasing the potential fire area should ignition occur.
- Flammable liquid fires produce tremendous quantities of heat and smoke in a very short time. A flammable liquid fire can be very difficult to extinguish.
- Flammable liquids in aerosol cans can explode when exposed to heat

Burning flammable liquids can spread rapidly, quickly injure or kill employees, and destroy buildings. You will be doing your Safety Program a favor by learning all you can about flammable liquid safety.



### **FLOOR WAXES - SLIP RESISTANT** –

For many Safety Offices, slips, trips, and falls are either the prevalent mishap cause, or are a major problem. The military often prefers shiny, high gloss floors. However, these floors are not only often slippery when wet, but the water is often very difficult to see and may not be noticed.

One solution to this problem may be to apply a slip-resistant cleaner/polish. This is often a simple one-step treatment that doesn't require rinsing, and raises slip coefficients dramatically on conventional finished flooring.

The higher the slip coefficient, the greater the resistance to slipping. A common procedure for measuring slip resistance is set forth in ASTM C1028. During this test, a 50 lb. weight is placed on a Neolite shoe heel resting flat on a surface, and the weighted heel is pulled across the surface. The force required to set the weighted heel in motion is recorded, and the static coefficient of friction is derived by dividing the force measurement by 50 lbs. OSHA requires a coefficient of friction of 0.5 or higher.



**Foodborne Illness** - Food poisoning is most prominent in high protein foods such as meats, eggs, fish, dairy products, and sauces. If you have experienced the cramps, diarrhea, vomiting, and nausea that can accompany foodborne illness, you know the value of careful food selection and preparation. If you have never experienced this malady, consider yourself fortunate and keep up your good food precautions. Some useful suggestions to protect you and your family from foodborne illness are:

- Do not thaw meats at room temperature – thaw in the refrigerator instead.
- Cook meat until the juices are clear. The meat interior should not be pink.
- Discard leftovers within 4 days.
- Do not let juices from poultry and raw meat come into contact with other foods. Keep uncooked poultry and meats separate, and in sealed containers.
- Since most germs that cause foodborne illness can't survive or cause harm outside of the 40 deg. F – 140 deg. F range, try to keep foods outside of this range by refrigeration and by thorough cooking.
- Start with fresh, wholesome food, prepare it carefully, cook using an accurate thermometer to measure internal temperature, and immediately refrigerate food that will not be used.
- Be particularly cautious of food that is cooked or stored away from conventional eating places such as restaurants or kitchens. Eating food purchased from mobile canteens, vendors, at roadside stands, or at festivals can be risky.

The above tips mainly apply to the food that you purchase and cook yourself, or to food consumed at local restaurants. But what about the food that you purchase or consume when travelling – particularly in another country ?

A good place to start when researching food-safety precautions in other countries is by visiting the Centers for Disease Control web site at <http://www.cdc.gov/travel/>, then scrolling down to the Section entitled "Safe Food and Water". This Section will provide you with health reports and food precautions for the countries that you select.

Many countries have food and water quality standards similar to those in the US. This is particularly true if your trip is conducted in or around highly developed areas or population centers. However, food safety standards in other countries or less developed

areas may not be as stringent, and you can get a foodborne illness if you aren't careful. Eating or drinking "as the locals do" may be risky. Your immune system is not the same as theirs, and getting sick while travelling is quite common for tourists in some countries. So, to protect yourself:

1. Wash hands often in soap and water
2. Avoid dairy products unless you're certain that they have been pasteurized.
3. Eat only thoroughly cooked foods, or fruits or vegetables that you have washed and peeled yourself. Raw shellfish is VERY risky, as are undercooked beef and poultry.
4. In underdeveloped areas, drink only bottled or boiled water, or carbonated drinks in cans or bottles. Avoid tap water, fountain drinks, and ice cubes.
5. Bring iodine tablets and "Absolute one-micron or less" water filters to purify your drinking water if bottled water is not available.
6. Do NOT eat food purchased from street vendors.

Another food safety tip which applies no matter where you are eating is to be careful not to swallow bones or bone fragments of any sort. This precaution is obvious when eating fish or chicken, but small bones may be hard to spot. Some cooks prepare chicken soup by adding cooked chicken that they have prepared by hand. Though you would not expect to find bones in your "homemade" soup and may not chew the solid portions as carefully, you still need to be aware that bones may be present.

If you should get a bone stuck in your throat and can look in a mirror and see where it is, you may be able to reach it with your fingers and pull it out yourself. Otherwise, its best to see a doctor, since bones in your throat can cause irritation and infection and may not become dislodged on their own.



**FOOT CARE** - Each of your feet contains 26 bones, 33 joints, and 19 muscles - all of which support your weight. If you have ever suffered sore or swollen feet, blisters, a foot sprain, or perhaps a broken foot bone in the past, you know how easily your feet can be injured. Don't take your feet for granted. Take care of them instead. Invest in good quality, slip-resistant shoes which provide adequate support. Wear safety shoes on construction sites and in industrial areas where you could expect foot injuries from falling or rolling objects. Never leave boards with the nails upright where they could puncture your foot if stepped upon. Invest in shock-absorbing shoe insoles if needed. Keep your feet dry by choosing socks of 100 percent cotton. They will absorb moisture and keep your feet cooler. Be especially careful while barefoot since you are vulnerable to foot cuts, burns from hot surfaces, etc. Hot surfaces may include beach sand on a hot day, etc. Take care of your feet so they can take care of you.

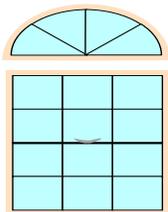


**FUELING SAFETY** - If you fill a portable gasoline container while it is sitting on a plastic bed liner of a pick-up truck, the insulating effect of the plastic may prevent the static charge generated by the flowing gasoline from grounding. A static spark can be created, igniting the gas can and your vehicle. Never fill any gasoline container while it is inside a vehicle, trunk, or pick-up bed. Dispense gasoline only into approved containers sitting on the ground a safe distance from your vehicle. Watch the filling process carefully to avoid overfilling the container.

**GALLBLADDER PROBLEMS** - The pear-shaped gallbladder, located in the abdomen just under your liver, stores bile which aids in fat digestion. However, bile composed of too much cholesterol or too little acid can harden into gallstones. Stones that are too big or numerous can result in severe bouts of abdominal pain, sometimes spreading to the back or shoulder, as well as nausea and vomiting. Women are about twice as likely to get gallstones as men.

Health factors that may reduce or prevent gallstones include drinking plenty of water, eating a plant-based diet, reducing dietary fat, regular exercise, and maintaining a healthy weight. Any weight reduction should be gradual, not sudden.

**GARAGE DOOR SAFETY** - Overhead garage doors are one of the heaviest pieces of equipment around the home. They can crush fingers, feet, and even trap a child. Garage doors with mechanical openers manufactured after January 1993 must have an electric eye sensor to raise the door automatically if an object is detected in the door's path. Inspect and lubricate your garage door regularly to ensure free operation. Always keep children away from operating doors.



**GLASS SAFETY REQUIREMENTS** - Safety glazing, (tempered or laminating glass), is generally required for glass installed in doors, and for sidelights within 12 horizontal inches of the door opening. For other locations, safety glazing must be used

when the glass is within 18 inches of the floor or within 36 inches of a passage, and the glass area is over 9 square feet. Tempered glass is commonly used in residences. Laminated glass is frequently used in commercial buildings. All tempered glass must be labeled as such by a permanently identifiable mark.

Safety glazing is glass that meets prescribed performance criteria established to reduce the risks of injury should someone fall into it or through it. Tempered glass has been heat treated and is 4 to 5 times as strong as ordinary glass. If accidental breakage should occur, the resulting fragments are small and granular and present minimal possibilities of injury. Typical applications of tempered glass are for store fronts, phone booths, office partitions, cabinet doors, and display cases.



**HAMMER SAFETY** - It would be hard to think of a more useful tool than the hammer, which has evolved over hundreds of years. Some handymen view their hammers as a trusted friend, and an extension of themselves.

To use hammers safely, you first must protect your eyes by wearing safety gloves or goggles. Small pieces of the nail or other material that you are hammering can fly up and cause an eye injury. This is particularly true if you are pounding case-hardened nails into concrete or masonry. You must protect your eyes.

A second area of concern is your holding hand, which can be struck and injured if you're not careful. The following rules apply:

1. Start by buying a good, well-balanced, quality hammer that fits your hand well. The proper head-to-handle weight distribution is very important. When a hammer has good balance, it seems to swing itself. If you prefer a wooden handle, one made of hickory should be selected. Other types of handles are made of fiberglass, or solid steel.
2. Inspect your hammer before use. Repair or discard hammers with loose, cracked, or broken handles or chipped, cracked, or mushroomed faces.
3. Use the right hammer for the job. Available hammer types include the common nail hammer, the rip hammer, ball pein, soft face, tack hammer, brick hammer, drywall hammer, and the carpenter's mallet.
4. Begin driving the nail by tapping lightly, then, once the nail is secure, pull your holding hand out of the way. For difficult nailing jobs, you may want to hold the nail initially with a pair of needle-nosed pliers to avoid hitting your fingers.

5. Hit the nail head solidly with the center of the hammer face using firm, smooth blows. Avoid sideways or glancing blows which can bend the nail. The hammer handle should be roughly perpendicular to the nail when contact is made.

If you should happen to hit your finger, your fingernail may turn black due to blood pooling under the nail. Though unsightly, this type of injury is usually not serious. However, your nail may stay black until the damaged portion grows out enough to be cut. It takes about 6 months for one of your fingernails to grow out completely from the nail socket to your fingertip. With this in mind, please be careful and try to avoid hitting your holding hand in the first place.



**HAND SAFETY-** Your hands are literally an extension of your brain, and more of your brain is reserved for hand movement than for control of any other part of your body. Your hands are your faithful servants, seldom tiring as they carry out tasks of strength and dexterity. But, in carrying out their many duties, your hands are often susceptible to accidents and injuries including:

- Finger and hand fractures. Your fingers and hands may be "caught" in car doors, sliding doors, door jambs, or machinery. Or, you may accidentally hit your hand or fingers while hammering nails, etc.
- Hand sprains. Thumb sprains are a common sports injury but any part of the hand may be involved in a sprain where ligaments are stretched too far and tear.
- Fingertip injuries. The finger, bone, nail, or fingertip itself can be easily damaged.
- Lacerations. Minor cuts or lacerations affect just the skin. Major lacerations may injure nerves, tendons, or other structures essential to hand function.
- Nerve compression. Loss of sensation in a finger may occur when tissues swell and push on a nerve.
- Carpal Tunnel Syndrome. (CTS) – The median nerve is compressed as it passes through a narrow tunnel of bone and ligament in your wrist. This can cause numbness, tingling, burning, and pain in the middle and index fingers and thumb.

### Protect Your Hands By:

- \* Wear comfortable gloves of the right type for the job at hand. Gloves should be flexible enough to allow you to grasp objects. Gloves can protect your hands from burns, blisters, cuts, slivers, chemicals, solvents, and other dangers.
- \* Use a full hand grip where possible. Using a "three-point pinch", (thumb, middle, and index finger), is 3-4 times harder on your wrist and hand muscles than a grip.
- \* Keep your wrists straight when handling objects for the greatest power, precision, and safety.
- \* If you feel yourself falling, try to relax as much as possible. Landing with all your weight on a stiffened wrist can result in wrist or hand damage. Let your arms and legs give like a spring to absorb the impact of the fall. Roll with the direction of the fall, protecting your vulnerable head and spine.



**Headaches** - The pain from a headache is a message that something is out of balance. For many people, headaches are a response to physical or emotional stress. Although there are several types of headaches, migraine and tension headaches affect the most people. The following are characteristics of each of these types:

#### Migraine Headaches

- \* Pain begins or stays on one side of your head
- \* May occur at the same time each week or month
- \* May be accompanied by nausea or vomiting
- \* May run in families
- \* Bending over may make your headache worse
- \* May affect your sight or sensation

#### Tension Headaches

- \* Pain on both sides of your head
- \* May be accompanied by pain in neck or shoulders
- \* Can be caused by doing the same thing, like driving or typing, for long periods of time
- \* People with this type of headache may also clench your jaw or grind
- \* Poorly positioned equipment may trigger this type of headache

### Relief for Migraine Headaches

- Use cold to relieve your pain. Wrap ice or a frosty can of soda in a cloth and place it against the pain site for 10 min. Wait 20 min., then repeat.

- Shield your eyes from direct light.

### Relief for Tension Headaches

- Use neck massage. Knead the muscles running from your shoulders up the back of your skull.

- Wrap a warm, moist towel around your neck and shoulders.

### Relief for All Types of Headaches

\* Try to work, sit, or stand in a comfortable position. Be aware of and avoid working in awkward positions, particularly those that put strain on your neck.

\* Exercises such as neck tilts and shoulder shrugs are a good way to loosen tight neck muscles.

\* Muscle tension can trigger headaches. Do a body check every so often and relax any tight muscle groups that you find.



### **HEARING CONSERVATION**

The human ear is carefully designed to pick up, separate, and send sounds to the brain. The hearing process is amazingly complex and involves many delicate parts.

As our world becomes more mechanized, the problem of noise pollution increases. Noise, (Unwanted sound), may bombard us at work, home, and play. It also bombards tiny hair cells within our ears. Loud or prolonged noise can permanently destroy these hair cells – causing hearing loss. The damage may be gradual, painless, and invisible, but **its permanent and very real !**

An important point to remember is that you don't necessarily have to work in a noisy factory day after day to suffer hearing loss. A single, sudden exposure to extremely high, loud noise can cause permanent damage. This is known as traumatic hearing loss, and may be caused by a shotgun blast, the noise of a jet engine, etc. Both are

approximately 140 dB in intensity.

As you know, loudness is measured in decibels, (dB). As the decibel level rises, loudness quickly increases. A sound of 90 dB is 10 times louder than the sound of 80 dB, and a sound of 100 dB is 100 times louder than a sound of 80 dB. The following are approximate decibel ratings of some common sounds:

- \* 5 dB - *Weakest Sound You Can Hear*
- \* 15 dB - *Rustle of Leaves*
- \* 25 dB - *Quiet Bedroom at Night*
- \* 35dB - *Whisper. Milk Poured on Cereal*
- \* 40 dB - *Quiet Office*
- Horn/Jackhammer .**
- \* 45 dB - *Soft Music*
- \* 50 dB - *Average Home*
- Sandblasting/Pistol Shot**
- \* 65 dB – *Normal Conversation*
- \* 75 dB - *Noisy Restaurant*
- \* 85 dB - **Shout ! Vacuum Cleaner**
- \* 90 dB - **Subway train !**
- \* 100 dB *Woodworking Shop*
- \* 105 dB *Lawn Mower*
- \* 120 dB *Car*
- \* **125 dB Rock Band !!!!!!!**
- \* **130dB**
- \* **140 dB Jet Engine**
- \* **150 dB EXPLOSION !**

You generally need hearing protection when you have to raise your voice to be heard by another person who is about 2 feet away. Hearing protectors include plugs and ear muffs. These can attenuate (reduce) the noise that you hear by 20 decibels or more.

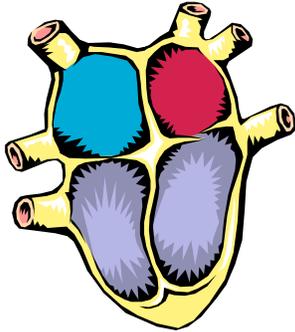
Some additional good ideas to protect your hearing are to wear hearing protection while mowing your lawn, doing carpentry work, and during other noisy activities and to always wear good hearing protection while hunting or target shooting.



- Avoid loud music. Enjoy music at lower volumes. A rock concert can hurt your ears as much as noise from a jackhammer.

- Try to keep water out of your ears since moisture invites infection.

-66-



**A HEALTHY HEART** - Your heart is unique. It is the strongest muscle in your body, beating about 100,000 times each day and pumping about 2,100 gallons of blood. With healthy coronary arteries, your heart can increase its oxygen supply rapidly as you step up your demand through exercise or exertion.

Your heart is a rugged, efficient machine that will last many years with proper care. However, any one of the risk factors below more than doubles your chances of developing coronary heart disease:

- \* Blood cholesterol over 240
- \* You are a smoker
- \* You are overweight
- \* Your blood pressure is higher than 140/90
- \* You are male and your father or other male relative had a heart attack at an early age.
- \* Having diabetes or a family history of diabetes
- \* You do not exercise regularly
- \* Your stress levels are high

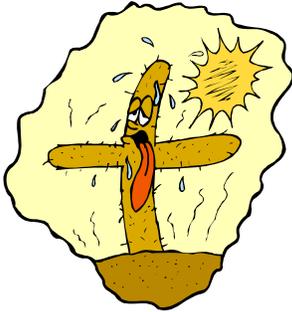
Each year about 1.5 million Americans have a heart attack, and many die needlessly. But most heart attacks need not be fatal if you recognize the symptoms and take quick action. In fact, if you act during the first hour of a heart attack, the "golden hour", less permanent damage may result and you may save your life. The symptoms of a heart attack may include:

- \* A feeling of chest pain, pressure, or fullness that may radiate to the shoulders, neck, jaw, arms, or back.
- \* Shortness of breath. You may feel like you have a tight rope around your chest
- \* Sweating - A profuse, cold sweat on the upper body.
- \* Weakness, dizziness, or nausea

Most heart attacks occur during rest - not physical exertion. Only about 4% of heart attacks occur during exercise. But regular, moderate exercise can protect your heart. You should exercise at least every day for 20 - 30 minutes to build up and preserve overall fitness. "Continuous" forms of exercise such as walking, swimming, and cycling are recommended. This type of exercise creates an aerobic effect, increasing oxygen

flow. It strengthens your heart muscle and lowers your resting pulse rate. This allows your heart to pump more oxygen-rich blood throughout your body with each beat.

-67-



**HEAT STRESS** - By understanding your body and being aware of the symptoms of heat stress, you can take precautions and necessary action to prevent the various stages of heat stress.

Your body maintains a core temperature of 98.6 deg. F by releasing heat through blood vessels near the skin's surface and through the evaporation of sweat. Factors that can cause problems for your body's cooling system include:

- \* Environmental temperature
- \* Humidity
- \* High level of effort producing metabolic heat
- \* Lack of air movement
- \* Working or playing in direct sun
- \* Being in poor physical condition
- \* Vacation/reassignment from a cool to a hot environment

The various levels of heat stress are generally defined as follows:

1. Mild – Dehydration – This may be caused by excessive fluid loss due to sweating with symptoms of fatigue, weakness, or dry mouth. Dehydration may not show any early symptoms, so it may be difficult for a person to detect what is happening. Treatment includes fluid and salt replacement.

2. Mild-Moderate – Heat Cramps, Prickly Heat - This is caused by electrolyte imbalance resulting from prolonged sweating without adequate fluid and salt intake. Symptoms may include excessive sweating, muscle spasms, tiny red bumps on skin with a "prickling" sensation, etc. Treatment includes rest in a cool or shady area and drinking plenty of water.

3. Moderate – Heat Exhaustion - Working too long in a hot environment causes you to lose too much water and minerals, reducing the blood supply to the brain. Your core body temperature may rise up to 101 deg. F. Your heart works harder to maintain the blood supply, straining your cardiovascular system. Heat exhaustion symptoms may include excessive sweating, thirst, extreme weakness, headache, nausea, and/or a rapid, weak pulse. You may need medical attention as well as this self-care:

- Lie flat on your back in a cool environment
- Drink water
- Loosen clothing and use cool compresses on forehead, neck, and under armpits

4. Severe – Heat Stroke - **THIS IS A SERIOUS, LIFE THREATENING MEDICAL EMERGENCY. IF NOT TREATED PROMPTLY, IT CAN LEAD TO**

**-68-**

**PERMANENT BRAIN DAMAGE AND DEATH.** With heat stroke, your body becomes so overheated that sweat glands and other organs don't function normally. Your core body temperature may rise to 105 deg. F or more. Heat stroke symptoms may include lack of sweating, hot, dry, flushed skin, headache, nausea, and possible loss of consciousness. The treatment is to call for medical help right away. While waiting for medical treatment, rest in a cool or shady area, remove outer clothing, attempt to lower body temperature, try to increase air movement, and drink water if possible.

#### Checkpoints for Preventing Heat Stress

\* Don't wait until you're thirsty to have a drink of water. Thirst is not a good indication of how much water your body needs. Drink amounts as needed throughout the day.

\* Wear loose, lightweight, light colored clothing

\* Stay in good physical condition. Conditioned muscles work more efficiently and generate less body heat.

\* Eat light, nutritious meals. Alcohol, caffeine, and increasing age all increase your risk of heat stress.



#### **HEDGE TRIMMING SAFETY**

Thousands of Americans visit emergency rooms each year for treatment following power hedge trimming accidents. And most accidents involve cuts and lacerations to the hands. **Complete finger amputations have also occurred !**

Since the hedge trimmer must be strong enough to cut through small branches, stems, and vines, it is also strong enough to cause severe cuts and serious injuries. Also, trimming hedges can put you in awkward positions, especially if the hedge is tall or wide.

Please read and heed the following hedge trimming precautions:

1. Purchase a trimmer that has the cutting teeth and guards close enough together so that fingers can't fit between them.

2. Select a trimmer that has two handles, including a wide forward handle high above the cutting blades. The trimmer you select should also be lightweight and easy to handle.

-69-

3. Try to find a machine which has a pressure-sensitive switch which turns off the trimmer when pressure is released.

4. Buy a trimmer that is either double-insulated or is grounded with a three-wire cord.

5. Always wear long pants, a long-sleeved shirt, gloves, eye protection. Hearing protection is necessary while using an engine-driven trimmer.

6. Clear the working area of children, pets, and other bystanders before trimming

7. If trimming taller shrubbery, stand on a stepladder or other firm support. Avoid the use of chairs, extension ladders, or other unstable items.

**8. Keep your hands and body away from the blades !**

9. Use an extension cord connector which holds the trimmer cord into the socket of the extension cord so it won't come apart when tension is applied. Also, the connector should have a hook which allows the cord to be hung on your belt out of the way of the cutting blade.

10. When trimming, work slowly and deliberately, planning your cuts before you make them.

11. Take an occasional rest break to avoid fatigue.

12. Stop the engine or unplug electric models before cleaning or adjusting.

13. Never leave the trimmer unattended, to prevent children from playing with it.

14. Check the cord regularly for cuts, cracks, or breaks in insulation, and repair promptly.

**HEPATITIS** - Hepatitis is a liver inflammation, and is characterized as acute or chronic. With both types, viruses or other mechanisms produce inflammation in liver cells, resulting in their injury or destruction. There are at least 6 forms of hepatitis, which are named with the letters A, B, C, D, E, and G. Hepatitis B is the most common and significant type of hepatitis. Although viruses are the most common hepatitis cause, it also may be caused by bacteria, toxic chemicals, alcoholism, and drugs.

Medical Information - Anything that affects your liver is potentially very serious. Your liver is your largest organ, performing over 500 vital functions:

- \* It processes all required nutrients including proteins, glucose, vitamins, and fats.

-70-

- \* It manufactures bile to help digest fat.
- \* It renders potentially toxic substances such as alcohol, nicotine, and drugs harmless.
- \* It removes old blood cells from the blood.

### Acute Hepatitis Facts

- \* **Short Term. (Lasts 1-2 months)**
- \* **Early symptoms may be very mild and mistaken for the flu.**
- \* **Can begin suddenly or gradually.**
- \* **Symptoms may include nausea, vomiting, fever, jaundice, aching joints, and abdominal pain.**

### Chronic Hepatitis Facts

- \* **Prolonged. May last throughout your lifetime.**
- \* **May have no early symptoms or very mild symptoms for 6 months or more.**
- \* **Itchy skin may be the first symptom**
- \* **Long term disability or liver failure may occur before any symptoms are felt.**

### Coping With Hepatitis

- Fatigue is a common problem. Try to find a happy balance between relaxation and activities.
- Short naps may prevent overwhelming fatigue at the end of the day.
- Maintain a well-balanced diet. If nausea is a problem, try eating frequent, small snacks or meals instead of traditional larger meals.
- Be cautious about drinking alcohol. Consult your doctor first. Alcohol may overtax your already strained liver.



**HERBAL REMEDIES** - You just heard about a new type of herbal remedy and want to try it. But does it really work? Is it safe? Herbs are being promoted widely today and the claims made for their healing powers are promising. BUT, we are still in the very early days for herbal and dietary supplements. More research is needed to measure the benefits and safety of most herbal therapies. Some of the uncertainties surrounding the use of herbs include long term effects, proper dosage, individual

reactions, and product reliability and effectiveness. Unlike prescription drugs, herbal supplements are not regulated. Also, it's difficult to measure and to regulate the actual content and purity of herbs because they are PLANTS. The amount of herb used may vary widely in different batches or brands. If you decide to try herbal supplements, the guidelines listed below should be followed:

-71-

- \* Always tell your doctor about the herbal products that you're taking, and discuss possible side effects and drug interactions.
- \* When possible, choose herbal products with the National Formulary, (NF) seal, indicating that they have met U.S. Pharmacopeia standards for purity and potency.

Here are some current findings on 4 popular herbs:

\* *Echinacea*: This is the most widely used herbal remedy for colds. Studies suggest that echinacea may stimulate your white blood cells to destroy bacteria, viruses, and other disease-carrying organisms. BUT, the studies are not conclusive and little research on echinacea has been done in this country.

\* *Saw Palmetto*: This contains substances that may slow production of the hormone that stimulates prostate growth. It is used to treat men with an enlarged prostate. Limited studies show improvement in urinary symptoms.

\* *St. John's Wort*: This flower extract may increase levels of the brain hormones that help enhance mood. Widely used to treat mild to moderate depression, it generally has fewer side effects than drugs for depression according to European studies.

\* *Ginkgo Biloba*: This comes from the dried leaves of the ancient Chinese maidenhair tree. European research shows beneficial effects on concentration and memory. It may also improve blood flow and help prevent blood clots. A U.S. study reported short-term improvement in patients with mild to moderate forms of memory loss, including Alzheimer's disease.



**HERNIAS** - A hernia or "rupture" occurs when muscle, often in the abdominal area, is torn. This creates a hole in the connective tissue through which fat or other parts

begin to protrude. The muscle tear can develop from an injury, heavy lifting, straining, or coughing.

Hernias can develop in several areas of the body:

-72-

- \* Through the diaphragm. (Hiatal Hernia)
- \* Into the upper leg. (Femoral Hernia)
- \* Through an old abdominal scar (Incisional Hernia)
- \* Into the groin. (Inguinal Hernia)
- \* In the region of the navel (Umbilical Hernia)

Possible signs of a hernia include

- A tearing pain when lifting or straining the lower abdomen or groin
- A lingering pressure or discomfort in the affected area, especially noticeable when you cough.

A hernia may cause pain, pressure, swelling, or a lump – or you may not notice it at all. If you suspect that you may have a hernia, do not wait until you experience acute pain. See your health care provider for a check-up of the problem area, and to discuss treatment options.

Hernias may be prevented by:

- \* Strengthening abdominal muscles by regular exercise and sit-ups several times a week.
- \* Warming up properly before exercise
- \* Lifting properly

**HIGH BLOOD PRESSURE** - Twenty-four hours a day, seven days a week, your heart faithfully pumps away, sending oxygen and nutrient-rich blood through your body. Your heart pumps blood when it contracts, squeezing the blood out from its four chambers into your network of blood vessels. A blood pressure reading measures the force of blood as it presses against the walls of your arteries. Left unchecked, high blood pressure can be a major contributor in the development of stroke, heart attack, kidney disease, and burst blood vessels. (Aneurysm)

Because you can't see it or feel it, high blood pressure is easy to neglect. Also, since some blood pressure medications trigger unwanted side effects such as fatigue, dizziness, and decreased sexual drive, as many as 50% of patients discontinue their blood

pressure medications within the first year. However, discontinuing antihypertension drugs can have adverse effects, and your doctor may be able to substitute more "user-friendly" drugs or lower doses.

A 1995 study estimated that 6.5 million Americans that year controlled their high blood pressure without the need for prescription drugs by:

-73-



1. **Losing Weight** - By losing 8-10 pounds, approximately 30% of people with high blood pressure have been able to discontinue prescription drugs.



2. **Stop Smoking** - Nicotine in your system raises blood pressure by several points.

3. **Limit Salt Intake** - Many people with high blood pressure are sensitive to sodium.



4. **Drink Less Alcohol, or None at All** - Alcohol also raises blood pressure.

5. **Exercise regularly** - Exercise can limit the effects of high blood pressure by strengthening your heart's pumping actions.



Blood pressure increases with age and, by age 60, almost 65% of older Americans have hypertension. One of the easiest ways to control this is simply to eat more fruits and vegetables. The minerals found in these foods have proven to be helpful in controlling high blood pressure, especially if they replace high sodium foods.

-74-

**HIV/AIDS** - These are abbreviations for Human Immunodeficiency Virus and Acquired Immunodeficiency Syndrome. Since this disease has reached epidemic proportions in some areas, it is possible that one or several of the employees at your Command may have it. Even if this is not the case, they certainly have heard or read about HIV/AIDS and may have specific concerns or questions.

HIV is the virus that causes AIDS - a serious illness that harms the body's ability to fight infection. At present, there is no cure for either HIV infection or AIDS. Since most people who develop AIDS die, everyone is naturally concerned for the safety and health of themselves and their families and wants to know how the disease is spread. Current research shows that HIV/AIDS is NOT spread by:

- \* Sitting next to someone in a car, bus, or elsewhere.
- \* Using restrooms, water fountains, or telephones.
- \* Touching, shaking hands, or a social kiss.
- \* Eating in a restaurant, sharing food, or donating blood.
- \* Caring for a person with AIDS if basic precautions are taken.



Research shows that HIV IS spread mainly by:

- Sexual intercourse
- Sharing a needle or syringe
- Contaminated blood

You may not know if a person is HIV-positive by looking at them. They may look healthy, and may not even be aware that they are HIV-positive. In fact, people who are HIV-positive may not show symptoms for many years. When symptoms become apparent, they may include:

- Swollen lymph glands in the neck, underarms, or groin
  - Recurrent fever, including "night sweats"
  - Rapid weight loss for no apparent reason
  - Constant fatigue
  - White spots or unusual blemishes in the mouth
- Most people infected with HIV go on to develop AIDS. When this happens, normally mild diseases can turn into fatal conditions. But research to find a cure for this deadly disease is continuing and progress is being made.

-75-

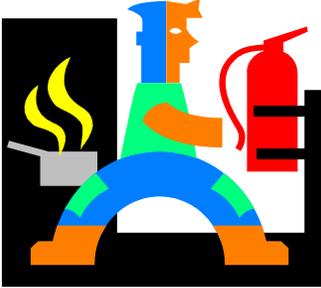


**HOLIDAY SAFETY** - Articles abound on holiday safety and many focus on fire prevention. And for good reason. You can see the results of failing to take common sense holiday safety precautions on your evening news channel. Fires, burns, auto accidents, etc. can ruin your holidays. So, please match the higher hazards of the holiday season with greater precautions on your part. These precautions may include:



1. Beware of candles. Either do not use at all, or do not burn without someone in attendance.
2. Always use a fire screen when using your fireplace.
3. For Christmas tree decorating, do not join more than 200 midget lights or 50 larger lamps through one string or cord.
4. Unplug all decorations inside and outside your home before going to bed.

5. To avoid intoxication at holiday parties, either don't drink alcoholic beverages at all, or limit yourself to not more than one drink per hour.



**HOME FIRE-SAFETY SURVEY** - The survey form included on the following 2 pages is a self-graded fire prevention checklist containing 50 questions related to your fire-safe procedures at home. Please review and consider whether your employees would find this type of self-graded questionnaire useful.

-76-

**Home Fire-Safety Survey**

Please read each item and indicate how often you follow the practice described, or your level of agreement with the statement, then grade yourself. (Grading instructions are on Page 65)

	<u>Almost Never</u>	<u>Some Times</u>	<u>Most of The Time</u>	<u>Almost Always</u>
1. I know the phone number to summon the Fire Dept.	_____	_____	_____	_____
2. I turn heaters off when I leave home or go to bed.	_____	_____	_____	_____
3. I never refuel gasoline-powered equipment when hot.	_____	_____	_____	_____
4. I never leave hot clothes irons unattended.	_____	_____	_____	_____
5. I never use flammable liquids for cleaning purposes.	_____	_____	_____	_____
6. I keep all combustibles well away from operating fireplaces.	_____	_____	_____	_____
7. I keep at least one fire extinguisher in my home.	_____	_____	_____	_____
8. I have at least one smoke detector in my home.	_____	_____	_____	_____
9. I use a metal container with lid for fireplace ash removal.	_____	_____	_____	_____
10. I store gasoline outside.	_____	_____	_____	_____
11. My fire extinguisher(s) are stored for easy access.	_____	_____	_____	_____
12. I do not leave the kitchen when cooking.	_____	_____	_____	_____
13. I keep matches and lighters up high.	_____	_____	_____	_____
14. I do not run extension cords under carpets.	_____	_____	_____	_____
15. I keep combustibles away from the stove at all times.	_____	_____	_____	_____
16. I keep my clothes dryer vent screen free of lint.	_____	_____	_____	_____
17. I keep bedroom doors closed at night.	_____	_____	_____	_____
18. I keep the flame screen closed when using my fireplace.	_____	_____	_____	_____
19. I keep at least one working flashlight at home.	_____	_____	_____	_____
20. I am careful to extinguish fireplace fires before going to bed.	_____	_____	_____	_____
21. I keep halogen lamps away from curtains/drapes.	_____	_____	_____	_____
22. I do not barbeque within 10 feet of overhangs or in garages.	_____	_____	_____	_____
23. I keep frying pan lids handy when frying.	_____	_____	_____	_____
24. I know basic first aid treatment for burns.	_____	_____	_____	_____
25. I check duct filters at least monthly and replace when needed.	_____	_____	_____	_____
26. I avoid using candles.	_____	_____	_____	_____

- 27. I have attended fire-safety training in the past 3 years. \_\_\_\_\_
- 28. I clean my smoke detectors periodically to prevent false alarms \_\_\_\_\_
- 29. I keep space heaters at least 3 ft. from combustible material. \_\_\_\_\_
- 30. I check fire extinguisher pressure gauges each month. \_\_\_\_\_
- 31. I have a smoke detector on each floor in my home. \_\_\_\_\_
- 32. I test all smoke detectors each month. \_\_\_\_\_
- 33. I check my chimney and have it cleaned when necessary. \_\_\_\_\_
- 34. I replace smoke detector batteries each year. \_\_\_\_\_
- 35. I replace smoke detectors that are more than 10 years old. \_\_\_\_\_
- 36. I have everyone smoke outside, or provide stable ashtrays. \_\_\_\_\_
- 37. I check extension cords, disposing of any that are worn. \_\_\_\_\_
- 38. I dispose of all oily rags promptly after use. \_\_\_\_\_
- 39. I keep the stove and stove exhaust fan and hood clean and free of grease accumulation. \_\_\_\_\_
- 40. I do not let used newspapers, magazines, and other combustibles accumulate, choosing instead to dispose of them regularly \_\_\_\_\_
- 41. I ensure that all flammable and combustible liquid container are properly labeled. \_\_\_\_\_
- 42. I unplug portable cooking appliances when not in use. \_\_\_\_\_

-77-

- 43. I place portable gasoline containers on the ground when refilling. \_\_\_\_\_
- 44. I check windows regularly to ensure that they open easily, especially when these windows are a component in my home escape plan. \_\_\_\_\_
- 45. I have provided smoke detectors near each bedroom. \_\_\_\_\_
- 46. I practice emergency evacuation drills at least 2 times each year. \_\_\_\_\_
- 47. I use a U.L./F.M. approved safety can for storing gasoline. \_\_\_\_\_
- 48. I have attended at least one session on fire extinguisher use \_\_\_\_\_
- 49. I have prepared a home fire escape plan with 2 means of escape from every room. \_\_\_\_\_
- 50. I keep a connected garden hose handy for possible use in fighting a house fire. \_\_\_\_\_

**WHAT'S YOUR SCORE?**

\* For Questions 1-18, give yourself one point for each "Almost Always" answer, and no points for any other answer.

\* For Questions 19-42, give yourself two points for each "Almost Always" answer, one point for each "Most of the Time" answer, and no points for any other answer.

\* For Questions 43-50, give yourself three points for each "Almost Always" answer, two points for each "Most of the Time" answer, and no points for any other answer.

**HOW FIRE-SAFE ARE YOU?**

\* **Virtually Always on the Safe Side**- Score 70-90. Congratulations! Your home fire-safety awareness is excellent and your chances of a home fire are minimal. Keep up the good work!

\* **Often on the Safe Side**- Score 45-69. You're aware of the importance of home fire safety and follow basic principles much of the time. But your lifestyle could use some improvement.

\* **Occasionally on the Safe Side**- Score 25-44. You follow established home fire-safety procedures when its convenient only and may be unaware of the potential for a housing fire that you face unless you make more of an effort to be safe.

\* **Seldom on the Safe Side**- Score 0-24. You are consistently failing to follow even basic home fire-safety precautions. Your life style and attitude towards home fire safety needs a complete rebuilding from the ground up.

-78-



**HORSEBACK RIDING** - Horseback riding is very popular in the US today, and an estimated 30 million Americans ride horses each year. The bond between man and horse has been strong for centuries.

Although most people do not view horseback riding as a hazardous activity, accidents can and do happen quite often. Most people would probably estimate the danger of a horseback riding injury as equivalent to that of riding a motorcycle. But, did you know that people suffer serious accidents from horseback riding roughly **20 times** as often as from motorcycle riding. On average, motorcyclists suffer an injury once every 7,000 hours of riding. By contrast, a horseback rider may have a serious accident once every **350 hours** !

The horse has continued to flourish for thousands of years in the wild because they have developed "fight or flight" instincts when dealing with predators. This means that they may run away almost instantly in response to an actual or perceived threat. And, we need to remember that we cannot teach the horse not to be a horse. Its "fight or flight" instincts are imbedded genetically and are always there. When the horse is under

mental or physical pressure, its instincts may take over and the training that it has received may go out the window – at least temporarily.

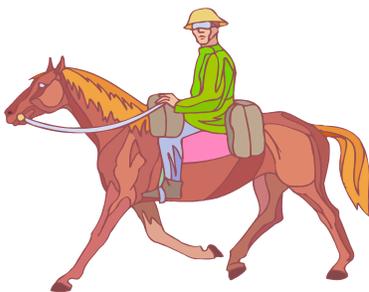
Because of these characteristics of the horse, humans must always behave as a horse's friend – avoiding any behavior that the horse might associate with a predator like a wolf or bear, etc. This means that, when you approach a horse, you announce your presence first and wait until the horse acknowledges you by looking at you or turning his ear to hear. You then may walk normally to his shoulder and stroke him. Be sure to stay where the horse can see you, especially when he does not know you well. Since the horse's eyes are on the sides of his head, this means staying mainly at the horse's side and avoiding staying directly in front or in back of a horse.

Some of the characteristics that make a horse so useful are its strength, size, and speed. Horses can weigh up to 1,500 pounds, travel as fast as 30 mph, and stand over 9 feet high. Most injuries result from falling off the horse, which can lead to severe and sometimes fatal injuries.

-79-

While there are numerous variables that may be encountered while horse riding, a rider can reduce his risks by taking safety precautions. Some precautions include:

1. Wear a helmet. A helmet approved for horseback riding reduces the risk of head injury if a rider falls or is thrown from a horse.
2. Check your equipment. Make sure that the saddle, bridle, and cinches are in good condition before mounting a horse.
3. Do not yell at your horse. Talk to it instead. Horses will react more predictably when they are calm and feel secure.
4. It will be in your best interest to become friends with your horse. Take a few moments to calm the horse before mounting.



5. Know the area where you will be riding, and ride slowly in an unfamiliar area. There may be hazards such as holes and ditches that may not be easily visible, so both you and your horse will need time to become familiar with the terrain.

6. Start your horseback riding experience by taking riding lessons from an experienced instructor. Learning to ride a horse properly takes time, and riding lessons can increase your skills and knowledge.



**INDIGESTION** - In the US, almost 50% of the population has heartburn at least once a month and about 7% have it daily. Acid indigestion is almost as common as heartburn. Small wonder then that Americans spend millions of dollars each year on medicines to cure the symptoms of heartburn and indigestion.

**-80-**

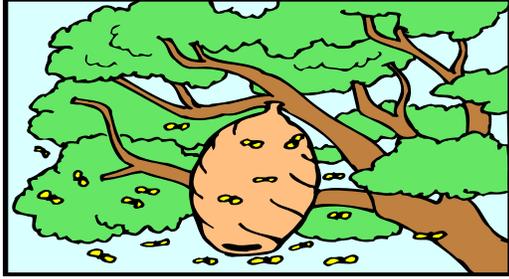
The medical term for indigestion is dyspepsia, meaning any sort of upper abdominal pain or discomfort following eating. Other symptoms include burping, bloating, nausea, and, occasionally, vomiting.

There are 3 typical causes:

- \* **Non-ulcer dyspepsia** – The most common type of indigestion in which no specific source can be found.
- \* **Peptic ulcer** - A sore in the lining of the stomach or intestine.
- \* **Gastroesophageal reflux disease- (GERD)**. This is reflux of stomach contents into the esophagus, causing heartburn or a sour taste in the mouth.

Less common causes of indigestion include irritable bowel, gallstones, heart disease, and hiatal hernia. Medications with aspirin or iron and some herbs such as feverfew, ginkgo, or saw palmetto may also lead to indigestion.

Some simple techniques to help avoid indigestion and heartburn include staying upright long enough to let food and acid empty out of your stomach. This means avoiding lying down after a meal, and not eating before bedtime. Foods that may cause indigestion include alcohol, peppermint, spearmint, chocolate, caffeinated drinks, and fatty foods. Wearing tight-waisted clothing may also cause or aggravate indigestion.



## INSECT PROBLEMS

**General Advice-** Prevention is the best defense against flying or crawling critters that can bite or sting. When your warm weather activities take you outdoors for extended periods to hike, camp, work in the garden, go on a picnic, or just mow the lawn, you need to be aware of the insect problems that you may encounter. Experts recommend that you:

1. Wear a hat, and work gloves if appropriate.
2. Try to expose as little skin as possible. Wearing light-colored long pants and long-sleeved shirts is recommended, particularly if your outdoor activities take you to field or forest.
3. Use a good quality insect repellent, and reapply every two to three hours.

Specific insects and potential problems are presented below:

-81-



**Mosquitoes-** Mosquitoes are attracted by body heat and carbon dioxide from our breath, as well as sweet odors and dark clothing. They live where water collects, and may be more prevalent during the late afternoon and evening hours during calm weather. Staying indoors during these times may help you to avoid getting bit. If you do, scratching may make matters worse. Instead, treat bites with an anti-itch cream or lotion.



**Bees-** You can encounter bees in a wide variety of outdoor situations, but you are more likely to be visited by them if you are wearing bright colored clothes or floral cosmetics. Bees are also attracted to sweet drinks. Many bees, particularly common honey bees, may be happy to go about their business and leave you alone. However, it is common on picnics or other outings to have a bee land on you or your food. Experts recommend that you either blow or gently brush the bee away. You need to pay special attention to your soft drink containers and glasses to ensure that a bee has not entered. Swallowing a bee can be dangerous, as a sting inside the throat can swell your airway.

If you should suffer a bee sting, you should brush the bee away from you to prevent an additional sting. Tweezers, if you have them, are useful for removing stingers. Otherwise, you can probably scrape the stinger from your skin with a credit card or even

your fingernail. Do not leave the stinger in your skin any longer than is necessary to minimize the amount of toxins that enter your body. Redness and swelling may develop around the sting site, and localized pain and itching are common.



**Spiders-** Although the vast majority of spiders that you will encounter are not harmful, caution and common sense still must be used. A bite from some spiders, such as the black widow shown above, can make you sick – or worse. To avoid problems, wear heavy-duty gloves when working with piles of brush or wood, and under houses where spiders like to hide.



**INSPECTIONS** - Most safety professionals have years of experience doing safety inspections of their buildings and workplaces. If you have your own inspection techniques and will not make changes for any reason, then please just review this Section for general reference. However, you may be quite open to change or at least would like

-82-

to know how someone else does business. Some suggestions and philosophy:

1. Once you write something up, corrective action must be taken. This may seem obvious, but occasionally you will be challenged or your recommendations disregarded. Ways to avoid this include:

- Get management "buy-in" so they will support your finding.
- Be sure you can back up your finding with a code/criteria reference.
- Listen to suggested alternatives from management and employees.

2. If your Command spends money on a safety issue, the permanent "fix" must result in Code compliance. Reserve partial "fixes" for interim corrections.

3. You can go beyond minimum compliance. It is perfectly fine to exceed code/criteria standards and seek the best possible arrangements.



4. A safety inspector with a clipboard is not always regarded as helpful. Walking through spaces with the supervisor or person in charge is recommended. Being friendly, making eye contact, saying "hello", etc. may put employees at ease.



5. If you see a potential hazard, you may use statements such as:

- \* What is your opinion of this?
- \* When I look at this arrangement, I feel concerned. Do you understand my concern?
- \* How can we improve this situation?
- \* Can I count on you to . . . . . ?

6. The best findings are ones that are corrected "on the spot" or are already corrected by the time that you write your report. I sometimes lend a hand in moving or carrying something to correct a problem. In this way, you are part of the solution.

-83-



**INVESTIGATION SUGGESTIONS:** These suggestions apply when you reach the "engagement" stage of a safety investigation and start talking to the personnel involved. They apply whether you are investigating an accident, a near-miss, an employee complaint, or an ergonomics problem, etc.

1. Let the employee's supervisor know, in advance, of your visit and invite them to participate if appropriate. If the employee feels uncomfortable talking to you with the supervisor present, then present a summary of your discussions to the supervisor later.  
**THE SUPERVISOR CANNOT BE LEFT OUT OF YOUR INVESTIGATION PROCESS IF YOU ARE TO BE EFFECTIVE !!!!!**

2. Once you, as the safety person become involved in the investigative process, you also become involved in following the process to a satisfactory conclusion. This means that you generally will be responsible for initiating requests for "fixes". (i.e. new equipment, management action, or whatever else may be needed). Even if the first line supervisor takes on this responsibility, you will still need to follow-up and ensure that the work gets done.

3. It is common for the employee to blame the Command for a particular situation or problem. Try to avoid taking sides. Sometimes the safety position is in the "middle ground" between employee and management, and each side has a right to be heard.

4. Do not be too hasty in making a decision. Taking the time to think things over before you speak or act may pay dividends later. Once you agree with the employee's point of view and take the problem to others, you become a "spokesman" for the employee's suggestions to a certain extent. So, be sure that you are willing to do this and are comfortable in this role. If you do not agree with what the employee is asking for, you certainly cannot be effective in selling the idea to management. So, we all need to learn the art of saying "No" tactfully when the employee request is unreasonable or unwarranted. You may encourage the employee to take their ideas up the chain of command if they choose. Save your credibility and influence for those situations that truly require safety intervention.

-84-

5. Employees who have been involved in an accident are within their rights in requesting that you treat what they tell you as private. Many are embarrassed by the fact that they had the accident in the first place, and may feel that they were clumsy, foolish, impatient, or accident-prone. No employee wants their accident publicized throughout the Command with their name attached, so use discretion and respect their privacy. They may be "paying the price" for the accident in terms of discomfort, inconvenience, financial loss, frustration, etc. Try to see yourself in their position by remembering how YOU felt after YOUR last accident.

Here are some suggestions for a successful post-accident interview:

- \* Start by showing empathy and concern for their welfare.
- \* Explain that you are not there to assign blame, but to gather information that may help others, including their co-workers, from getting hurt in a similar manner.
- \* Don't rush into the investigation or seem like you are on a schedule or in a hurry. Encourage the employee to talk about themselves, their background, how long they have worked for the organization, what they do, and what they like about their job.
- \* When you begin your inquiry about the accident, keep an open mind, and be a good listener. If you take notes, record the major points only and try to maintain eye contact with the employee to the extent possible. Let them tell their story first, and then ask questions to clarify what was said. Then you can repeat the key points to ensure that you both understand what was meant.

\* I have found that some employees will want to blame everyone else but themselves for the accident while staying "blameless" themselves. It is not necessary that you agree or disagree when they blame the facilities, weather, working conditions, their supervisor, or someone else. You can just simply state something like " I understand that you feel that \_\_\_\_\_ was at least partially responsible", and stay out of the "blame game" yourself.

\* Employees may want to take you to the accident scene to show you what happened. I encourage this type of visit. It may help to give you a clearer picture of what happened, and the employee may have a need to show someone.

\* Was the employee performing a task that was reasonably consistent with their duties? Were they following accepted procedures? If this job had been done many times before, what was different this time that caused an accident to result? These are important questions. The same task, repeated under similar conditions, may result in other accidents to either the same employee or co-workers. So, procedural changes, different equipment, or different techniques may be needed.

\* A prompt interim correction, while not permanently solving the problem, shows the employee that they have been listened to and taken seriously.

It is very likely that your investigation will leave a lasting impression, either positive or negative, on the employee and their supervisor. Accident investigations can demonstrate to the employee that the Command cares about them and their injury/illness, and can be a learning experience for the safety professional who handles the investigation.

-85-

**KIDNEY STONES** - It is estimated that 10% of all people in the U.S. will have a kidney stone at some point in time. The number of persons with kidney stones has been gradually increasing over the past 10 years. Men are 3 times more likely to develop kidney stones than women of the same age, and the southeastern U.S. is the most likely area for kidney stone problems. The good news is that most kidney stones are the size of a grape seed or smaller, and pass out of the body without medical intervention.

Kidney stones form when urine is supersaturated with calcium oxalate. Increased fluid intake lowers the concentration of the substances involved in stone formation, so medical experts recommend that we all drink at least 8 glasses of water each day.

Usually, the first symptom of a kidney stone is extreme pain in the abdomen. This pain often begins when a stone moves in the urinary tract causing irritation or blockage. Nausea or vomiting may occur with this pain. Other symptoms of stones are fever, blood in the urine, or burning on urination. If you begin to show these symptoms, you should see your doctor as soon as possible. Treatment options include:

1. Expectant Therapy - Drinking lots of water to flush your stone out naturally.
2. ESWL - You receive a series of high energy shock waves which shatter your stone into very fine sand which can be easily passed. This procedure is not painful, and effectively removes the stone without the need for surgery.

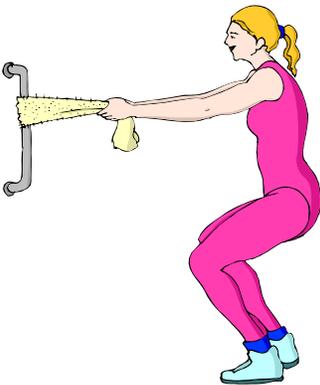
3. Invasive Treatment - Surgical removal of kidney stones is now far less common than it once was. If incisions are necessary, they are normally very small. With the advent of new technology, only those patients with unusually large or oddly shaped or located stones need open surgery.

Prevention - The most effective means of preventing kidney stones is **WATER - WATER - WATER!** Drink at least 8 glasses each day. Also:



- Limit dehydrating liquids such as alcohol and coffee
- Limit dairy products, colas, chocolate, and peanuts
- See your doctor regularly and have any unusual symptoms checked right away. Your doctor may prescribe one of several medications to prevent kidney stones.

-86-



**KNEE PROBLEMS** - When your knees are working smoothly, you give them little thought. But they are one of the first body parts to suffer the effects of age, injury, and hard use. With all of the work that they do, it's no wonder they are at risk for pain and injury. Some common symptoms of knee problems are:

\* *Pain:* This may be discomfort that comes and goes. Or it may be sudden, severe pain.

\* *Swelling:* After an injury, bleeding inside the joint may cause the knee to swell. An irritation inside the knee can cause a clear fluid to build up, which also makes the knee swell.

\* *Locking or "Giving Way"*: This can happen if the parts of the knee are not working together as designed, or can be caused by a loose piece of cartilage.

\* *Limited Movement or Stiffness*: This may be due to injury, wear and tear, inflamed tissue, or disease.

\* *Grinding or Cracking*: This may be caused by rough bone or cartilage inside the knee.



Your knee is a large, complex joint. (Where bones meet). The cartilage, ligaments, tendons, and muscles around the bones help your knee bend, rotate, and support the weight of your body. Whether you jog, garden, or do heavy lifting, your knees are subject to a lot of stress. Knee problems include:

*Osteoarthritis*: This most common form of arthritis causes knee cartilage and other joints to break down, and can be caused by age, injury, or heavy stress on the knee. Symptoms may include aching, stiffness, or pain. Presently there is no cure for osteoarthritis.

-87-

*Bursitis*: Repeated movement or pressure can cause the bursae to become inflamed. This happens most often to the bursae on the inner side of the knee or below the kneecap. Bursitis can cause tenderness or swelling.

*Runner's Knee*: This condition involves damage to the smooth cartilage under the kneecap, and is caused by impact stress to the knee from running or from blows to the knee. With time, the knee cartilage wears down, roughens, or cracks. This can cause pain, swelling, or a grinding noise.

*Meniscus Tears*: A sudden twist or repeated squatting can cause a meniscus to tear. You may notice pain, swelling, or a locking of the knee.

*Mild to Moderate Sprains*: A twist or injury may cause ligaments in the knee to stretch or split. Symptoms include knee pain, swelling, and possible instability.



*Torn Ligaments:* A severe injury can cause ligaments to tear and you may quickly notice pain and swelling.

Tips for Protecting and Conditioning Your Knees:

- \* Lose excess weight to reduce the load that your knees must carry.
- \* Build stronger quadricep, (thigh) and hamstring muscles. Start with basic leg extension exercises.
- \* Adopt a sensible walking or cycling program to strengthen the muscles surrounding your knees. This may be the best way to maintain or restore healthy knees.
- \* Check your footwear. Worn or poor fitting sport shoes may not support your knees properly.
- \* Warm-up and stretch your leg muscles prior to exercising.
- \* If you already have knee problems, avoid hills, stairs, kneeling, and squatting down as much as possible. Also, make it a habit to jog on grass instead of concrete.

If you do suffer a knee injury, standard treatments include resting, applying ice, wearing a knee brace, and selected exercises when you are able to keep your knee strong and flexible while it heals.

-88-



**KNIFE SAFETY** - Housewives, chefs, food processing employees, and others who work with kitchen knives while slicing or cutting up food are subject to hand injuries, which occur thousands of times each day. The most notorious food for cutting your hands while slicing it is the bagel, which can be unstable and difficult to cut.



Experts advise starting a bagel cut while the bagel is lying flat on a counter or cutting board, then turning it on end and finishing the cut downward and away from your fingers.

Since both you and I have suffered hand cuts during food preparation, here are some cutting tips that may be useful:

1. Knife safety includes not only what you are doing with the knife, but also what you are doing with your other hand. That's the one in danger of being cut ! Curl your fingers of your hand holding the food under that hand, then position them on top of the item to be cut. Maintain a secure grip on the item that you are cutting. Only the flat part of your knuckle should be facing the blade. This hand position keeps your fingertips safely away from the blade and out of harm's way.

2. Know your knife. The tip of the knife is the most delicate part of the utensil – ideal for slicing mushrooms, etc. The mid-section is the most commonly used area and does the majority of the work. And the heel or back 1/3 of the knife does the heavy work – ideal for cutting off a bunch of celery.

3. Keep your knives sharp along the entire length of the blade. A sharp knife will cut quickly, efficiently, and cleanly. A dull blade, on the other hand, can drag and slip, potentially cutting fingers that have already moved on to the next area because the knife was not supposed to be left behind.

4. Focus on the job at hand. Keep your mind on your work when holding a knife and always cut away from your body.

-89-



**LADDERS** - Ladders are a subject that most safety personnel know a lot about, and everyone uses a ladder now and again. When considering ladder safety, however, your employees may want to be aware of the following ladder facts:

- Fixed ladder safety requirements are contained in OSHA 1910.27 and ANSI A-14.3.
- You need to choose the right height ladder to do the job. Too long or too short could be unsafe.
- Different ladder materials have different characteristics that make them suitable for certain tasks. A ladder of the wrong material can pose a safety threat.
- Available ladder materials/advantages are:
  - *Aluminum - Light and Strong*
  - *Wood – Sturdy and Economical*
  - *Fiberglass - Strong and Electrically Non-Conductive*
- Portable ladders come in 4 classes as follows:
  - Type 1A - Industrial Heavy-Duty. Holds up to 300 lbs.
  - Type 1 - Industrial. Holds up to 250 lbs.
  - Type II - Commercial. Holds up to 225 lbs.
  - Type III - Household. Holds up to 200 lbs.
- The American Ladder Institute is a key player on the ANSI A14 Committee which develops ladder safety standards.
- Ladder standards can be purchased from ASSE by calling (847) 699-2929 or from ANSI by calling (212) 642-4900.
- A point of contact for ladder safety standards is Professor Ralph Barnett, who can be reached at (847) 677-4730.
- In certain cases, a ladder is considered a means of egress and must comply with OSHA and Life Safety Code requirements.

-90-



**LAWN MOWERS** - Lawn mowers cause more than 100,000 injuries in the USA each year, but most can be prevented by following common-sense precautions including:

- \* Clear the yard of stones, sticks, toys, etc. before mowing
- \* Never mow in bare feet, or while wearing sandals, flip flops, or other footwear with no foot protection and virtually no slip resistance.
- \* Only fuel the lawnmower before starting – while the engine is cool.
- \* Make any wheel height adjustments before starting the mower.
- \* Do not mow when children or pets are in the area.
- \* Only mow in good lighting conditions, and when the grass is dry.
- \* Pulling a lawnmower backward is hazardous since your feet can be injured. Push the lawnmower forward as much as possible.
- \* When mowing an inclined area, make a series of horizontal passes rather than mowing up and down.
- \* Wear hearing protection when using powered mowers.



**LEAD** - Exposure to lead is something that cannot be eliminated completely, since it is found in storage batteries, solder, older paint, leaded gasoline, pottery glaze, and some electrical cables. For the last 50 years, much lead-based paint was used on bridges, tanks, pipes, metal supports, equipment, walkways, etc. Sandblasting, welding, and cutting materials coated with lead based paint can release lead vapors. Lead hazards are generally controlled by:

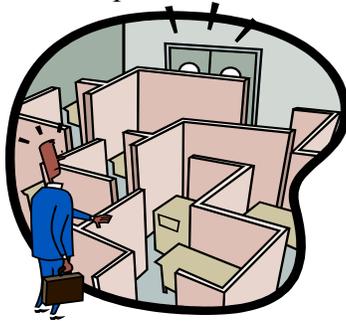
- \* EXPOSURE MONITORING - Air sampling is performed to determine whether the PEL of 50 micrograms per cubic meter of air has been exceeded.

-91-

- \* LEAD OVEREXPOSURE PROGRAM - Engineering, work practice, and administrative controls are used to reduce overall lead exposure.
- \* PROTECTIVE CLOTHING - Includes coveralls, gloves, hat, and face shields.
- \* GOOD HOUSEKEEPING - Includes cleanup shoveling, wet sweeping, and vacuuming with a HEPA filter vacuum cleaner.
- \* MEDICAL SURVEILLANCE - OSHA requires a blood testing program to determine if controls are working.

**LIFE SAFETY FEATURES AND CONCERNS** - It is most helpful to be familiar with NFPA – 101, "Life Safety Code" when making building inspections and doing plan reviews. Some useful Life Safety Code rules are:

- Thirty six (36) inch exit access aisles are required for new buildings, 28" for existing buildings.
- Each person must have unrestricted access towards an exit at all times.
- Every exit shall be readily visible, or the route to reach every exit shall be conspicuously indicated. Each means of egress, in its entirety, shall be arranged or marked so that the way to a place of safety is clearly indicated.
- All exits must be marked with an approved exit sign which is readily visible from any direction of exit access, except for main exit doors that are obviously and clearly identifiable as exits. Also, exit access signs are required in all cases where the exit, or the way to reach it, is not readily apparent to occupants.



- No point in the exit access corridor should be more than 100 feet from the nearest sign.
- Egress through all exit doors should be attained by pushing a single bar or turning a single knob.
- Where emergency lighting is required, units should be spaced roughly 75 feet apart, and in stairways at every floor level.
- LED type exit signs are preferred.
- Panic hardware is required for doors serving high hazard areas, and for assembly or educational occupancies where the doors are subject to use by more than 100 persons.



**LIFTING AIDS** - When heavy appliances or furniture must be moved, try to put plywood, paneling, or something similar on carpeted floors so the items can be slid or rolled to their new locations. **Avoid lifting heavy items** if at all possible to save wear and tear on your back and possible injury. If you must raise a heavy piece of furniture to get it on a smooth, rigid surface, try to arrange a simple lever using a longer 1" X 4" as the lever and perhaps a short 2" X 4" as the fulcrum.



Preplanning your moves should allow you time to obtain a hand truck or cart which can be used to move lots of heavier items with a minimum of effort. When using these, ensure that you have a clear path to your destination to avoid unexpected stops and possible load shifts or spills.



**LIGHTING LEVELS AND SAFETY** - Modern buildings are often designed with ample window space for several reasons:

- Windows provide for the admission, control, and distribution of daylight for seeing.
- Windows provide a distant focus for employee's eyes, and thus relax eye muscles, and
- Windows eliminate the dissatisfaction that some people experience in completely closed-in structures.

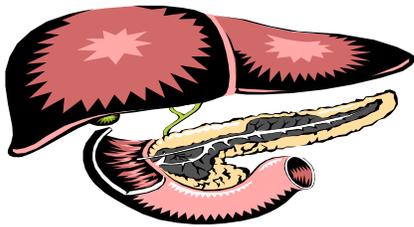
However, natural daylight is an unpredictable type of illumination. Therefore, electrical lighting is required to maintain good vision conditions and should be designed to provide adequate illumination over the entire working area.

The 3 forms of electrical lighting are:

- \* General Lighting - Provides illumination throughout the building by use of ceiling mounted or pendent lighting fixtures in the areas involved.
- \* Localized General Lighting - Reinforces general lighting in specific working areas.
- \* Supplementary Lighting - Used to provide higher illumination levels for small or restricted areas, to furnish a specific brightness or color, or to permit special aiming or positioning of light sources.

The following levels of illumination are generally recommended:

- Inactive Storage Rooms - 5 foot-candles
- General Construction Work - 10 foot-candles
- Corridors - 20 foot-candles
- Bathrooms – 30 foot-candles
- Factories-Metalworking - 50 foot candles
- General Office Spaces - 100 foot candles
- Detailed Drafting Areas - 200 foot candles



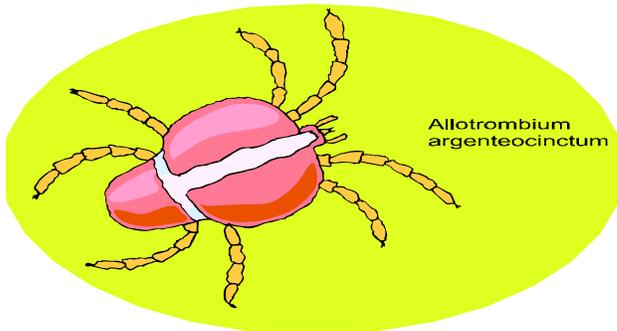
**LIVER FACTS** - Your liver is one of the most hard-working and precious organs in your body. Its responsible for filtering everything that you eat, drink, inhale, and touch. Similar in size and shape to a football, the liver's many functions include:

- \* Producing bile to aid fat digestion.
- \* Producing cholesterol, clotting substances, blood proteins, and enzymes
- \* Metabolizing alcohol
- \* Storing certain nutrients
- \* Cleaning the blood
- \* Regulating blood chemicals
- \* Detoxifying poisons
- \* Helping maintain hormone balance

Each year, more than 25 million Americans suffer from liver problems and more than 43,000 die from liver disease. Another sobering fact is that deaths from liver disease appear to be increasing.

Alcohol and drug use, poor diet, unprotected sex, poor hygiene, obesity, and exposure to toxic fumes can all damage this vital organ, resulting in acute and chronic conditions. These include cirrhosis of the liver, viral hepatitis, gallstones, and liver cancer.

Alcohol and medications can be damaging to your liver, so they should be used in moderation. Also, a combination of alcohol and pain-killers can place an additional burden on your liver, so alcohol should be avoided when these medicines are taken. And, of course, you should always protect yourself from toxic vapors from insecticides, paints, and chemical solvents.

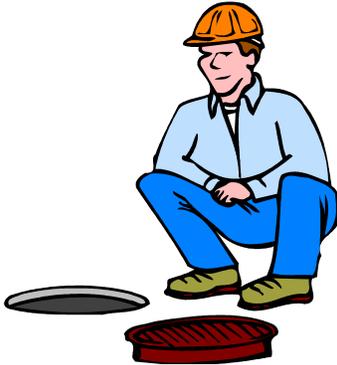


**LYME DISEASE** - Lyme disease is the most common tick-borne disorder in the U.S., with about 10,000 new cases each year. It requires preventive measures, particularly while walking or hiking in wooded areas. The tick season begins around April and continues into early fall.

Lyme disease symptoms include fever, muscle aches, and fatigue. A telltale sign of Lyme Disease is a reddened area about the size of a half dollar where the bite occurred. This disease can be treated successfully with 4 to 6 weeks of intensive antibiotics. If left undetected and untreated, however, the Lyme bacterial infection can spread. If it affects the brain and spinal cord, it can be devastating.

A new vaccine to protect against Lyme Disease, given in 3 doses, has been developed and is about 80% effective. But with or without receiving the vaccine, you still need to take precautions. Avoid hiking in areas known to be tick-infested, and in dense wooded areas. It is better to hike on established trails where you are not so likely to come into contact with trees and shrubs. Ticks do not jump, fly, or drop from trees - they cling to vegetation and then transfer to people or animals that brush against them. Put on a long-sleeved shirt, long pants, and a hat before walking in the woods, and spray tick repellent on your clothes and shoes. Check your clothing for ticks frequently and

remove them promptly with tweezers - pulling them straight out. If you remove any tick within 24 hours of attachment, it will greatly reduce the risk of tick-borne disease.



**MANHOLE COVERS – SAFE LIFTING** - Although this is a subject that you may not have thought much about, Navy employees have suffered injuries, some serious, during manhole cover lifts. Our employees occasionally receive requests for utility studies that require access to many different types of manholes. They may focus so much on safe confined space entry procedures that they overlook the hazards of the manhole cover. The covers can weigh from 40 – 80 lbs. or more and can be awkward and difficult to lift because:

1. They are usually at grade level, and the lift often requires the person to squat down.
2. The cover handles may or may not be intact.
3. Many covers are wet and slippery and may not release easily from the opening due to debris accumulation and disuse.
4. The lifter cannot stand over the cover, so must instead either stand to the side or straddle the cover while making the lift. This creates the potential for an awkward lift, especially if the proper lifting tools are not available. In the position of lifting from the side of the load, the lifter may lose his balance or his grip on the cover.

Employees with existing back problems or a predisposition to them should NOT be lifting manhole covers. This is a type of lifting that should be reserved strictly for able-bodied, and preferably younger employees. If you are visiting a Naval/USMC activity for a study, it is definitely better to have the host activity supply a utility worker to handle the lifting chores. If you must make the lift, however,

- \* Take the time to stretch and warm up well before starting the lift.

\* You MUST wear safety shoes to protect your feet. Heavy manhole covers can and do slip from the grasp of even the most well-meaning worker, and can easily cause a painful fracture of your toes or the bones in your feet.

\* Make sure that you have the proper tools for the job. Some firms make sturdy lifting tools with a choice of several tips to accommodate most manhole covers, and shafts long enough to permit the employee to lift from a standing position.

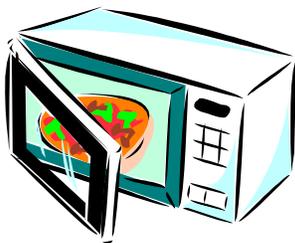
\* Less experienced employees should not be lifting any manhole covers until they have had a chance to observe experienced lifters who use correct techniques and precautions to protect their back. Then, their first few lifts should be under favorable conditions with the experienced employee observing and offering suggestions and/or assistance.

\* I personally am in favor of wearing slip-resistant gloves while making the lift. These help protect your hands and avoid cuts and scratches. They may also keep your hands relatively clean and free of wet or oily debris that can cause your grip to loosen on later lifts.

\* Since confined space entry procedures prohibit employees from manhole entry without an attendant present, you will have assistance with the cover from at least one other person. So, use that assistance when possible, communicating both before and during the lift so that each knows what the other is doing.

\* Be sure that you provide a safety guard around any opening where you have removed the cover to keep passers-by from stepping into the opening.

\* Take care to restore the cover to its proper position when you are finished, and check to ensure that it is secure. Covers that are put back "almost" on right can cause an unstable, unsafe cover, and people who subsequently step on them to twist or break their ankles. This is also a good reason for all of us to avoid stepping on manhole covers if another path is available.



**MICROWAVE OVEN SAFETY** - Microwaves are a form of "electromagnetic" radiation – they are waves of electrical and magnetic energy moving together through space. They are useful for cooking because they are reflected by metal, pass through glass, paper, and plastic, and are absorbed by foods.

Microwaves are produced inside the oven by an electron tube called a magnetron. The microwaves bounce back and forth within the metal interior until they are absorbed. Although food containers in microwave ovens may be cool, the food itself may be very hot – hot enough to cause scald burns. Also, some food that feels cool to the touch in one place may be hot enough to burn in another place.

Microwaves do not make food radioactive – the microwave energy is changed to heat as soon as it is absorbed by the food. All microwave ovens are covered by a radiation safety standard enforced by the Food and Drug Administration. Throughout its lifetime, the maximum leakage limit is 5 milliwatts of microwave radiation per square cm at approximately 2 inches from the oven surface. This is far below the level known to harm people. Standing 20" from an oven limits the microwave exposure to approximately 1% of that received at 2 inches. Also, all ovens must have 2 independent interlock systems to stop the unit the moment that the latch is released or the door is opened. In addition, a monitoring system stops oven operation in case one or both of the interlock systems fail.



**MOPED SAFETY** - The name "Moped" is the nickname for motorized pedal cycles - low speed two-wheeled vehicles. Mopeds are intended for limited use on public highways, and are very popular in tourist sites, in some parts of the U.S., and in some foreign countries. If you have visited Bermuda, for example, you know that Mopeds are the most popular means of travel there.

If You Rent a Moped, your orientation briefing may cover a large number of items very quickly. Then you are left with an unfamiliar machine and a "try it and hope for the best" mode of operation. Try to avoid this. Take time to test drive your machine and make sure that you are comfortable with it. Check it over before accepting - especially the brakes!

If You Buy a Moped, check with your state of residence regarding:

- \* If a license is required
- \* Registering your moped and getting license plates
- \* Is a motorcycle helmet required?
- \* The type of lighting required
- \* Is night driving permitted?
- \* Where can you drive your moped? (i.e. road shoulder, bike paths, etc.)
- \* Insurance requirements
- \* Applicable speed limits

\* Are pedals required?

\* Traffic laws that must be followed on a moped

Regardless of your individual circumstances while riding a moped, you are expected to comply with all traffic regulations. Sidewalk riding is prohibited in virtually all states. Also, since the maximum speed that most mopeds are designed for is about 30 mph, you should restrict your moped driving to those roads and areas with a speed limit of 30 mph or less.

For moped safety tips, please refer back to the "Bicycle Safety" section. Virtually all of the bicycle tips also apply to mopeds since a moped is essentially a motorized bicycle. Also, most automobile drivers regard mopeds essentially as bicycles since they are two-wheeled and generally cannot go as fast as cars.

The "fender-bender" mishap that you may experience in a car can result in serious injuries if duplicated on a moped since you may be thrown onto the road or against another vehicle. Your clothing may be your last line of defense in such situations. You should wear an approved helmet, eye protection, hard soled shoes with heels, a long sleeved shirt or jacket, and long-legged trousers. Leather gloves for hand protection and a yellow or orange vest with reflective strips for visibility are also desirable.



**MOTION SICKNESS** - Millions of Americans suffer from motion sickness from time to time, with effects ranging from unpleasant to debilitating. It is estimated that from one third to one half of airline passengers will experience some degree of motion sickness when encountering heavy turbulence. Rough seas can prompt motion sickness, even in experienced sailors. And many people find that they are unable to read without experiencing some degree of motion discomfort while riding in a car.

Motion sickness happens when the balance center of your inner ear sends information to your brain that conflicts with the visual signals that are being sent simultaneously through your eyes and sight.. For example, your body may sense rolling motions that you cannot see from inside a ship or plane. Or, if you are watching a movie where you are seeing what the pilot sees while flying at high speed, your eyes are seeing movement that your body does not experience. These conflicting signals to your brain may trigger motion sickness. Symptoms can include:

\* Dizziness

\* Paleness

\* Excessive saliva production

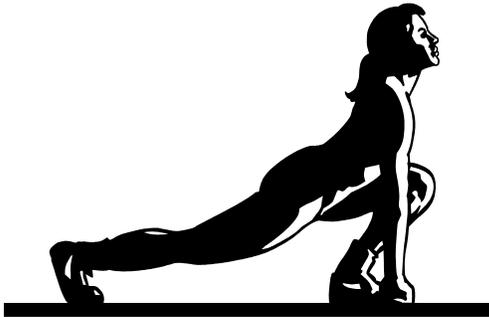
\* Cold sweating

\* Nausea

\* Vomiting

Motion sickness is generally easier to prevent than to treat. Some tips on coping with trips by land, sea, or air:

- \* Avoid food and drink on short trips, and eat lighter before and during longer trips.
- \* Sit where there's the least sense of motion – near the wings of an airplane or in the front seat of a car.
- \* Avoid reading while travelling, focusing on the view outside whenever possible.



**MUSCLE CRAMPS:** Muscle cramps are also referred to as "muscle spasms" or "charley horses", and are painful muscle contractions. In most cases, the pain of the cramp is severe enough to cause the person to promptly stop what they are doing.

Tight muscles are more likely to cramp than flexible muscles that have been stretched. Stretching after exercise can keep your hot muscles from shortening and cramping.

Muscle cramps are also often associated with:

- \* Failure to keep hydrated by drinking enough water
- \* Excessive sweating or dehydration
- \* Taking "fluid pills" to reduce fluid retention
- \* Mineral deficiencies due to inadequate diet
- \* Exercising or playing sports in hot weather
- \* Failure to cool down and stretch after vigorous exercise
- \* A low level of fitness
- \* Overexertion
- \* Muscle fatigue
- \* Wearing high heels
- \* Smoking

A muscle cramp can cause your muscle to be tender to the touch for several minutes after the cramp is noticed. Most cramps occur in the legs or feet, but they can involve other muscle groups as well.

When a cramp occurs, several steps can be taken to reduce the symptoms and to help stop the cramping. These include:

- \* All activity should be stopped. A muscle cramp is a sign of an irritated muscle, and further activity causes further irritation.
- \* Gently stretch and massage the muscle.
- \* Ice, alternating with heat, may help to treat the cramp and to lessen pain.
- \* Wrapping the cramped muscle with an Ace bandage may help.
- \* Gradually increased amounts of stretching and exercise can be started after the initial symptoms have gone away.



**NECK CARE** - Your neck is your head's lifeline to the rest of your body. It encases the spinal cord and vital nerves and blood vessels. It also supports your head – which can weigh 15 – 20 pounds. Its sturdy, but flexible system of muscles and ligaments continuously holds your head up and also allows it to move forward and back, to pivot so you can look to the side, and to tilt toward either shoulder.

Your neck can experience stresses from poor posture, obesity, emotional tension, automobile accidents, and sports injuries. But, it has ways of protesting against overuse and abuse. Not only can you have pain in your neck, but problems originating in your neck can result in pain in the arms, head, and shoulders as well. Severe neck problems can also lead to tingling or numbness in your fingers, frequent headaches with pain felt in the back of your neck, or dizziness.

Much neck pain can be avoided by good posture – which involves keeping your ears, shoulders, and hips in a straight line. Good posture distributes your body weight evenly, from head to toe. If neck pain does occur, gently massaging your neck with your fingers for about 15 minutes may help. Also, exercises, including head tilts, neck rotations, and isometric exercises can strengthen your neck and increase flexibility.



**NEW EMPLOYEE SAFETY ORIENTATION** - Can you remember the check-in process when you "reported aboard" ? Were you given a safety brief ?

Or, did your Command wait until you had an accident to inform you about what you were supposed to be doing ?

Most Safety Professionals agree that the time to provide safety orientation training to a new employee is on the first day they are aboard. This certainly prevents them from reporting to their work site without knowing anything about our safety expectations. However, any employee's first day may be hectic since they shuttle from one place to the next and may be inundated with more information than they can absorb at the time. So, what is the best "first day" safety training for them ?

1. A one-page handout that they can take with them after you talk is desirable. This reinforces what you tell them, and they can review the information again later at their workplace.
2. Keep your presentation short and to the point. Start by asking the employee about their previous work experience and contacts with their Safety Office. Inquire about their Supervisor at your Command, and the expected job duties, and gear your presentation to what they will be doing. Be sure to ask about their field duties, since their field work and associated hazards may be much different than their office work.

Certain safety basics are normally a part of every safety orientation brief:

- \* How the employee can access the Command Safety Instruction.
- \* Individual safety responsibilities.
- \* How they can report unsafe/unhealthful conditions
- \* Personal protective equipment required, and how they can obtain.
- \* What they must do in the event of an accident.

The new employee's supervisor is responsible for advising them of specific job hazards, hazardous materials that they will be using, etc., although I mention any particular hazards that I am aware of.

I close by emphasizing the safety services that we provide, and how to contact me if they have any questions. I then follow-up with a safety e-mail at a later date to expand on what was discussed. This helps to remind the employee of the key safety points and makes it more likely that they will retain the information.



**NOSEBLEEDS** - A heavy nosebleed can be frightening, but using the proper self-care measures can usually help control the bleeding. Suggested techniques for stopping a nosebleed include:

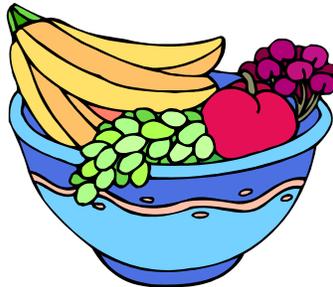
\* Sit upright and tilt your head slightly *forward* so that blood can run out the front of your nose. Avoid tipping your head back, which can cause blood to run down your throat.

\* Pinch your nostrils together, breathing through your mouth. Most nosebleeds come from the soft, front part of your nose.

\* Release your hold after 10 full minutes. (not before). If bleeding continues, you may not be pressing in the right spot. Try again for 10 more minutes.

\* Rest quietly after the bleeding has stopped. Avoid blowing your nose for at least 12 hours.

You should seek medical attention if the bleeding hasn't stopped after applying pressure for 20-30 minutes or if blood continues running down your throat even when your nose is pinched. Also get care if you suspect an injury or broken nose, or you keep getting nose bleeds.



**NUTRITION** - Good nutrition is absolutely necessary for good health. You cannot ignore this basic fact if you are to avoid illness and to maximize your ability to recovery from injury. The "payoffs" of good nutrition include easier weight control, lowered blood pressure, more energy, and better overall health. Some nutrition suggestions are:

- Eat lots of starches and grains such as bread, cereal, rice, pasta, and beans. They can be good sources of fiber, and most are naturally low in fat.
- Eat more fruits and vegetables like carrots, broccoli, apples, and bananas. They are good sources of vitamins, minerals, & fiber & contain almost no fat.
- Eat some dairy products and meat. These include milk, yogurt, beef, fish, and eggs. They are good sources of protein and nutrients, but can be high in fat.
- Eat less fat and sugar. Foods like oil, salad dressing, butter, and margarine are high in fat. Soft drinks and candies are high in sugar. Chocolate, cookies, and sweet desserts are high in both.
- Choose fresh fruits and vegetables. Straight from the garden is ideal. Frozen is okay, and canned should be a last resort. Many orange and yellow vegetables have nutrients that may protect against certain kinds of cancer.
- Eat breads and cereals made with whole grains instead of refined grains
- Eat a good breakfast each day to get you started
- Limit caffeinated drinks to no more than 2 or 3 a day
- Include 3 to 5 servings of vegetables and 2 to 4 servings of fruits each day

- Be careful of using too much salad dressing, mayonnaise, or sour cream in your diet. These can be high in calories and fat.
- Keep healthy snacks such as flavored rice cakes, yogurt, veggie sticks, and fresh fruit on hand.
- Excellent, nutritional dinner food choices include broccoli, legumes, soy, and tomatoes.
- Make smart choices when ordering fast food - even if you're hungry and in a hurry.
- *Enjoy* food for its wonderful variety of flavors, textures, colors, and nutritional qualities.



**OBSTACLES – GETTING PAST** - Most of us encounter walking obstacles rather frequently when we're out and about. These obstacles may include:

- \* **Uneven or broken pavement**
- \* **Raised tree roots**
- \* **Holes**
- \* **Puddles of water**
- \* **Muddy areas**
- \* **Snow/ice**
- \* **Downed tree limbs**
- \* **Open manholes**
- \* **Snowdrifts**
- \* **Missing pavement sections**
- \* **Vehicles parked on the path we intend to take**

To safely navigate these, we must,

1. Recognize the presence of the obstacle.
2. Evaluate the hazard presented
3. Decide whether to go over, under, or around the obstacle.
4. Plan our technique for getting past the obstacle, and carry it out.

Obstacles may be anticipated when you have been over the same route before and know what to expect. But, most obstacles that can cause us trouble fall into the category of unexpected hazards. And, you can't depend on "Caution" signs being present to

alert you. Some of the worst hazards such as sinkholes, snow/ice, downed tree limbs, etc. can develop quickly and create problems. So, I would like to pass along the following tips:

- \* Try to avoid going out or being out in bad weather. Most of your trips can probably wait until things improve.

- \* Your footwear should be suitable for the surfaces that you may encounter. Assume reasonable adverse conditions on your walk and wear sturdy, slip-resistant shoes or boots. Women should leave their high-heeled shoes at home or avoid them altogether.

- \* Look where you're walking and walk where you're looking. This applies whether you're alone or with a group. Become adept at noticing and adjusting to walking hazards. If you must read a map or sign, written directions, or similar items while on your walk, you should stop to do so.



- \* It is generally safer to walk around obstacles rather than trying to climb over them. This rule applies especially to ditches. Trying to jump a ditch invites a sprained ankle, fall, or worse. Even walking or climbing down into the ditch may be risky due to the presence of water or mud that can cause you to slip and fall to the bottom. Chances are that others have encountered this ditch before and, by following a path that they may have made, you can find a safe way around.

- \* Holes in pavement with depressed sections around them sloping inward toward the hole may indicate a sinkhole. This is where the soil under a paved area may have washed away, leaving a "hollow" space under the pavement. Stepping on or near the sinkhole can cause the pavement to crumble and you to fall in. And sinkholes can be several feet deep. So please stay away from these areas and call your local Public Works Dept. if a sinkhole is found.

\* Avoid walking near busy roadways when possible. If you must, plan in advance and dress to be seen by wearing reflective materials. If you find that your path ahead is unexpectedly blocked and you might have to walk in the roadway for some distance to get around the obstacle, consider backtracking instead until you find a safe place to cross the road. Then it may be possible to continue your trip on the other side. Crossing at a straight roadway section where oncoming traffic can see you more easily, and vice-versa, is recommended.

\* Since many slip/trip/ and fall mishaps occur when you are in a hurry or try to cut corners in some way, try to match your walking speed with the type of hazards that you are finding. Avoid the urge to undertake the higher risks involved by climbing over fences, jumping over ditches and downed limbs, and similar strategies, especially when you have more desirable alternatives at hand.



**OSTEOPOROSIS** - This is a disease characterized by low bone mass and structural deterioration of bone tissue, leading to bone fragility and an increased susceptibility to fractures of the hip, spine, and wrist. Although either men or women can be affected by osteoporosis, 80% of cases in the US are women. This is often known as the "silent disease" because bone loss occurs without symptoms. People may not know that they have osteoporosis until their bones become so weak that a sudden strain, bump, or fall causes a fracture, or a vertebra to collapse. The sad fact is that one in two women and one in eight men over the age of 50 will have an osteoporosis-related fracture in their lifetime.

By age 20, the average woman has acquired 98% of her skeletal mass. Building strong bones during childhood and adolescence can be the best defense against developing osteoporosis later. Women can lose up to 20% of their bone mass following menopause, making them more susceptible to osteoporosis.

Certain people are more likely to develop osteoporosis than others. Factors that increase the likelihood include:

- \* Being female
- \* Being thin and/or small frame
- \* Advanced age
- \* A family history of osteoporosis

- \* A diet low in calcium
- \* A sedentary lifestyle

The good news is that, with an "ounce of prevention", you can dramatically reduce your risk of acquiring this problem. Some steps that you can take are:

1. Maintain a balanced diet, rich in calcium and Vitamin D.
2. Weight bearing activities, (those that you do on your feet), like walking and stair-climbing. Weightlifting is also very good.
3. A healthy lifestyle with no smoking and minimal alcohol intake
4. Bone density testing, and medication when appropriate.

**PAIN RELIEF** - The tendency among healthy individuals is to take their good health for granted, and they may not understand or sympathize with the employee who spends a good deal of their life dealing with pain symptoms.

Pain is your body's natural alarm to warn of danger, as a reminder to slow down, or to tell you when you have been injured in some way. But chronic pain is another matter – it doesn't go away despite your best efforts to control or eliminate it. It can disrupt your life. Employees who are in chronic pain may:

- \* Have high absenteeism
- \* Be frustrated and depressed
- \* Suffer low productivity
- \* Be irritable and affect group morale
- \* Be left out of group activities

Some good advice to give the employee who must deal with pain on a daily basis:

- They should get a thorough medical evaluation to identify any treatable conditions.
- Some employees find that massage or self-hypnosis work for them.
- The employee's physical fitness program should not be neglected. Being out of shape makes pain worse, while a regular exercise program can increase the ability to tolerate pain.
- Moderate use of pain medications may help.
- Employees should try to stay relaxed. Muscle tension often increases pain.
- Some pain can be effectively managed using ice packs, soaking in a hot bath or whirlpool, or by using a heating pad.

Some resources for obtaining more information on this subject are:

- The American Chronic Pain Association. (916) 632-0922, and
- The National Chronic Pain Outreach Ass'n. - (301) 652 – 4948



**PEDESTRIAN SAFETY** - In any collision between a motor vehicle and a pedestrian – the pedestrian loses ! In fact, pedestrians account for approximately one in five road fatalities, and about 100,000 walkers are struck and injured each year.

Elementary age children are at greatest risk because of their limited developmental skills. **Children in this age group:**

- Have a field of vision about 1/3 narrower than an adult's.
- Are unable to determine the direction of sounds.
- Cannot accurately judge the speed or distance of moving vehicles.
- Do not understand the time and distance needed for a vehicle to stop.
- Overestimate their own abilities
- Are easily distracted, and tend to focus on one thing at a time.
- Are easily hidden by bushes, parked cars, etc.

Another age group at higher risk is older Americans, who may develop vision or hearing problems. Their mobility and reaction time may also decrease.

**Walking While Intoxicated:** Have you heard this term before? It is not used much when compared to DUI or DWI, but a drunk pedestrian takes roughly 5 times the risk of a sober walker. Injuries and fatalities occur when these zonked-out folks simply walk out into the street and wander directly into the path of an oncoming vehicle. The sad fact is that almost half of all pedestrians who are killed die drunk. Also, it should be noted that more than 60% of pedestrian fatalities occur at night.

For pedestrians, the challenge is to avoid these risky situations:

- \* Darting out from between parked cars
- \* Crossing a multi-lane road
- \* Crossing in front of a turning vehicle
- \* Crossing behind a vehicle that is backing up
- \* Children who play street hockey, basketball, and other games in the roadway
- \* Venturing out into a busy roadway to rescue or assist an injured cat or dog.

The best way to protect children near traffic is to hold their hand. Experts recommend that children under the age of 10 are always supervised by an adult near traffic. Also, both you and they should be careful while walking behind vehicles – especially in parking lots where the car may be about to back up. If you see backup lights, then it is safest to wait until the car has completed backing and is out of the way.



**PERSONAL PROTECTIVE EQUIPMENT (PPE)** - Since PPE is a basic part of any successful safety program, most safety personnel are very experienced in this subject. Therefore, this section deals mainly with the problem of getting employees to wear PPE each and every time that they should, when neither you nor their supervisor is there to ensure that they do. Some comments and suggestions:

\* Be concerned about your employee's PPE practices away from work. An employee injured at home will deprive you of their services to the same extent as if they were injured at work.

\* Recognize that some employees must be "sold" on the value of PPE, either because they are not used to wearing it or for some other reason. Reasons that employees may give for not wearing PPE include:

- Uncomfortable      - Hot
- Heavy (As in the case of safety shoes)
- Restricts their work or vision      - May be difficult to put on
- It may not be readily available when they need
- They dislike the appearance
- They don't feel that the hazard warrants the protection
- Peer pressure may encourage them that its okay not to wear PPE

The above factors may not be present at all, or may be minor. But if the employee does not recognize the value of PPE or really does not want to wear it, intervention by yourself and/or their supervisor may be necessary. Some ideas are:

- Explain the value of PPE – why wearing is a small price to pay to protect a priceless resource.

Show workers examples of what can happen if they fail to wear their protective equipment and have an accident.

The supervisor and work group must support the PPE Program.

Give the employee some PPE choices when possible.

Repeated violations of PPE rules must have a consequence. (i.e. – Disciplinary action)



### "PINK EYE"

You awaken from a good night's sleep with itchy, red, and irritated eyes that you can barely pry open. What's going on? It may be that you have an eye inflammation known as "Pink Eye" or *conjunctivitis*.

Viruses, bacteria, allergens, and other physical irritants can cause irritation of the conjunctiva, which is the transparent membrane that lines the eyelids and the eyeball. "Pink Eye" is not considered particularly serious, but it can infect an entire classroom of children or a daycare center in just a few days.

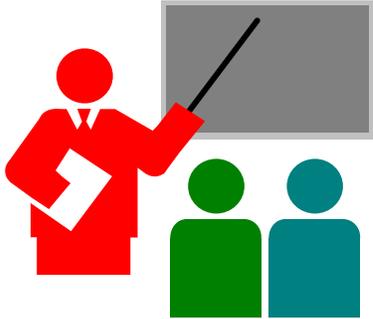
The typical symptoms of conjunctivitis are redness in the white of the eye. The entire eyeball will look pink and inflamed. The eye feels gritty when you blink and may also produce a yellowish discharge that forms a crust during sleep. You may experience some blurred vision as well. One or both eyes may be affected.

You should see your health care provider immediately for conjunctivitis. If the cause is *bacterial*, you will be given a prescription for antibiotic drops. Allergic conjunctivitis can be treated with antihistamine drops. A virus will clear up on its own.

Prevention tips for conjunctivitis include keeping the hands away from the eyes. Towels or washcloths should not be shared. Eye cosmetics, especially mascara, should be replaced frequently to avoid infection.

Self-care relief for conjunctivitis can include applying warm compresses to the eyes. Doing this for about 15 minutes at a time, several times a day, can soothe the discomfort.

Children who suffer from the viral or bacterial form of conjunctivitis should be kept home from school or daycare for a day or two or until the infection has cleared up.



**PRE – TRAINING QUESTIONNAIRES** - Regardless of what you consider an ideal safety training session to be, it probably is NOT standing in front of an audience and reading from a safety book. Most adults want to be INVOLVED in the training session, have a chance to participate, and come away with information that they can use at work, and possibly at home.

After introducing myself and the topic, I sometimes start a training session with a questionnaire for employees to complete, then go around the room asking each employee for at least one response. Some advantages that this offers are:

- \* You get immediate employee involvement, especially when employees realize that you may call on them.
- \* Employees can determine how much they actually know about the safety topic.
- \* After thinking about the questions, employees naturally want to know the answers.
- \* Employees come to the session with a pen/pencil and you provide them with a place to make notes. They can take these with them and review later.
- \* The questionnaire may serve to introduce the topic and what you would like employees to know.

A rule of caution when using the pre-training questionnaire. ALWAYS be positive when commenting on the employee's response, even if the answer is incorrect. Praise any effort to come up with an answer or suggestion. Failure to do this is a sure

way of cutting the line of communication between you and the class. You want attendees to feel good about both themselves and the training session.

**PROSTRATE PROBLEMS** - The prostate is a small gland at the base of the bladder that produces seminal fluid. The most frequently diagnosed and most fatal cancer in America after skin cancer is prostate cancer. More men die of prostate cancer than from any other cancer. Also, your risk for prostate cancer doubles if you had a father or brother who had it. Overall, one in every six American men can be expected to develop cancer of the prostate.

Medical research still has not discovered the cause of prostate cancer or how to prevent it. But, preliminary results, based on continuing research, offer new hope. Based on research findings, here are 8 habits to adopt that may help to protect your prostate.

1. Avoid fat in your diet, especially that from meat, eggs, and whole-milk products.
2. Include more cooked and raw vegetables in your diet.
3. Eat more fiber from legumes, whole-grain breads, and cereals.
4. Stop smoking.
5. Eat foods rich in Vitamin E, such as brown rice, wheat germ, nuts, and seeds.
6. Exercise regularly and maintain a healthy weight.
7. Sip green tea with meals and snacks.
8. Try products with soy in them, including tofu, soy powder, and soy milk.



**RECREATION SAFETY** - As recently as two generations ago, many Americans worked in physically demanding jobs that provided them with lots of physical activity. Many jobs today are relatively sedentary, and exercise through recreational activities is essential for health, weight control, fitness, and an overall sense of well-being. Some examples of moderate exercise that can keep you healthy are:

- \* Play volleyball for 45 minutes
- \* Walk for 30 – 40 minutes
- \* Bicycle 5 miles in 30 minutes
- \* Social dancing for 30 minutes

\* Swim for 20 minutes

\* Jog at least 1 ½ miles in 15 minutes

Recreational activities are healthy and fun. Yet, it must be recognized that they sometimes present an accident potential – particularly higher risk activities like skiing, skateboarding, racquetball, etc. Your workers need to be reminded that:

\* The best recreational activities are ones that can be enjoyed on a regular basis, not just on weekends. Intense physical activity just once a week can be dangerous.

\* Everyone should know their limits and listen to their bodies. But when "everyone else is doing it", it is tempting to try and keep up – and pay the price later. It takes courage to say – "I'll sit this one out" and rest, but your body will thank you for it.



\* Some recreational activities such as touch football, "pick-up" basketball, etc. are primarily for younger people. Yet at company picnics, older people may try to join in, even when common sense tells them that they should choose activities with less chance of blows, trips, or collisions.

\* Be aware of heat and humidity conditions. Wear light, loose fitting, breathable clothing to allow circulation, and a hat to shield you from the sun. Early morning or evening is the best time to exercise in the summer. Scale down your activities to compensate for hot weather.



## **RODENT CONTROL AND SAFEGUARDS**

It is a rare and fortunate home indeed that does not have problems with rodents at one time or another. They can be found in homes, farms, ranch buildings, sheds, and garages. Rats, mice, and other pests have been around for centuries and their adaptability virtually guarantees that they will be around for as long as we are. While we cannot hope to rid the world of these creatures, we can do many things to help minimize their intrusions. They are undesirable in a number of ways:

1. They eat and contaminate all types of food.
2. They damage and destroy property
3. They may carry diseases that are health hazards to both ourselves and our pets.

The signs that rats or mice are around include droppings, tracks in the dust or in the snow, and burrows in the ground. Some exterminator companies have blacklights that illuminate the exact locations where rodents have been travelling. The principal means of controlling rats and mice are:

- Removal of Shelter. This may include trash, empty boxes and cartons, etc. If these cannot be discarded immediately, avoid piling them on the ground or against walls. Try to arrange storage at least 18 inches off the ground. This also includes the storage of towels and rags in your garage. Also, tall grass and weeds should be cut, especially if they are near the house.

- Removal of Water and Food. Rodents love bird seed, grass seed, and pet food, all which are loaded with nutrients. The smell of these items is so strong that it will attract several types of animals to your yard. Therefore, it will be to your advantage to store these items in metal containers with covers when possible. Also, put garbage in tightly covered metal trash cans. Repair any leaky faucets, and remove any water that rodents have access to.

- Use Rat/Mouse Poisons. You can either do this yourself, or arrange to have a professional exterminator come in to put out bait. In either case, all poisons MUST be placed where they are not accessible to children, pets, and livestock. Single feed active poisons such as Bromethalin are preferred over other products where the rodents must feed several times before the effects are evident. Dispose of unused bait and containers properly.

- Seal Possible Entries to Your Home and Outlying Buildings. All openings where rodents can enter should be covered by rat-resistant materials such as hardware cloth or copper wool. Copper wool cannot be chewed through and will not rust. Also, it is easy to cut and also easy to stick into access holes.

- Use Rodent Repellents. These may simply be sprinkled around a building. They have faint odors which people cannot detect, but which rodents do not like. Although this product will not get rid of existing populations, it has proven to be quite effective in keeping new rodents out.

Although a frightening thought, it is possible that you may encounter rats or mice unexpectedly. This may be either outdoors in your yard area, while working or walking, or may be in a part of your house such as the garage or attic. Most will scurry away at the sound of your footsteps as they want to avoid human contact. Occasionally, however, the rodent may be trapped and cannot readily escape without getting past you. In these cases, it may be desirable to withdraw rather than to try and deal with a terrified animal that may bite if cornered. Also, seeing one rodent virtually guarantees that others are around, and you need to formulate a plan for dealing with the entire problem and not just the rat or mouse that you happen to see.

Another good point when dealing with a rodent problem is not to close or seal a rodent's point of entry until you know that all active rodents have been removed or destroyed and you are certain that there is no longer any activity. Some homeowners simply close or seal holes thinking that the rodents will just go away. Nothing could be further from the truth. Since rodents are creatures of habit, sealing the holes that you see will not solve the problem – the rodents will simply adapt to the fact that their primary means of entry has been removed. They will then either find another way in or find other food in the area similar to the type that they have been eating.



**SAFETY COMMITTEES** - The value of a good, active, and motivated safety committee is well known – it can make a difference in the lives of supervisors and employees. Goals for a good safety committee may include:

1. They are an expanded version of the Safety Office.
2. Safety responsibilities and authority can be delegated to Committee members.
3. Members act as a conduit between the Safety Office and the workers, and voice employee concerns.
4. Members care about more than themselves. They have a commitment to keep their co-workers and friends safe and healthy.

But, some Safety Committees just "go through the motions". They are semi-active and ineffective. Members meet monthly or quarterly, talk about accidents, and wring their hands. They may become complacent and bored.

There is no easy solution to developing an active, vigorous, and viable safety committee. It takes time, effort, and hard work to keep the members interested and active. It can be difficult to come up with new ideas.

The bottom line for any safety committee has to be results. What is the committee doing for the Command? What has been accomplished? These questions can be addressed by:

- Keeping members involved by delegating tasks.
- Keeping members informed of Command developments related to safety.
- Recruiting motivated, committed members who have a natural interest in the Safety Program.



**SAFETY POLICY COUNCILS** - Although Safety Policy Councils offer a great deal of potential in assisting the success of the Safety Program, using this potential can be very difficult for several reasons, including:

\* Safety Policy Council members are normally top management officials, and their time is valuable. You may have to make your Policy Council presentations short and to the point.

\* Top managers may or may not have much interest in the Safety Program, and may associate it with negative factors such as accidents, injuries, and compensation claims.

\* Some top managers travel frequently and thus may be absent when Safety Policy Council meetings are held.

The top management executives that we badly need for success typically are extremely sharp, intelligent persons who are highly interested in the people that work for them. Studies often show that time limitations are the main reason for inactivity with the

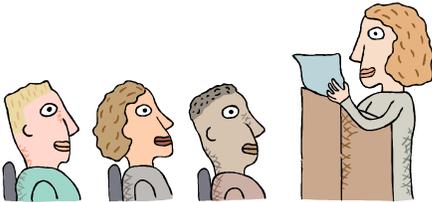
Safety Program. Some executives assign staff members who guard their time and schedules carefully, and thus may be somewhat shielded from Safety Office contact. These factors make our limited time with top management even more important. My suggestions for conducting effective Safety Policy Council meetings are:

- Be brief. State your points clearly and concisely, and be prepared to offer two or three examples to support your conclusions.
- Relate your suggestions to money, efficiency, and performance.  
Organizations profit from excellent safety programs by:

- \* Saving money by avoiding accidents, FECA costs, and medical expenses.
- \* Saving money that would otherwise be spent for vehicle and equipment damages, fire losses, etc.
- \* Saving time associated with filling out accident reports, visiting medical facilities, consultations with HRO, and handling employee safety complaints.
- \* Avoiding the time and expense of replacing injured employees with substitutes.

- Conducting individual meetings with Policy Council members if more detailed information is desired.

During meetings, state clearly what you want Policy Council members to do. Ask the Council for decisions, as appropriate. This involves Council members and maintains interest.



### **SAFETY TRAINING**

You know the feeling. You enter a classroom filled with employees who are there for "mandatory" training and wonder how you will be able to overcome their apathy and disinterest to the extent that your message will get through and be well-received. Or public speaking is a relatively new assignment for you, and you realize that it can get pretty scary in front of a large group of people. Regardless of the obstacles, the safety message must be presented, and you may be the best one to do it. So here are a few tips to ease your transition into the world of public speaking:

- Try to visit the training site in advance to ensure that it is comfortable and pleasant, and that the necessary audio-visual equipment is available.

- Get a good night's sleep before the session. You think more clearly and have more enthusiasm if you are rested than if you are fatigued or have extraneous problems on your mind. You need to be focused when you get up to speak.
- Arriving early for the training and staying for awhile afterwards conveys dedication and commitment to your audience.



- You will be more successful if you are perceived by your audience as "one of them". Mingling with the audience before the class is a good idea. Share jokes and comments of the day and help the employees relax so they will be at ease with you.
- Your introductory remarks can set the tone for the session. State briefly who you are, and what the Safety Program can do for employees. The class is an opportunity to pass along the latest safety information. Also, mention that the information learned in class can also be used at home to protect employee's families. My two stated goals for each class are:
  - \* That employees enjoy the class
  - \* That employees actually learn something during the class.
- Try to make eye contact with all employees and ask for responses from time to time. Adult employees want to be personally involved with the training.
- Whenever possible, put in examples of humorous situations that happen in everyday living. Adult employees remember stories, and laughter may lighten the message and ensure that it is well received.
- Not every employee will "buy-into" your presentation, and some questions may reflect their skepticism. Remind the class that you are there to provide them a service, and to help them meet their training requirements. Try to address harsh questions in a friendly, professional manner. Address topic-related questions during class that seem to be of concern to the entire group, and try to postpone individual problems or concerns until after class.
- Try to use training aids to the extent possible, obtaining the highest quality that you can find. Sight represents about 83% of how people learn, with listening only 11%. The effective use of training aids is very important.
- Ask questions like "What do you think would happen if?", "Just suppose that", "What is your opinion of", etc.

- Some good responses to questions from your audience are:
  - "That's an important question for me also"
  - "I have asked myself the same question"
  - " I can relate to your concern about . . . . ."
- Vary your presentation by changing the tone and volume of your voice. Also, make it a habit to walk around during the presentation, sometimes going out into the audience to make a point or to address a question.
- It may be useful to announce a training topic that you would like to present, then ask for a show of hands of how many people are interested in the topic. This may tell you when to go into detail, and when to "hit the high spots" and move on.
- Try to end most training sessions with a video. Most employees like quality videos and remember much of what they see. A good video also closes out your session by reinforcing at least some of the points that you made in class.



- Don't hesitate to ask your point of contact how he/she felt the session went, and for any suggestions for future sessions. Also, you can critique yourself and make notes of areas where you felt the session could be improved, particularly since safety training sessions tend to be repeated for many different audiences.



### **SCISSORS SAFETY**

Most people don't give much thought to their scissors, which are essential for all types of home projects. They buy one pair and use them for every conceivable purpose – school projects, home repairs, opening boxes, etc. until they either break or become so dull that they will no longer cut anything. But, this "one size fits all" approach can

result in unexpected problems and is not recommended.

Actually, there are many types and styles of scissors, designed for many different purposes. Some scissor companies offer over 180 different scissor models, some of which are for professionals who perform very specialized tasks over and over throughout the day. Other scissors are general purpose, but have limitations as to the types and thicknesses of materials that they can cut. It is to your advantage to learn which types of scissors will accomplish what tasks, and to use them only for those purposes.

Unfortunately, scissors have been a source of injury for some of our employees, particularly when they have volunteered to hold a material while someone else cuts it. The person using the scissors becomes intent on completing the cut along the intended path and sometimes is using a lot of force. The person loses track of the position of the helper's hands and, in an instant, accidentally cuts into their hands or fingers. Some of the resulting hand injuries have been serious enough to require hand surgery.

Therefore, some tips on scissors care, maintenance, and safety are in order:

1. Decide what tasks you will need scissors to perform, and learn which types of scissors are required. Use those scissors only for the intended purposes.
2. Cut heavy things near the pivot of the scissors, NOT near the tips of the blades.
3. Don't force cutting. If its hard to make the cut, the scissors are either too light or too dull to complete the task. Use "high leverage" scissors with longer handles compared to the blade length, and ensure that the blades are sharp. This will allow you to cut thicker materials with less hand closing pressure.



**SHOE FACTS** - Your feet bear a cumulative total of about 5 million pounds of impact each day as the average American walks about 7 1/2 miles. Your feet are designed to absorb this impact under natural conditions such as walking on grass. But if you walk all day on concrete, underfoot cushioning is desirable.

Running shoe use should be restricted to running! This may sound obvious, but using running shoes inappropriately can cause you to fall or twist your ankle. Manufacturers design shoes according to function or activity. Running shoes are designed to get the runner comfortably from one point to another, and pretty much in straight line. Running shoe designs concentrate on good heel support and forefoot

control. They are not recommended for other purposes such as basketball, tennis, etc. where excellent lateral stability is needed to allow quick changes in direction. Also, wearing running shoes with deep treads around the house is not recommended. If you are walking backwards or from side to side on plush or textured carpeting, for example, the deep treads of running shoes may "grab" and force you to stop abruptly causing a loss of balance.

Some factors that make a shoe comfortable are:

- \* Proper Fit: This means the correct heel width, arch support, heel-to-toe dimension, box toe space, etc.
- \* Shape: There must be a reasonable match between the shape of the shoe and your foot.
- \* Flexibility
- \* Weight: The heavier the shoe, the more load and foot lift is imposed on your feet and legs, with consequent lessening of comfort.
- \* Inside Shoe Climate: This is an important shoe comfort factor and involves temperature, humidity, moisture, breathability, and insulation.

A running shoe's midsole only lasts so long. It degrades from use, and the resultant useful life is between 350 and 550 miles. After that, the shoe should not be used for running but may be used for walking or other less strenuous activities.



**SKATEBOARDS & IN-LINE SKATES** - Millions of kids of all ages enjoy skateboarding, and the related thrills of in-line skating and scooters. For many kids and some adults, the first time that they try out a skateboard or in-line skates is when they receive them as a Christmas present. Adults may purchase in-line skates because they look like fun, and because adults like to behave like kids once in awhile. Many kids experience skateboarding for the first time by borrowing one from an older sister or brother or one of their friends, jumping on, and trying to imitate the stunts that they have seen older kids do.

Since you are involved in safety, and may also have kids of your own, are you thinking of a couple of "Caution" items concerning the above description? You probably realize that, when a group of kids get together, the powerful effect of peer pressure may prompt young, inexperienced skateboarders to attempt maneuvers or "stunts" that they should not do. This is confirmed by US statistics that document more than 70,000 visits to Hospital Emergency Rooms each year due to skateboard and in-line skating injuries. Also, this does not include the thousands of other bruises, scrapes, muscle strains, etc.

that are not reported because medical attention is never sought. Kids who have been skating less than a week suffer one-third of these injuries even though they account for a much smaller percentage of the skateboarding community. Obviously, the sport of skateboarding and in-line skating could use some improvement in the safety department.

**SOLUTIONS:** Skateboards and in-line skates are probably going to be around for a long time, and are a very enjoyable and healthy source of fun to millions of kids. I believe that safe skating behaviors by our kids should start by a parent discussing safe behaviors with them before they can start. Also, parental involvement should include:

- Purchasing quality skating equipment and protective gear, including a helmet, elbow pads, wrist guards, and knee pads.
- Helping youngsters get started safely. This can include some **lessons** in safe skateboarding, how to warm up before skating, etc.
- Insisting that your kids only skate on surfaces that are clean, dry, and free of holes, bumps, and rocks.
- Teaching kids how to fall safely by crouching, trying to relax, hugging their arms, and rolling in the direction of the fall.
- Assistance in checking equipment for loose, broken, or cracked parts.
- Monitoring their kids for safe behavior. How many times have you seen groups of kids with no parental supervision skating in the street or in busy parking lots, or along shopping center sidewalks? Their behavior then becomes a problem for drivers, shoppers, and pedestrians. Parents who notice or receive reports of unsafe skating behaviors should curtail or eliminate skating privileges for a time.



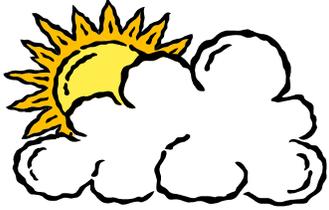
**SKIN CARE SAFETY** - Since there are about a million new cases of skin cancer each year in the USA, it's wise to check your skin spots routinely for changes, and to notify your doctor if you notice any mole which:

- Appears to be red, blue, or white in color
- Has irregular, ragged, or bumpy edges
- Has grown to a size greater than a pencil eraser
- Has become raised or modular
- Bleeds, crusts over, or itches

Also, your doctor should be consulted if you notice a skin sore that does not heal in 3 weeks, a persistent reddish patch, or the sudden appearance of a new spot.

One of the best ways to care for your skin is to avoid the summer sun at peak sun intensity. (Between 10 a.m. and 2 p.m.) Heavy exposure to the sun's ultraviolet rays

increases your risk of skin cancer and causes premature skin aging. Both sunburning and tanning lead to the same end - the breakdown of skin collagen and elastin. This causes the skin to sag and thin more quickly than normal, promoting wrinkling, blotchiness, and tumor formation. Even after you acquire a tan, the damage to your skin continues.



Some people think that they are safe from ultraviolet light, (UV), exposure if the day is cloudy. However, up to 80% of ultraviolet rays can penetrate clouds, so wearing long-sleeved shirts, pants, and a wide-brimmed hat is recommended. Also, wearing sunscreens with SPF values of 15 or higher is recommended - with higher SPF values of 30 or higher recommended for your face, ears, and neck.

Sun protection should be started in childhood since most people receive the majority of their sun exposure before age 18.



**SLEEP** – By some estimates, nearly half of Americans fail to get the sleep that they need to function well during the day. About 1 in 3 adults have trouble either falling asleep or staying asleep.

Lack of sleep can make you feel tired and irritable, become forgetful, and make it difficult for you to concentrate. It can also make you more prone to motor vehicle accidents, illnesses, and premature death.

The average adult functions best with 7 to 8 hours of quality sleep each 24 hours. Regular fatigue and drowsiness could mean that you need more sleep. Typical sleep problems are stress, poor health, caffeine, certain medications, alcohol, nicotine, and shift work. Of the people who say that they often do not get as much sleep as they need, one in three says that sleepiness interferes with their daily activities. And an estimated 100,000 car crashes each year are blamed on sleepy drivers!

One way to determine how much sleep you need is at the end of a vacation after several nights of quality sleep. The number of hours you sleep per night at this time represents the amount that you probably need all the time.

Getting better sleep might require making some lifestyle changes. You should try to go to bed and get up at approximately the same time each day. Activities shortly before going to bed should be relaxing, not stressful. And you should try to resolve any problems or issues before going to bed. Your bed should be used for sleeping, not for watching TV or eating.



Naps can disrupt your body rhythms. If you do take a nap, it should be limited to an hour or less. Shorter naps of 15-20 minutes at rest stops during trips can increase your alertness for several hours afterwards, and you should always visit a rest stop if you become sleepy while driving.



**SLIPS, TRIPS, & FALLS** - It is quite likely that slips, trips, and falls are one of your primary accident causes. Let's make sure that we all understand these terms:

**Slips** - are a loss of balance caused by too little friction between your feet and working/walking surfaces.

**Trips** - are a loss of balance caused by an interference between your forward motion and some object.

**Falls** - are caused whenever you move too far off your center of balance. A slip or trip, as well, often ends in a painful fall.

A key phrase for preventing slips, trips, and falls might be to "Stay alert, stay balanced, and stay safe". Go where you are looking and look where you're going. Some additional suggestions are:

- \* Allow yourself enough time so you won't have to hurry or run.
- \* Choose slip-resistant footwear with adequate friction for the exterior conditions and interior flooring that you expect to encounter. A good shoe is one with non-skid soles, rubber heels, and at least some ankle support.

- \* Avoid walking into dark or poorly lit areas. Carry and use a flashlight.
- \* Use stair handrails, maintaining a "power grip" that will support you if you slip.
- \* Bad weather, uneven pavement, potholes, pavement cracks, changes in elevation, depressions or holes in grassy areas, etc. create higher hazards that should be matched by your higher awareness and caution.
- \* Many workers become accustomed to furniture, equipment, file drawers, etc. being in the same place, and don't take time to note when things change. This means that poor housekeeping or clutter can create tripping hazards that might not be noticed and cause a tripping accident, so everyone's consistent attention to good housekeeping can avoid a painful trip and fall.



**SMOKE DETECTORS** - In the event of a dwelling fire, you may have only a small window of opportunity to escape from your house. Within 2 minutes of the start of a fire, the entire room of origin may be involved. After 5 minutes, your entire house may be fully ablaze. Most fatal fires occur in homes between 8 p.m. and 8 a.m., when occupants are most likely to be asleep. Smoke detectors are life savers, warning you about a fire before it spreads and allowing you time to escape and call for help.

Although approximately 93% of U.S. homes have at least one smoke detector, almost half of the home fires and 60% of the fire deaths occur in the share of homes with no detectors. Having at least one smoke detector cuts your chances of dying in a home fire nearly in half. There are two basic types of smoke detectors, each providing adequate protection but also offering these distinct advantages:

#### Ionization Detectors

- Are fastest at responding to flaming fires that give off little smoke.
- Are the most widely sold type, by far.
- Models with the "hush" button can be silenced after false alarms without removing the battery or opening windows for ventilation.

#### Photoelectric Detectors

- Are fastest at responding to smoldering, smoky fires.
- Are less prone to false alarms from cooking.
- May be more difficult to find in stores.

You should have at least one smoke detector per floor. At least one ionization and one photoelectric type are recommended. When purchasing smoke detectors, check for:

- \* U.L. listing
- \* Ease of installation
- \* A loud alarm
  
- \* The warranty period. (5-year preferred)

Ceiling-mounted smoke detectors are preferred. If you wall-mount them, the detector top should be between 4 – 12" below the ceiling.



**SMOKING** - When you smoke, you inhale more than 4,000 chemicals. At least 200 of these are poisonous and 43 are known to cause cancer. And these chemicals are harmful to anyone who inhales them - not just smokers. Here are just some of the harmful substances found in cigarette smoke:

- Acetone:* A common ingredient in nail polish removers and paint strippers.
- Ammonia:* A poisonous gas and common cleaning agent.
- Arsenic:* Comes from a toxic metal. Once used in rat poison.
- Carbon monoxide:* A poisonous gas and the main ingredient in car exhaust.
- DDT:* A banned insecticide hazardous to the environment.
- Formaldehyde:* An embalming fluid cancerous to animals.
- Hydrogen cyanide:* This is an extremely toxic gas. Although the small amounts in cigarette smoke won't kill you, this will destroy your cilia - tiny hairs that help keep your lungs clean.
- Nicotine:* A highly addictive substance once used as an agricultural insecticide.

Smoking causes lung cancer, heart attack, stroke, emphysema, and other cancers, and one in six deaths in the US are smoking-related. Also, smoking adds significant stress to the heart and blood vessels, accounting for nearly one-fourth of coronary artery disease deaths in the US. And the survival rate for people with smoking-related diseases is not good. Only about 13% of people diagnosed with lung cancer live another 5 years or more.

"Passive" or "secondhand" smoke is the smoke that you're exposed to when you're not smoking yourself, but are around others that are smoking. You are more likely to be affected by "secondhand" smoke in places of public assembly, bars, nightclubs, and restaurants. Regular exposure to secondhand smoke doubles your risk of heart disease and increases the risk of lung cancer and respiratory disease.

Smokers that think that their habit and what it does to their body is their own business need to think again. A recent Treasury Dept. study found that smoking costs this country *more than \$120 billion a year* - a financial burden that *all of us share*. As the costs of treating smoking-related illnesses increase, so do our group insurance premiums, medical bills, and taxes for public-funded medical care programs. We bear these costs whether we smoke or not. The current breakdown of smoking costs for smokers and nonsmokers alike *every year* in the US is:

\$ 60 billion in lost wages from reduced productivity, early retirements, and death.

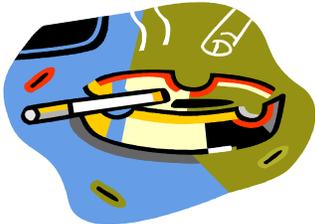
\$ 60 billion in treatment of smoking-related illnesses.

\$ 4 billion in increased life insurance premiums.

\$ 3 billion in treating children born to mothers who smoke during pregnancy.

\$ 500 million from fires caused by smoking.

Of course, the financial costs don't tell the story of the emotional pain and devastation caused when a loved one dies from the ravages of tobacco. Research shows that women use smoking to relieve stress and to control weight. However, research also shows that women are less likely to quit smoking than men. And they face even more smoking-related problems than men, including breast cancer, osteoporosis, cervical cancer, lung cancer, diabetes, and stroke.



But if members of your family or some of your friends are smokers, you should be aware that it is not easy to quit. The force of the habit is strong, and the nicotine in cigarettes is physically addicting. Many smokers would like to quit, but lack the strength or commitment to do so. Studies show that less than 25% of persons who try to kick the habit are successful, and relapses are common. Most smokers will quit several times before they are permanently successful.

If a person is ready to quit smoking, there are many sources of help for them, starting with their primary health care provider. When they quit smoking, every organ in their body benefits. Some great benefits achieved from quitting are:

- \* Better sense of smell and taste
- \* Fresher breath
- \* Cleaner teeth and gums
- \* Easier breathing
- \* Improved complexion
- \* Healthier bones
- \* \$ Saved



**STRAINS AND SPRAINS** - Some definitions on this subject may be helpful:

Strains occur when muscles or tendons are stretched or torn. Muscles are made up of tiny fibers that become more flexible when they're warm. Tendons anchor the ends of muscles to bones. Tendons are stronger than muscles, but less flexible.

Strains may be caused by overexertion, failure to "warm up" properly, lack of flexibility, or poor technique. Strains are classified as:

**Mild** - Fibers are stretched or slightly torn. There is usually some pain, swelling, and tenderness.

**Moderate** - Up to half the fibers are torn. There is greater pain, swelling, and tenderness.

**Severe** - Fibers are extensively torn. A gap in the muscle may be seen or felt under the skin where muscle fibers have given way.

Ligaments are not as flexible as either muscles or tendons and can be sprained if a joint is forced beyond its normal range of motion by a fall, a blow, or a sudden twisting movement. When a ligament is torn, the joint is no longer stable. Nearby muscles, tendons, and blood vessels may also be damaged.

Sprains are classified as:

**Mild** - The ligament is stretched or slightly torn. There is slight discomfort when the joint is moved.

**Moderate** - Up to 75% of the ligament may be torn. There is pain, swelling, and tenderness.

**Severe** - The ligament is extensively torn, and the joint is difficult to move. Severe sprains may be mistaken for fractures.

Avoid strains and sprains by:

- \* Warming up/stretching before vigorous activity.
- \* Starting out slowly.
- \* Wearing the proper clothing, shoes, pads, gloves, helmets, etc. for your activity.

- \* Practice and use proper techniques.
- \* Cool down after activity. Slow down gradually and stretch to keep muscles from tightening too quickly after you stop.



**STRESS** - You are all familiar with stress – a feeling of urgency or pressure which can cause mental or physical tension. Positive stress can help you to concentrate, focus, and perform. People that handle stress well meet the challenge, then relax. This allows them to build up the physical and emotional reserves to meet the next challenge.

Stress becomes negative when you do not or cannot relax after meeting the challenge. Unless you take steps to relax, tension may build up in your body and can affect your health. Some signs of negative stress are:

- \* Nervousness
- \* Muscle tension
- \* Headaches
- \* Speaking rapidly
- \* Trouble sleeping
- \* Feeling hurried and frustrated
- \* Being irritable and impatient
- \* Anger over small problems

Some tips to reduce your stress level are:

- \* List tasks and set priorities. This may give you a sense of "closure" as you finish each task and move on.
- \* Create a friendly workspace. Post pictures of happy times, your family, pets, nature scenes, etc.
- \* Take breaks from your work. Practicing relaxation techniques during your breaks is recommended, and will reduce your overall stress level.
- \* Live well. Eat well – balanced, nutritious meals. Exercise regularly and get enough sleep.
- \* Listen actively to others and give them sincere appreciation for what they do.
- \* Provide for breaks in your work routine, like a vacation trip where you get away from stressors such as an early wake-up call, heavy traffic, deadlines, etc.
- \* Smile



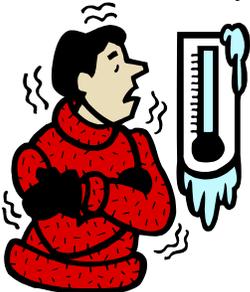
**SUICIDE PREVENTION** - Suicide is an extremely tragic and sudden event and has increased dramatically among young people. Over 30,000 people commit suicide each year, and several years ago our CNO took his own life. Although this subject is unpleasant, we need to know about suicide in the event that we may be in a position to help. Here are some facts:

- \* Depression is considered a leading cause of suicide.
- \* Alcohol use may also be involved since it can cause an already depressed person to lose control.
- \* Some people who commit suicide suffer from chronic pain or a seriously disabling disease.
- \* The period of time that a person considers suicide may be quite limited, but each occurrence **MUST** be taken seriously. **ALL** suicidal persons should receive professional help as soon as possible.

Some positive actions that you can take are:

- Help them keep busy with hobbies, sports, and/or recreation
- Regular exercise can often help the person feel better
- Talk with the person about the problems that they have been having
- Suggesting relaxation techniques such as deep breathing may be helpful

If necessary, an immediate call to a Suicide-Crisis Hotline is recommended.



**TEMPERATURE RANGES** - If your Command is primarily administrative, you have probably heard "discussions" among office workers about the proper temperature. Our servicing Industrial Hygiene office reports that the desired

temperature/humidity levels for offices are:

- \* Temperature - Between 73 – 79 deg. F
- \* Humidity - Between 30% and 60%

These ranges leave a considerable variance for the comfort needs of individual employees.



**TINNITUS** - Some reasons for including this subject are:

- Since approximately 50 million American adults have tinnitus to some degree, it is very likely that some of your employees have it.
- Tinnitus is associated with hearing loss and is an indication that there has been some kind of damage to the hearing mechanism. Usually, a person's tinnitus will be a high-pitched tone in the approximate frequency of the hearing loss.

For most people, tinnitus is no more than a nuisance. Severe cases, however, can cause loss of concentration, sleep problems, and psychological distress.

Some things that people with tinnitus should know:

1. Avoid loud noise and protect your hearing at all costs!
2. Excessive use of alcohol can increase tinnitus.
3. Avoid or limit drinks containing lots of caffeine like coffee, tea, chocolate, and cola drinks.
4. Smoking may increase tinnitus.
5. Aspirin and many medicines are causative tinnitus agents and can make existing tinnitus worse.
6. Control of stress levels may also reduce tinnitus.

The American Tinnitus Association may be helpful and can be reached at:

Phone: (503) 248-9985

FAX: (503) 248-0024

E-mail: [tinnitus@ata.org](mailto:tinnitus@ata.org)



**VACCINATIONS** - When a "shot" is given, the body reacts by making antibodies which fight disease. You never outgrow your need for vaccinations. Getting the proper shots is as important for adults as for children. The following vaccination facts may be of interest:

- Everyone should be vaccinated against measles, mumps, polio, rubella, diphtheria, tetanus, typhoid, and yellow fever.
- Vaccines for chicken pox and pneumonia are now available.
- Annual flu shots are recommended for most people.
- A tetanus shot every 10 years is necessary
- Hepatitis and cholera shots are necessary for travellers to certain countries.

**VEIN PROBLEMS** - Most vein problems occur when your veins have trouble carrying blood from your feet back to your heart. These problems may be cosmetic, or they may cause your legs to ache, burn, or swell. Also, some vein problems can cause blood clots or damage tissue. So, what causes vein problems?

1. Heredity may cause weak veins. Heredity is possibly the top risk factor for vein problems.

2. Injury may damage veins, or cuplike flaps within the veins called valves. These valves open upward so blood can move up the vein. When they close, they keep blood from falling back down the vein. If an injury weakens a vein, the wall near the valve begins to sag. The valve may no longer close fully, allowing blood to drop back down to the first healthy valve. Over time, even the healthy valves may weaken and you may develop ropy veins, or pooling or clotting blood. Blood clots may grow large

enough to close off the vein.

3. Standing for long periods of time makes your veins work against gravity, raising your risk of vein problems.

Bulging veins on the skin surface are commonly called varicose veins. They may be spider veins, ropy veins which present curvy, spiral appearances, and superficial clots.

When thinking about how to control vein problems, remember the three E's - **Elevate, exercise, and elastic stockings**. Elevating your feet above your heart level helps return blood to your heart and reduces fluid build up in your legs. Daily exercise helps to push blood toward your heart. And wearing elastic stockings helps support sagging veins. Swimming is a particularly good exercise for people with vein problems.



**VENDING MACHINE SAFETY** - Everyone has inserted their hard-earned cash into the monster vending machine, only to have it swallow your coins and give you nothing in return. Some people have been known to become enraged at this and resort to rocking or tipping the machine – either to dislodge to product or to at least get their money back. The problem with this is:

1. The vending machine is bigger than you are. It can weigh in excess of 700 lbs.
2. With enough abuse, vending machines can tip over, injuring or even killing the angry customer.

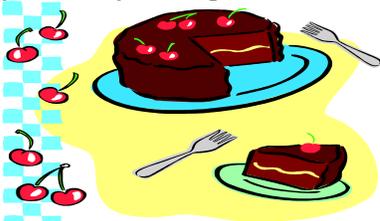
The Navy requires certain precautions to prevent this from occurring.

- Vending machines must be securely anchored to the floor or wall using an industry standard stabilizing bracket.
- A safety label warning of the hazards of tipping or rocking the machine must be displayed near the coin slot.



**WEIGHT LOSS** - Over half of all American men and women are considered to be overweight and out-of-shape, and billions of dollars are spent each year on weight loss programs, "diet" foods, pills, and the like. And the American media almost always features thin or ultra-thin models to sell their products, leading many Americans to feel that thin is the "ideal" look. But most diets fail for a variety of reasons. Here are some time-tested weight loss tips that can increase your chances of achieving good health, and weight reduction:

1. Aim for a healthy body, not just thinness. How you feel physically is most important.
2. Someone else's weight reduction plan won't necessarily work for you.
3. Think consistency and moderation in your exercise and eating habits.
4. Fasting or ultra-low calorie eating will make you tired, hungry, and unhappy, and will probably produce only temporary weight loss.
5. For lasting results, experts say that the maximum realistic target is 1 - 1 1/2 pounds lost each week, *with the aid of exercise*.
6. You can lose roughly a pound a week by cutting 250 calories every day from your diet, *and* burning an extra 250 extra calories each day with physical activity. Cutting 250 calories from your diet each day can be as easy as passing up cheese on your burger and eating one less cookie. You can burn an extra 250 calories each day with physical activity - walking a little more during the day and a mile or so after work.
7. The high diet dropout rate is often the result of feeling deprived due to missing your favorite foods. Don't deny yourself the pleasure of eating. Instead of cutting out food, cut out the extra fat and try to eat smaller portions. Replace your daily doughnut or cinnamon bun with a bagel. And you should allow 100-200 calories worth of treats in your daily meal plan.



8. If you like to snack, pass up vending machine snacks which are likely to be high in fat and calories. Better snacks are nutrient-rich foods such as veggies, yogurt, and plain popcorn.



**WELLNESS** - The "Wellness" Program encourages employees to pursue a healthy lifestyle by:

- \* Not smoking
- \* Getting regular blood pressure checks
- \* Minimizing the use of alcohol and nonprescription drugs
- \* Taking time each day to relax
- \* Maintaining a healthy diet
- \* Following a reasonable exercise program

Wellness is an approach to life, helping you to feel and to look your best.



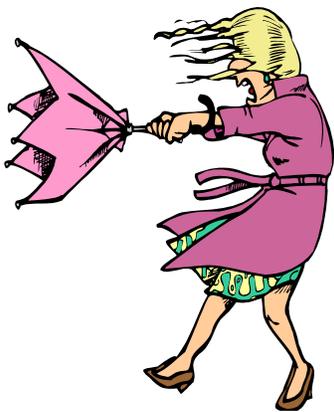
**WINDY WEATHER** - Okay, so not all of us live in a windy city like Chicago. But all of us have to deal with moderate to high winds once in awhile, and this can be a safety concern in several respects:

1. You can be thrown off balance or even knocked down if you are unexpectedly hit by a high wind gust. This is especially true if you happen to be walking on snow, ice, wet grass, or other surface offering little friction.
2. If you are driving in high winds, your vehicle can be blown sideways enough to force you to either compensate, or to be blown out of your lane. Also, if you are using your vehicle to transport something that must be strapped down to the roof or to a luggage rack, the wind can blow this item off of your car and into the roadway.
3. If you are walking and the wind should blow your hat off or some papers out of your hand, you will probably find yourself running after the item(s). This can expose you to trips and falls, or even being struck by an oncoming car if the item you're chasing ends up in the street.

4. Wind-driven rain or snow can obstruct your vision and make it hard to see.
5. The noise from high winds can mask sounds that you need to hear.
6. High winds can turn loose items into missiles.
7. If you're not careful, the wind can slam your car door closed unexpectedly, catching and injuring your fingers.
8. If you're on the water, high winds can be life-threatening rather than just inconvenient. Your boat can be capsized or swamped, and you can drown.
9. Winds can topple trees, limbs, and power lines, creating hazardous situations.
10. Cold winter winds can cause hypothermia or frostbite.

Most of us don't have to deal with high winds or storms too often, and the ones that we are exposed to can be better dealt with by keeping these pointers in mind:

\* Wear slip-resistant footwear and suitable clothing if you must venture out. Secure your hat so that it won't blow off, and carry any articles such as papers in an attache case or something similar. The last thing that you want is to be frantically chasing down these items once they have blown away from you.



\* Keep a firm hold on your steering wheel when driving and slow down to a safe, cautious speed. Also, since driving through high winds can be tiring, take more frequent rest stops and switch drivers when possible.

\* Bring loose lawn items inside, or secure them to keep from blowing around.

\* When you can, avoid walking near or under trees and power lines. If you are boating and notice a storm approaching, try to come ashore as soon as possible.

Many storms such as hurricanes or blizzards are predicted well in advance, giving you a chance to stock up on vital supplies. Check emergency water, food, medicines, fuel, etc. so that you can weather the storm indoors and not have to venture out into the elements.

