



BULLETIN



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Mine Safety and Health Administration

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HOLMES SAFETY ASSOCIATION



Dangerous People

Circumstances may sometimes
be beyond your control, but attitude
and conduct are always within your control.



HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Does "Carelessness" Cause Accidents?

Have you ever seen an accident report attributing the cause to "carelessness"? STOP! If you have and are accepting "carelessness" as a reason, consider the following: Did the employee, involved in the accident, care whether he was injured and suffered considerable pain and discomfort? Sure he cared! The point, then, is that the word "carelessness" has no business in an accident description. It explains little and often misrepresents the cause of the accident.

Let us take an example: A dock worker picks up a 100-pound carton while in an awkward position and lifts with his back instead of his legs. He hurts his back. The tendency would be to say he was careless. Not so.

The chances are he cared very much whether he suffered pain, lost time from work, and possibly may never be able to return to his occupation because of permanent impairment. However, he may have wanted to show off--to be the tough guy who did not need to lift safely or get help when needed--and it cost him plenty.

Accidents are caused; they do not happen. Many times the cause can be traced to a moment the individual failed to concentrate upon the job at hand, not hypnotized, but off on a short mental stroll. Factors, such as lack of interest, worry, fear, or too many outside interests can become mental blocks piled between the worker and the task at hand. They can and do lead to accidents.

The next time the word "carelessness" appears as a cause of an accident on a supervisor's accident report, do not accept it! Find out the true cause or causes of the accident.

(For underground and surface mining operations)

November 1979

ABSTRACT FROM FATAL ACCIDENT

HOLMES SAFETY ASSOCIATION
MONTHLY SAFETY TOPIC



DROWNING ACCIDENT

General Information: A laborer was accidentally drowned when he apparently had a diabetic attack and fell or jumped into the water. The victim had wandered away from his assigned work place onto the dredge. He had 2 months work experience as a laborer and had been employed on this job for 2 months.

The dredge and plant, a floating suction dredge, sand and gravel operation, was owned and operated by a gravel company. Sand and gravel was mined from the bottom of the river (depths of up to 10 feet) by a diesel-powered pump, then pumped through a pipeline to the plant area (on land) where it was separated, screened, washed, and conveyed to stockpiles.

At the time of the accident, the dredge was not in operation and was docked next to the riverbank, near the plant area. A work barge 8-feet by 18-feet was tied off behind the dredge. The victim was a diabetic and had experienced a fainting spell 2 days prior. Weather conditions were 100-degree temperature. Employees had a past practice of swimming in the river to cool off.

Description of Accident: The victim had been assigned to help a welder building a steel water trough at the plant. His work progressed normally during the day until about 2:30 p.m., when the victim wandered away from his assigned work place and wandered out onto the dredge that was docked nearby. He walked back to a work barge that was tied behind the dredge, on which the dredge operator was working. Shortly after seeing and talking to the victim on the work barge, the dredge operator quit working and went to the shore to get a drink of water.

While the dredge operator was gone, getting a drink of water, the victim apparently had a diabetic attack and fell or jumped into the water near the pipeline flotation drums. The dredge operator yelled to the victim asking him if he needed help. The victim indicated that he did need help by nodding his head. The dredge operator dove into the water and twice had a hold on the victim only to have the victim start fighting him. The dredge operator finally had to give up on his attempt to save the victim for fear of getting drowned himself. The victim submerged and did not come back to the surface. The dredge

Distribution: Surface mining operations - noncoal

operator ran back to the plant and summoned help from the foreman. Upon returning to the river bank, they could not find the victim. The foreman called the local sheriff's department and rescue unit to the scene. After dragging procedures, the victim's body was recovered at approximately 5 p.m. that same evening.

Cause of Accident: The direct cause of this accident was the victim having a diabetic attack and either falling or jumping into the water. Contributing factors were the failure of the victim to wear a lifejacket and his failure to work at assigned work place.

A possible contributing factor may have been a fainting spell brought on by his diabetic condition. Because of his known condition, the victim was specifically told not to go near the water by the owner.

Recommendations: All floating stock should be strictly off limits to all people, except certain key personnel, or those required to perform necessary work.

HOLMES SAFETY ASSOCIATION

INSIGHTS

SUPERVISOR'S SELF-EXAMINATION

Do you ever take time for meditation? A bit of inward searching now and then may help you to find ways of improving your relationships with people --and to do a much better job as a supervisor--if you'll question yourself sincerely.

To help you probe the critical areas--and to provide food for thought--here's checklist FOR YOURSELF ALONE. You don't even need to write down your answers--but you should answer honestly, in your mind, and then take a good look at your score. How do you stack up?

	Yes	No
Do I practice what I preach about safety?	___	___
Do I know all the hazards in my department?.....	___	___
Do I inspect continuously for hazards?.....	___	___
Do I permit unsafe shortcuts by workers?.....	___	___
Do I check on their personal protection?.....	___	___
Do I stop unsafe practices with out delay?.....	___	___
Do I criticize in friendly, helpful manner?.....	___	___
Do I see that workers have proper tools?.....	___	___
Do I make sure tools are in good condition?.....	___	___
Do I insist on prompt first aid for injuries?.....	___	___
Do I encourage reports on unsafe conditions?.....	___	___
Do I investigate accidents promptly, fully?.....	___	___
Do I encourage housekeeping for safety?.....	___	___
Do I encourage safety suggestions?:.....	___	___
Do I act promptly on all suggestions?.....	___	___
Do I give proper credit for good suggestions?.....	___	___
Do I help workers feel secure in their jobs?.....	___	___
Do I commend good work whenever possible?.....	___	___
Do I try to counsel worried employees?.....	___	___
Am I considerate in handling grievances?.....	___	___
Am I good listener?.....	___	___
Do I adminster discipline fairly?.....	___	___
Do I keep emotion out of job decisions?.....	___	___
Do I prepare for opportunities ahead?.....	___	___
Am I training others to take over my job?.....	___	___
Do I consider my own health and safety?.....	___	___



HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Investigating Accidents

Today I would like to discuss one of the problems that I as a supervisor have, and only you can help me. Stated briefly, I need your help and cooperation in getting the facts concerning all accidents.

I believe that you have the same feeling; something can be learned from every accident regardless of its nature, and every accident that goes unreported decreases our opportunity to reduce injuries in our industry. Are we certain that even the individual who was injured and failed to report the incident learned anything?

You may be wondering why unreported injuries, even the so-called "minor ones," are serious problems to supervisors. Suppose we discuss some of the items that could develop when injuries are not reported.

1. Infection of untreated injuries may result.

Each year the medical profession treats numerous patients with serious infections that developed as a result of neglecting to receive immediate medical treatment for minor injuries. Naturally, failure to report such injuries resulted in lost work time for the employees and increased expense for employers.

2. Aggravation of injuries may result.

Many persons judge the severity of an injury by the amount of pain it produces, which is definitely wrong. Often this thinking can produce major injuries, some even fatal.

3. Nothing is learned from unreported accidents.

As I stated earlier, something constructive can be learned by all of us from the facts of an accident. If any of you fail to report a minor injury, you are reducing my ability to prevent other accidents of a similar nature.

4. Other injuries may result from the same cause.

Correction of causes of unreported minor injuries cannot be accomplished, and a trap is left baited for other persons.

(Underground and surface operations)

5. The practice may become general.

If it becomes known by other persons in our crew that minor injuries are not reported to me, then the attitude may spread throughout our section and soon blanket the entire mine. This situation can only result in an increase in disabling injuries, since we will have no information on these injuries, and therefore, cannot correct the cause.

If any of you are injured, even slightly, let me know about it in order that positive action can be started to correct the situation as well as to assure that you will receive prompt medical treatment. Never regard any injury as trivial, and if you have the idea that someone might classify you a "sissy" for reporting slight injuries, remove that thought from your mind. The company and I are interested in correcting the cause of injuries and are not interested in conducting a contest to see who can withstand the most pain and suffering from injuries which often are mistakenly referred to as "just a scratch."

If you are hurt, even the slightest, I want to know about it. You will be doing a grave injustice to everyone concerned if you fail to report an injury. Certainly, you do not wish to jeopardize the welfare of your families by allowing minor injuries to go without proper medical treatment and possibly develop into serious injuries of major consequence.



HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Guarding Machinery

Complete protection of moving machines and machine parts is necessary to prevent contact with persons even though such contact might result from the carelessness, thoughtlessness, or foolishness of persons.

The following kinds of moving parts requiring guards are given to focus attention on the common types that have caused accidents and personal injury.

1. Gears, sprockets, friction drives, collars, flat or grooved pulleys, and couplings with protruding bolts, nuts, or keys should be guarded completely.
2. Shafting and projecting shaft ends within 7 feet of a floor or platform level should be enclosed by complete guarding.
3. Vertical or inclined belt, chain, or rope drives should be guarded adequately to a height of at least 7 feet (measured vertically) above a floor or platform.
4. Horizontal belt, chain, or rope drives within 7 feet (measured vertically) above a floor or platform should be well guarded.
5. Flywheels should be guarded. If a flywheel extends to a height of 7 feet or more above a floor level, it should be guarded to a height of at least 7 feet. If a flywheel extends to a height of less than 7 feet above a floor, it should be guarded for its entire height.
6. Circular saws, bandsaws, and planers should be guarded. Guards for these machines are usually standard factory equipment.
7. Locomotive repair pits should be guarded to prevent persons from falling into them. The guards should be kept in place when a pit is not in use. These guards are generally steel plates, steel grills, or wooden planks.

(For underground and surface mining operations)

8. When guards or safety devices are removed from machines, devices, or normally moving parts to permit repair, adjustment, cleaning, or lubrication, they should be replaced before the machinery is operated.

Guards for machines and machine parts should be substantially constructed; usually they are made of solid metal, perforated or expanded metal, screening and sometimes wood. One of the most common causes of injuries around machinery is the failure to replace a guard or safety device that has been removed to permit inspection, repair, cleaning, or adjustment of the machinery. Close supervision is necessary to prevent this type of negligence.

Power-driven grinding wheels should be equipped with--

1. Safety washers or protective flanges on the vertical faces.
2. Substantial retaining hoods, the throat openings of which do not expose more than a 90-degree sector of grinding wheel. Not more than 60-degree exposure of a grinding wheel face is preferable.
3. Where grinding operations are frequent or constant, a dust-collecting hood should be installed or a permissible respirator should be worn by the operator.
4. Each grinding wheel should be provided with an adjustable work rest and eyeshield. Safety goggles should be worn by all persons who use grinding wheels.

Machinery in motion should not be repaired or adjusted. Oiling machinery in motion should not be permitted unless it can be done without danger to the oiler. Many workers have been injured seriously while working around moving machinery, particularly from getting their clothing caught in moving parts.

Good clearance should be maintained between machines and all walkways, or aisles between machines should be kept clean and free of obstruction. Crowded conditions around machines and poor housekeeping have caused many persons to stumble and fall against moving machinery. Passageways around machines should be well lighted.

All persons engaged in cutting and welding operations with oxyacetylene torches should be provided with suitable shield or goggles to protect the eyes and face. The intense light rays and flying particles can do permanent damage to the eyes. Stationary cutting and welding locations should be well ventilated to carry off fumes and should be guarded to protect other workers against eye injuries and burns from flying particles of hot metal. Fire-fighting equipment should be available immediately where cutting and welding is done.



HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Federal Mine Safety and Health Act of 1977

Section 303(i)(3)

Part 75.310 of the Code of Federal Regulations

Methane in Virgin Territory

In today's session we will talk about mining in virgin territory. We are all familiar with the term "virgin." The term "virgin territory" as used in the Act means that area of a mine that is being penetrated for the first time, not surrounded on all sides by previous mining, and is of such extent that there has not been sufficient mining to reduce the amount of methane liberated during the extraction process. The Law states that mining is permitted when the return air from virgin territory contains less than 2 percent of methane if the following procedures are followed: (1) the quantity of air in the split ventilating the active workings in such territory equals or exceeds twice the minimum volume of air prescribed for the last open crosscut (18,000 c.f.m.); (2) the air in the split return from the workings shall not pass over trolley wires or trolley feeder wires; (3) a certified person must continually test the methane content of the air in such split during mining operations in such workings.

If the methane in the air returning from the workings contains 2.0 per centum or more, then all persons shall be withdrawn from the area, and electrical power shall be cut off from the endangered area. The methane content in a split of air returning must be measured at a point or points where it may be present in the air current between the last working place and the junction of the split with another air split, and the test for methane content shall be made at a point not less than 12 inches from the roof or ribs. Strict compliance with this section of the Law in areas that are known to contain large amounts of methane is an absolute necessity.

Methane is contained in the fissures and cleats of coalbeds and may be contained in a pocket. It could be released suddenly, creating an explosive atmosphere. Experience has proven that extreme precautions must be taken in virgin territory. Records verify that many explosions have occurred while mining in previously undeveloped areas.

Distribution: Underground coal-mining operations



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Session XL

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Mandatory Safety Standards, Surface Coal Mines and Surface Work Areas of Underground Coal Mines

Fire Protection

Subpart L

Section 77.1109

In today's session we will continue our discussion on the section of the safety standards that pertain to the category "means to fight fires."

Section 77.1109 - Quantity and location of firefighting equipment.

Preparation plants, dryer plants, tipples, drawoff tunnels, shops, and other surface installations shall be equipped with the following firefighting equipment: Each structure presenting a fire hazard shall be provided with portable fire extinguishers proportionate with the potential fire hazard at the structure in accordance with the recommendations of the National Fire Protection Association. Generally, a minimum of one extinguisher having a rating no less than 2A8B, or 2A8BC where electrical installations are present, shall be provided on each floor or level in the structure. At least one extinguisher shall be provided for each 3,000 square feet of floor space. Where the floor space exceeds 3,000 square feet and more than one extinguisher is required, they shall be no more than 75 feet apart. If the area protected contains permanent electrical installations, the maximum distance between extinguishers shall be no more than 50 feet.

Preparation plants shall be equipped with waterlines, outlet valves on each floor, and sufficient firehose to protect a water stream to any point in the plant. However, where freezing conditions exist or water is not available, a 125-pound multipurpose dry powder extinguisher may be substituted for each 2,500 square feet of floor space in a wooden or other flammable structure or for each 5,000 square feet of floor space in a metal, concrete-block, or other type of nonflammable construction. This is to insure that a water stream or dry-powder extinguishing agent can be applied at any location in the building. The 125-pound extinguisher can be a single unit or made up of several smaller units, provided the total weight of powder meets the requirements. A single 125-pound unit can provide protection for more than a single

(For surface mining operations)

floor if the system is permanently installed with rigid piping. Thus, a portable 125-pound unit can serve only a single floor, but a permanently installed unit may serve one or more floors, provided the floor area does not exceed 2,500 or 5,000 square feet, depending on the type of construction.

Mobile equipment, including trucks, front-end loaders, bulldozers, portable welding units, and augers, shall be equipped with at least one portable fire extinguisher. The following portable fire extinguisher ratings will be acceptable, as meeting the requirements of this section. All trucks up to and including those of 20-ton (load) capacity should be equipped with at least one extinguisher having a minimum rating of 5BC. Trucks larger than 20-ton capacity should be equipped with an extinguisher having at least a 10BC rating. Two 5BC extinguishers are acceptable.

Other mobile equipment, such as front-end loaders, bulldozers, portable welding units, and augers of comparable size (to the trucks) should be rated on an equivalent basis, except hydraulically operated equipment containing flammable and combustible liquids, trucks transporting flammable and combustible liquids, and diesel-powered motor generator sets. Examples: 1. A front-end loader or portable welding unit no larger in size (weight) than a 20-ton truck should require the same protection as a 20-ton truck, or 5BC. 2. A front-end loader, bulldozer, auger, etc., larger than a 20-ton truck should require the same protection as a truck larger than 20-tons or 10BC.

Mobile equipment containing flammable and combustible liquids, including trucks transporting flammable and combustible liquids and diesel-powered motor generator sets, shall be protected with extinguishers having a minimum rating twice that required for other mobile equipment in examples 1 and 2; except that additional fire protection shall not be required for equipment using hydraulic fluids only for power-steering and power braking systems.

Power shovels, draglines, and other large equipment shall be equipped with at least one portable fire extinguisher; however, additional fire extinguishers may be required by an authorized representative of the Secretary. This section requires equipment larger in size than that equivalent to a 50-ton truck to be provided with additional fire protection proportionate with the hazard. A minimum of one extinguisher having the proper rating shall be provided on each of all multilevel equipment, such as shovels and draglines.

Auxiliary equipment, such as portable drills, sweepers, and scrapers, when operated more than 600 feet from equipment required to have portable fire extinguishers, shall be equipped with at least one fire extinguisher.

Fire extinguishers shall be provided at permanent electrical installations proportionate with the potential fire hazard at such installation in accordance with the recommendations of the "National Fire Protection Association." In implementing this section, judgment shall be used in the evaluation of the requirements for extinguishers at each permanent electrical installation. One portable extinguisher can serve several adjacent electrical motors or transformers. Extinguishers provided and located according to this section shall be acceptable as protection for electrical installations within that area, provided such extinguishers are no more than 50 feet from the electrical installation.

Substation - Two extinguishers having a total rating of 20BC shall be provided at permanent substations.

Two portable fire extinguishers, or the equivalent, shall be provided at each of the following combustible liquid storage installations: 1. Near each above ground or unburied combustible liquid storage station; and, 2. Near the transfer pump of each buried combustible liquid storage tank.

The requirement in this section of two portable fire extinguishers at the stated combustible liquid storage depots clarified in NFPA Code No. 30 means that two portable units each having a rating of not less than 10-B units shall be provided. Questions will arise as to whether a single extinguisher having a rating of 20B units can be used instead of two 10B fire extinguishers. Decisions shall be made for individual circumstances. Two 10B extinguishers are generally preferred, as a greater chance exists that at least one unit will not be downwind of the fire. Decisions shall be based on the size of liquid storage, locations, and surrounding conditions. Rock dust in the amount of at least 500 pounds, kept dry and maintained usable, will be acceptable as "equivalent" to two portable extinguishers at remote combustible liquid storage installations, provided a shovel or equivalent means is available for applying the rock dust.

Vehicles transporting explosives and blasting agents shall be equipped with fire protection as recommended in Code 495, Section 20, "National Fire Protection Association Handbook," 12th edition, 1962.



HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

The Timberman

Today, I would like to stress some aspects of the timberman's duties.

As a timberman, you know that the life of every person passing through the area is dependent upon how well you do your job. This is a responsible job and requires a person of skill, good judgment, horse sense, and a safe mind. Your duties go far beyond the mere act of just setting timbers. You must make a thorough check of the roof over the entire face areas, using the sight, sound, and vibration methods before you can properly evaluate the true roof condition. Loose roof must be scaled down. If you cannot pull it down, install enough temporary supports under it until something definite can be done to make the area safe.

Most of us know that the coal is the natural roof support; when it is removed, artificial roof support must be installed to prevent the roof from falling. I have frequently discussed with you the standard timbering plans adopted for this section, and that you, as a timberman, must follow them at all times. Roof conditions may require that additional roof supports should be installed. If so, set them promptly.

The roof should be supported in the face areas with a sufficient number of temporary supports or jacks before you begin to install the permanent roof supports. The actual job of setting the timbers in the area requires considerable skill and judgment. Posts should be set straight, on line, and tight. Posts that are set loosely will permit the immediate roof to draw away from the main roof and rest on the posts. This condition sets up one type of roof-fall accident. Dislodgment of loosely set roof supports by mining equipment has invariably resulted in a collapse of the immediate roof. Also, the timbers you set should be long enough and not set upon small pieces of wood or blocks. Tell me when your timbers are too short.

In wet or muddy areas, timbers must be placed on the bottom so that they will not push out if and when weight settles on them. All of us must promptly replace all roof supports that are dislodged with our machines.

(For underground coal-mining operations)

There are two things I want to caution you about when setting your timbers. First, any work necessary in preparing your timbers should be done under supported roof and not in by the last roof support; second, stand facing the timber and the roof you are supporting, in the event the roof breaks, you have a chance to move out of the way.

Roof supports that are set straight and in line permit free and safe movement of the shuttle cars and other mining equipment along the roadways. The mining equipment operators can feel secure in operating their machines along the roadways when they know the timberman is taking an interest in their safety by installing all roof supports in a straight line.

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HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

THANKSGIVING

With Indians as guests of honor, about tables loaded with game and fish, wild berries from the forest, and cornbread and vegetables from their new gardens, the Pilgrims celebrated their first American harvest festival, in October 1621, the first autumn of the exiles in their new home.

For years the festival was almost exclusively a New England institution, celebrated by religious services in the churches, the sermons being often a political address, and by the gathering at the old home of the scattered members of the family. The day gradually became a custom in the Western and some of the Southern States, each appointing its own day. In 1864, President Lincoln issued a proclamation in which he "appointed and set aside" the last Thursday in November as a day of national thanksgiving "for defense against unfriendly designs without and signal victories over the enemy who is of our own household." In December 1941 Congress passed a resolution making the fourth Thursday in November a legal holiday.

Although Thanksgiving Day is wholly an American institution, harvest festivals have been known since time immemorial. It was long customary in England and elsewhere to hold special days of "feasting and prayer" in times of peril and disaster and equally to celebrate with "thanksgiving" Nature's annual bounty and other marks of God's favor to those who believed. The increased know-how and desire to reduce accidents that we presently possess is one of the most important marks of God's favor.

(For use at underground and surface operations)

November 1979



HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Before Christmas!

During this holiday season, we are involved with many various activities, both at home and elsewhere. Naturally, I wish each of you a "Merry Christmas" and a "Happy New Year". This, however, will depend to a great extent on your individual work habits for this month and the months during the coming year.

As is expected, and rightly so, there is considerable excitement during this month, and the tempo increases until Christmas day. We are caught up in the excitement of this festive season and sometimes might have a feeling similar to a very tired football player who, nearing completion of a hard-fought game, would like nothing better than to stop, rest, and catch his breath. But, he knows he must continue until the final whistle has blown. Some of us might wish to pause, even during our working hours and reflect on some activity planned or anticipated for Christmas, but you must resist this temptation or you may do something to injure yourself or another person.

I do not wish to sound like a "wet blanket," but we each must face reality, as we are concerned with earning a living for our families. In order to accomplish this, we must be constantly alert to all possible hazards and keep safe work practices in mind. Any thoughts concerning outside activities should be shoved to the backs of your minds and your full attention centered on your work duties. It is not my intention to frighten anyone unduly, but the period before Christmas has not always been a happy one in the mining industry. This should be a constant reminder to always stay alert.

If you will always give your fullest attention to the various jobs at hand, then many glorious seasons, such as the current one, will come your way.

SAFETY SLOGAN: To see the future, work safely!

(For underground and surface mining operations)

Safety Hints and Tips

WORK ACCIDENTS

The 1978 death total for work accidents was approximately 13,300, a 2 percent increase from the 1977 total. Disabling injuries numbered 2,300,000. The death total excluding agriculture was about 11,400 of which 1,900 occurred in manufacturing industries. Total cost, including loss from business fires, amounted to about \$23.8 billion.

In addition to the 13,000 workers killed while at work, 42,000 died from off-the-job accidents — a death total of 55,300. Workers injured in both kinds of accidents numbered about 5,500,000.*

SAVING LIVES is our goal. Won't you please help us accomplish this goal?

* Reprint from Accident Facts — National Safety Council

HYPOTHERMIA: NATURE CAN KILL

Exposure, more properly called hypothermia, can occur when wind, low temperature and moisture combine to lower skin temperature.

The outside temperature needn't be below freezing for the body to begin losing heat faster than it can be generated. Blood circulation becomes restricted so that not enough oxygen gets to the brain. If not treated, this condition can lead to coma, cardiorespiratory failure and death. A person can actually "freeze" to death at temperatures as high as 50° F.

The first sign of hypothermia is shivering. The body is attempting to generate heat by expanding and contracting the muscles. This can lead to slow, slurred speech, followed by loss of memory and meaningless babbling. The victim may have a false feeling of well-being.

To treat hypothermia, get the victim's body temperature back to normal as soon as possible. If he's conscious, remove his wet clothing, pat his skin dry and put him in a sleeping bag. Give him something warm to drink—but never alcohol. This can cause more heat loss.

If the victim is unconscious or body temperature is dropping rapidly, external heat is necessary. Normal body heat is the best remedy. Survival experts recommend the victim be stripped and dried, then placed between two persons in a sleeping bag.

Hypothermia can be avoided. Be in shape for the sport you are playing. Avoid drinking alcoholic beverages on cold outdoor trips. Wear the proper clothing and include a large plastic bag as an emergency thermal shield.—

(For use at underground and surface operations)