



# Maryland EMS NEWS

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Where there's smoke, there's usually a fire; however, the "vapor cloud" above is not a signal of a real emergency. Vista Chemical Co.'s "spill drill" tests the reactions of plant personnel and local emergency response teams. (Photo courtesy of Vista Chemical Co.)

## Hazardous Materials Incident Response

At Vista Chemical Company's Baltimore Plant on the morning of December 11, 1985, a small leak is discovered in a railcar loaded with 20,000 gallons of hydrochloric acid. Two employees try to plug the leak with a wooden dowel, but the hole suddenly becomes larger.

Acid spills out of the railcar, splashing the men on their faces and necks. Both are seriously injured.

"My eyes! My eyes! I can't see!" one man screams in panic. The other runs to call for help and then frantically climbs up to the safety shower near the area to wash the acid from his skin.

An alarm sounds from the top of the boiler house, alerting all employees of a toxic gas emergency. The plant's emergency plan goes into action.

As the fire department and ambulance crews arrive, the acid continues to pour onto the tracks below the railcar at a rate of 5 to 10 gallons per minute.

A vapor cloud drifts through the plant and spreads over South Baltimore. Men in "space suits" rush to survey the spill area and begin emergency "patching" of the hole. Surrounding businesses are notified of potential danger.

About an hour later, the crisis is over. The hole in the railcar has been

patched with an inflated rubber pillow. The acid spilled on the ground has been neutralized with soda ash and the surrounding tracks have been washed down with water by firefighters.

Plant employees, emergency crews, and surrounding businesses are notified that the incident is under control. The toxicity alarm is turned off.

This frightening episode, as described above and reprinted from the *Vista Chemical News*, was just a drill. Vista Chemical Company was the site of a simulated hydrochloric acid spill to test the response and reaction time of plant employees and local and state agencies. Lawrence Mauerman, safety director for Vista, says, "We need to learn all our lessons in case a real leak occurs." This drill, and others to be held in the future, are part of a preparedness plan in which private agencies, chemical companies, and local, state, and federal agencies voluntarily cooperate for the good of the community.

The possibility of catastrophic incidents involving chemical, biological, radiologic, or explosive substances that could endanger people and the environment are of constant concern in industrialized countries. In Baltimore, organizations are putting aside questions of

personal "turf" to pre-plan for such incidents.

Representatives of both the public and private sectors formed the Emergency Preparedness Planning Committee (EPPC) in 1984 to review and update existing plans to ensure the coordination necessary to respond to a hazardous materials incident. The group consisted of representatives from local, state, and federal agencies; chemical companies from South Baltimore; and transportation companies that carry these hazardous materials. EPPC's primary interest was the first 30-45 minutes into a hazardous material incident.

Chairman of EPPC, Capt. James D. Henry, of the Baltimore City Fire Department, through Fire Chief Peter O'Connor, brought the committee to the attention of Baltimore's mayor, William D. Schaefer, in 1985. Mayor Schaefer directed that the committee become citywide in scope, not just serving South Baltimore. After its expansion, the committee became the Mayor's Emergency Preparedness Planning Committee (MEPPC). Members of MEPPC included: American Red Cross; Anne Arundel County Fire Department; (Continued on page 4)

# Defensive Strategies for EMS Survival ...

*"It's late Friday night. There's been a fight involving injury in a bar about two blocks from your rescue squad. You jump in the ambulance and zoom to the scene. The police have also been notified, but they are farther away and busier; they are wearing guns and bulletproof vests and have had courses in street survival, but they will not be the first ones at the scene. You, the pre-hospital provider, will be. Is there anything you can do to minimize the risk? There are techniques used by the police that can be adapted to be of help to you,"* says TFC Mark Gabriele of the Maryland State Police, who is also a firefighter/CRT at the Rosedale Volunteer Fire Company in Baltimore County. Trooper Gabriele and Dennis R. Krebs, a Lt/CRT with the Baltimore County Fire Department, teach a course in EMS survival to prehospital providers. They use as its basis a course in street survival that is taught to the State Police, and adapt it to EMS and firefighters' needs.

The object of the course is to teach EMS providers the rudiments of the decision-making process needed to determine whether to approach a situation or wait for police assistance; how to identify hazardous situations; and how to use physical force if all else fails. Articles in this 5-part series will give some pointers covered by the course on the topics of approaching motor vehicles, dangerous situations in residences, cover and concealment, hostage survival, and the use of reasonable levels of force. Part 1—How to Approach Motor Vehicles—follows.

It is not necessary to take the following precautions on every call. If there are obvious signs of an accident with injury, you can approach without hesitation. But if the car is pulled off the road nicely in a deserted area and you just have a funny feeling about it, give yourself more time to react to the situation. This article will be written as though the driver of the car was a man; however, the same precautions should be taken for a woman driver.

"Look at your working uniform," the instructors say. "You wear a dark blue or white shirt, patches on your shoulder, collar ornaments, badges, pouches on your side carrying scissors, forceps, and so on. If the patient's level of consciousness has been altered in any way, when he hears the sirens and sees

the lights flashing he thinks he sees a cop. The element of surprise is your only advantage."

To benefit most from that surprise, Krebs suggests that you approach a car in this way: Position your vehicle 15 feet behind the car in front, at a 10 degree angle, with the wheels turned to the left. If you are answering a call at night, use your high-beam headlights as spotlights; illuminate the area inside and around the car—things could be going on that you should know about. Think about your surroundings: are you on a busy highway, in a residential area, or out in the boonocks? Is there more than one person in the car?

Write down the license number of the car and leave it near your radio; be sure to note the state where the license tag was issued. This gives a written record of which car was in front of you. Don't call in the number to communications—they are not accustomed to taking that information, and will not know what to do with it.

The officer in charge of the medic unit should approach the car on the driver's side. The driver remains with the vehicle, keeps his eyes open to what is taking place ahead, and tries to determine what is happening.

There are two problems with walking between the two vehicles. First, if the car goes into reverse, whether deliberately or by accident such as when a car not in "Park" drifts backward, you can be trapped between cars. Many a police officer can attest to this risk and has the broken legs or knees to prove it. The second problem is that if you produce a shadow on the car, you have lost the element of surprise.

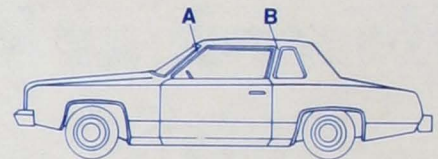
Instead of walking directly from the medic unit to the car in front, walk as briskly as you can around the back of the medic unit to the driver's side. This gives the driver a chance to observe the car and determine whether anything has changed. If something happens, with the ambulance wheels turned to the left, you can dive behind them for cover. An engine block or wheel will stop a bullet from a .357 magnum gun. From the time you leave the ambulance you are in no-man's land, a dangerous place to be.

As you approach the rear of the car, put your aid kit down where it will be handy but where you won't fall over it if you have to run back. "If something

happens, do you worry about bringing the drug box back to the ambulance?" Gabriele asks. "No! They just bought themselves a drug box. Don't worry about it.

"When you reach the trunk of the car, lightly lift the lid. If it is ajar it will pop open; slam it shut. If someone inside the trunk has his fingers on the ridge of the lid, that's his problem. He has no business being in the trunk. If you should hear a click and the trunk is unlocked from inside the car, it's time to leave."

After you check the trunk lid, observe the side-view mirror. If it is moving or in a strange position, ask yourself why. Keep your belly in toward the car, move alongside the car, and check the back seat for people or weapons. If there are people, see what they are doing with their hands. Remember that weapons do not have to be guns or knives; they can be baseball bats, tire irons, screwdrivers, or a host of other items.



Use the B column (see diagram) behind the driver for protection and concealment. Don't go into the "kill zone" alongside the driver's door until you are sure he doesn't have a gun on his lap. While you are behind the driver he has to turn in his seat to see you, and has to visualize you—two steps—before he can act. You can do a lot in that short period of time; you can be on the ground or running.

Before you say anything to the person in the car, check the front seat for weapons. What is he doing? If he looks cyanotic and appears to be in cardiac arrest, you can try to arouse him. Let him know who you are and why you are there. If you just walk up and say, "Hey—wake up!" he doesn't know whether you plan to harm him and might come up with a gun. It's important to announce yourself. Gabriele explains, "I say, 'Rosedale Volunteer Fire Company—are you OK?' or else 'Fire Department—why did you call an ambulance?'"

Gabriele points out that it is expected that you will make a driver's side approach, so you should be on your

# ...Approaching Motor Vehicles Cautiously

toes when you do. "Nowadays you don't get within arms reach of people, because they can hurt you," he says. "There is nothing wrong with knocking on the window and telling the driver to step out of the car. Stay 5 or 6 feet away from him. If he's hurt and really wants your help, he will try to get out. You do not get near this person until you are sure he is not going to harm you."

There should be some kind of pre-arranged signal between you and the driver of the medic unit so you can call him or he can draw you back if necessary. Sometimes he can't say "Come back, he's got a gun!" because that will give away the fact that he knows it, and you need the time advantage.

The ambulance driver should remain about 15 feet away, with his wheels turned to the left.

There are other methods of approach that can be used if you feel uneasy. The California Highway Patrol makes a passenger side approach, looking the car over in the same way, before making their presence known. The public address system can be used to ask the occupants of the car to come out of the car. If you do get out of the ambulance, slam the door twice to give the impression that two people are approaching the car. "Talk to yourself as if you are calling to another person—it feels stupid, but it works," assures Gabriele.

Carry a vital signs pad. One group of State Police decided that if something were to come out of a car window at one of them he would take off his soft Stetson hat and throw it in the driver's face to slow him down. The same thing can be done with the vital signs pad, which is soft and would not cause injury. Use the momentary confusion while he flinches and refocuses his eyes to run back to your vehicle as fast as you can.

How do you get out of there? Backwards. Gun battles happen at less than 5 feet away, in 10–15 seconds. If you were to go forward, it would be necessary to encounter the dangerous person for a second time when you pass him. Straighten the wheels of the ambulance and back out of there quickly. If you are the driver and your partner is shot, don't try to get to him—pull back and call for help. If you step out to help him and get shot, no one can call for help. Don't use a code on the radio, Gabriele says. Just

say, "Help! My partner has been shot!" The police will need additional information, so keep the line available. Pull back to the nearest intersection and wait for the police.

Suppose when you check the car you find the driver is lethargic; he goes in and out of consciousness and has no visible weapons, but during the primary survey you discover that he has a .38 caliber revolver stuck in his belt. Should you disarm him? Or say, "I'll be right back, I forgot some equipment," and leave? Or secure his hands? What you should do is check his pulse—really tightly so he can't pull the trigger. Do not unload guns you know nothing about; people tend to modify guns. If you find one weapon you might find others; keep looking. Bikers sometimes sew three sides of a patch and slip a razor in the fourth side. Check to see if the driver is a police officer. Police officers generally wear holsters. If he has a badge be especially hesitant to take his gun, because he has been trained to fight you for it. Leave it there.

If the driver is totally unconscious and looks like he will die without medical intervention, take the gun and lock it up in the medic unit, possibly in the bottom of the drug box. When the first police officer arrives at the scene, get his name and ID number before you give him the weapon, and document it; you are part of the chain of custody.

Vans are dangerous to approach because they have no windows on the side and might conceal someone hiding behind the driver. Approach on the passenger side. Stay 10–15 feet away; stand at a 45-degree angle to the A column of the windshield (see diagram) and look in. Don't get close to the door. If you have a flashlight don't hold it in front of you because it pinpoints your location. Hold it away from your body, and flash it on and off just enough to let you see in the van. Don't get close to the rear doors; they can open up to all kinds of trouble.

Suppose you approach a car cautiously and it looks as if the driver has suffered cardiac arrest. You open the door and the driver falls out, dead. Your supervisor finds out it took from 45 seconds to 1 minute for you to begin treatment. How do you justify it? Self-preservation. Gabriele and Krebs have con-

sulted a Baltimore County state's attorney, a civil attorney, and a volunteer paramedic who is an attorney for advice. They say as long as you don't overdo it and take five minutes to get to the patient, you are all right. Your defense is, "I felt uncomfortable walking up to this" (Continued on page 7)

## EMS Update

### Med-Evac Program Study

The General Assembly of Maryland has requested a study of the Med-Evac program. Peterson, Howell, & Heather Aviation Services of Hunt Valley, Maryland has been selected by the Department of Budget and Fiscal Planning to conduct the \$100,000 study. The final report, due October 1, will be submitted to a Legislative Oversight Committee in whose hands will rest the responsibility of the future of the Med-Evac program.

Committee members are: Senator Francis X. Kelly and Delegate Paul Muldowney, co-chairpersons; Senators John C. Coolahan, Bernie Fowler, Frank J. Komenda, and Catherine I. Riley; and Delegates John M. Ashley, Jr., John C. Astle, Samuel C. Linton, and Timothy F. Maloney. Because this issue is crucial to the ability of the EMS system to respond effectively and efficiently to meet the critical demands placed upon it, we urge prehospital and hospital care providers to contact the members of the committee to make their position known. Constituent opinion is vital and you can play a leadership position in informing the committee members of your support of the system and the need to provide adequate support for the Med-Evac program.

### EMS Week

September 21–27 has been designated as National EMS Week. Activities throughout Maryland will bring EMS into the public's eye through open houses, demonstrations, award presentations, and other events. Extensive media coverage is also planned.

The annual state awards luncheon is scheduled for September 24 in Baltimore. Nominations are being sought for both system providers and citizens who should receive special recognition for their contributions or heroic acts; these nominations should be given to your regional administrator. —William E. Clark  
State EMS Director

## Agencies Coordinate Haz. Mat. Response

*(Continued from page 1)*

Baltimore City Fire Department; Baltimore City Health Department; Baltimore City Police Department; Community College of Baltimore; Maryland Department of Health and Mental Hygiene; Baltimore Department of Public Works; FMC Corp.; Maryland Emergency Management and Civil Defense; MIEMSS; Maryland Port Administration; Mayor's Office, Baltimore; Office of Disaster Control and Civil Defense; Office of Emergency Management for Anne Arundel County; U.S. Coast

Guard; and the South Baltimore Industrial Mutual Aid Plan (SBIMAP), the parent organization of EPPC. Brochures for the general public on what to do in case of a chemical emergency were produced by the Mayor's Hazardous Materials Advisory Council and members of the South Baltimore Industrial Mutual Aid Plan. For further information, write the Mayor's Office, 250 City Hall, 100 N. Holliday St., Baltimore, MD 21202 or call 301/396-4904.

Resources that have assisted MEPPC included: Chesapeake Area Society of Hospital Engineers; C&P Telephone Co.; Baltimore City Department of Planning; Federal Railroad Administration; Johns Hopkins Hospital;

Maryland Department of Labor and Industry; Mass Transit Administration; Motorola; SCM Corp.; Tellabs; U.S. Postal Service; U.S. Weather Service; WBAL Radio; and the Yellow Cab Company.



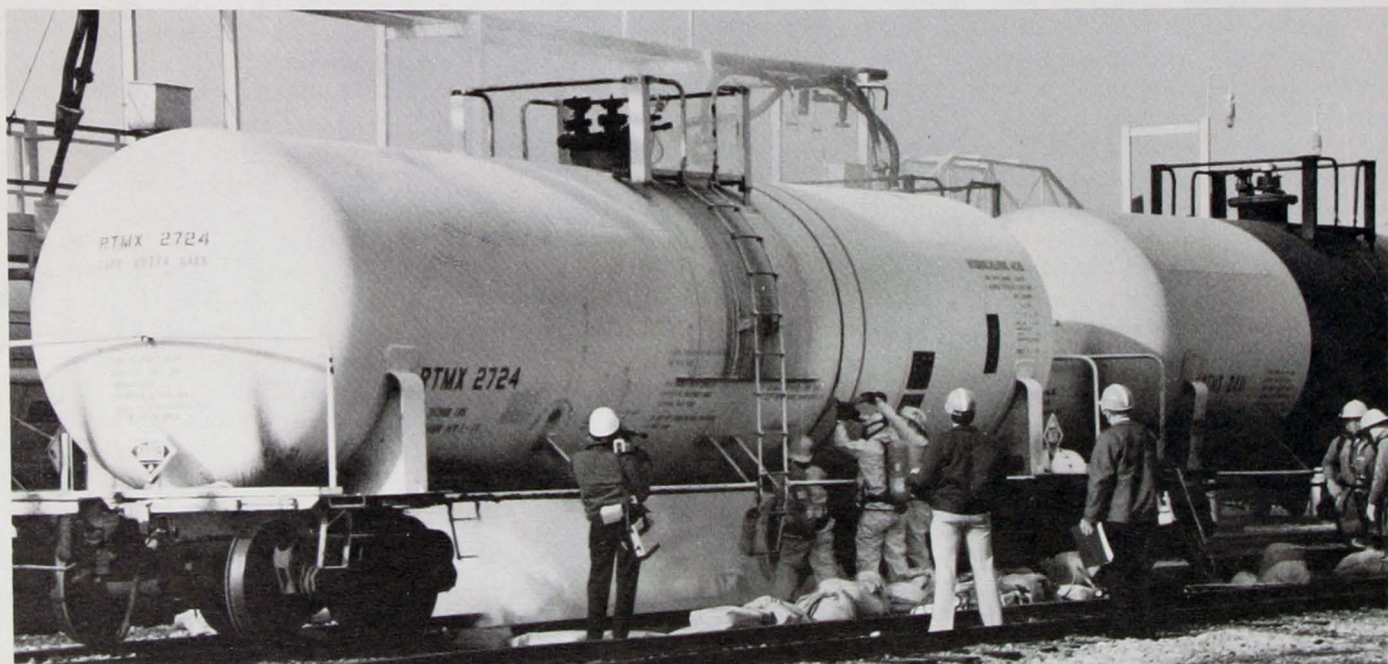
*A utilities supervisor judges the extent of the chemical leak and the injuries during a Vista Chemical Company disaster drill. (Photos courtesy of Vista Chemical Co.)*

With the emergency preparedness plan now in place, MEPPC has been disbanded, and by mayoral decree, the Mayor's Hazardous Materials Advisory Council (HMAC) was established in March 1986 to facilitate coordination between chemical, transportation, health and safety, and governmental agencies. Many former MEPPC members now serve on HMAC, which main-

tains and administers the hazardous materials emergency action plan; conducts and critiques drills that test the effectiveness of the plan; monitors and evaluates the level of preparedness of the companies and agencies to respond to the plan; and conducts public awareness programs. The council will also review and critique response to actual hazardous materials incidents that might occur.

This coordinated plan is not copyrighted, and adaptation by other communities is encouraged.

—Erna Segal



*The second attempt to attach an air bag over the leak succeeds; the flow is stopped during a Vista Chemical Company disaster drill.*

# Poisoning from Snakes, Spiders, Plants

Warm weather brings a longing for outdoor activities and an appreciation of nature's wonders. Some of the wonders of nature that we are not so eager to encounter include poisonous snakes, bugs, and plants.

## Snakes

Nationally more than 40,000 snakebites are recorded each year. Although most people are afraid and revolted by snakes, the level of fear that snakes induce is out of proportion to the actual number of deaths that they cause—only 10–15 per year.

Speaking to EMS providers, Rose Ann Soloway, RN, MSED, certified poison information specialist and education/communications coordinator at the National Capital Poison Center at Georgetown University Hospital in Washington, DC, said that snakes in the eastern part of the U.S. are "usually not so bad. The really bad ones tend to be on the west coast."

Poison center statistics indicate that most contacts with snakes occur in warmer weather, from spring through fall. Occasionally there will be copperhead bites in November or rattlesnake bites in January but only on unseasonably warm days, because snakes can't move until the temperature goes up to a certain degree. "So if you decide to go rock climbing on a nice warm day in January, look around before you put your hand down on the next rock," she advises.

Most snakebites in this country are caused by pit vipers: rattlesnakes, copperheads, and cottonmouths. Coral snakes account for a few bites. Most snakes are not aggressive—if they see you coming most would be just as glad to turn around and go the other way. Most will not come looking for you. Most pit viper bites occur on the lower extremities, the ankles or lower legs.

Cottonmouth snakes are usually found no closer than southern Virginia. Sometimes called water moccasins, these snakes are aggressive and will attack. Cottonmouth snakes can be identified by a white cotton patch inside their mouths.

Three questions must be answered by field providers after an encounter with a snake: 1) Was it poisonous or nonpoisonous? 2) Has envenomation occurred? 3) If so, what treatment mea-

asures must be followed?

Poisonous snakes look different from nonpoisonous snakes (see diagram). The heads of nonpoisonous snakes in this area are more rounded than those of pit vipers. Nonpoisonous snakes have round pupils and they have teeth on both halves of their jaws. Their bites (puncture wounds) are very easy to deal with. Treatment calls for copious washing with soap and water and, since the bites are dirty, a check to make sure the patient's tetanus shots are current. The patient should be warned of the risk of infection and to watch for a few days for a reddened area, heat, and streaking.

Pit vipers have triangular-shaped heads due to venom glands on each side, and narrow necks. Their pupils are vertical, and there is a depression or pit between their eyes and nostrils that gives the pit vipers their name. They also have fangs that are retracted when not in use. A classic bite from a poisonous snake will be red and swollen and have two fang marks plus tiny scratches. There may be more than one or two fang marks, because fangs fall out and are replaced when the snake sheds its skin. Pit viper bites to vascular areas such as the face and neck are the most dangerous. A bite from a poisonous snake will hurt immediately if the victim has been envenomated. Minimal discomfort 45 minutes after a bite means that you are not dealing with an envenomated bite.

The seriousness of a snakebite differs, depending on the size of the snake, where it bit, whether it bit more than once, and how much venom was injected. Snakes don't inject all their venom at one time; they usually inject from  $\frac{1}{4}$  to  $\frac{3}{4}$  of their supply. About one-third of the time a poisonous snake bites and injects no venom whatsoever.

Copperhead bites might require hospitalization. They are generally not fatal unless the person is allergic to

venom; but according to Ms. Soloway, this is rare. Children under age 6 and adults over age 60 tend to have the worst reactions.

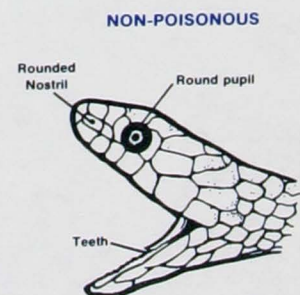
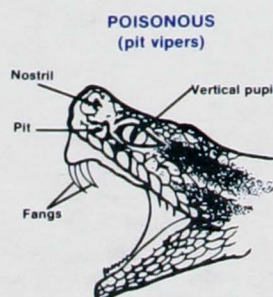
Swelling, bruising, and skin discoloration are direct results of venom. Venom may also interfere with blood clotting. Sweating may be caused either by the venom or by the patient's agitated condition. Rattlesnake bites may cause tingling around the mouth and lips.

Ms. Soloway emphasizes that the first priority should be to get the patient to medical care with antivenin. She says, "As far as first aid is concerned—tourniquets, ice packs, and making criss-cross cuts to suck out the venom—forget it! That advice is outdated.

"Contrary to what was formerly taught, never immerse the extremity in ice. There are patients who would have done well if not for the ice that was applied by well-meaning rescuers. Applying cold does two things: It drives the venom more deeply into the tissue, and it causes vasoconstriction. Damaged tissue needs oxygen; we don't want to restrict the blood flow," Ms. Soloway says.

The correct way to handle the patient is not to do anything that will slow down the transport to the emergency department (ED). Put a very loose constriction band—not a tourniquet—above the site. It should be about  $1\frac{1}{2}$  inches wide, loose enough to insert two fingers under it. The loose band will restrict the circulation of snake venom through lymphatic channels. Oxygen, if available, will not be harmful. Maintain the airway and administer 50–100 percent oxygen as needed.

Some experts advise incising and sucking out the venom. However, this is not part of Maryland EMS protocols. Venom becomes tissue bound after five  
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# Poisoning from Snakes, Spiders, Plants

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minutes, and oral suction has risks of self-infection and envenomation. If there is a break in the skin, a cavity in a tooth, or a cut on the lip, you will absorb the venom. Some experts advise that high-risk personnel, such as campers, should carry a snakebite kit. The victim may then elect to incise the wound himself, cutting from fang to fang, using a suction cup to remove the venom. Quick action is imperative. A venom-restricting band should be applied and evaluated every 10–15 minutes for tightness.

According to Maryland protocols, EMS personnel are responsible for determining whether or not the snake was poisonous and whether envenomation has taken place. The edge of the swelling should be marked, and the time noted. All movement should be minimized and the extremity immobilized. A KVO IV should be established in the uninjured arm. In cases of anaphylaxis, epinephrine (1:1000) should be administered via a subcutaneous route. The caregiver should then consult the poison center and receiving hospital and begin transport.

It is possible to run into exotic snakes that were kept as pets for a while and then released. They will not live forever in the wild away from their natural habitats, but might live long enough to cross your path.

Ms. Soloway says, "Good emergency medical care is of the utmost importance with snakebites; prompt transport to a source of antivenin may make the difference between life and death." The best treatment is to use an ounce of prevention: Avoid high-risk areas, carry a snakebite kit, and wear loose clothing.

## Spiders, Caterpillars, and Ticks

Poisonous spiders are another outdoor menace. Black widow spiders live in log piles, leaf piles, overturned flower pots, sheds, and basements. Their bodies are only about ½ inch long, and are hard, black, and shiny. Their abdominal segments are high and round, and several species have an hourglass on the underside—possibly red, yellow, tan, or orange. Some may have an incomplete hourglass that looks like two separate dots. They hang upside down in their webs.

The male of the species is smaller than the female and usually does not

have strong enough fangs to pierce human skin. The bite of a black widow spider doesn't look impressive—just two tiny fang marks making two tiny red dots. But the bite may be very painful. The pain may subside in 20–40 minutes and become a dull ache, but if the patient is badly envenomated, or under 6 years old or over 60, the reaction might be much more severe.

Classic symptoms are board-like, rigid muscles and much pain. If a person is bitten on the upper extremities, the pain tends to be across the shoulders; if the bite is on the lower extremities, the pain tends to be across the abdomen. Many patients have been taken to the hospital for emergency appendectomies when the pain was actually caused by a bite from the black widow spider. However, the pain can be distinguished from that of appendicitis: when the abdomen is pressed and then let go, the pain persists; there is no rebound tenderness if the pain is caused by a black widow spider bite.

Spider venom attacks the nervous system, so other possible symptoms are seizures, weakness, paralysis, and respiratory arrest. These symptoms are not common, however.

If it is recognized in the field that a black widow spider bite has occurred, observe for shock, which is possible but not likely. If the patient is having seizures, valium is the drug of choice. *Take the patient to the ED*, where antivenin is available. Even if the rescue squad is called early and the patient is not in much distress, take him to the ED. If he is fine after 4–6 hours, he will be released, but if he develops more severe symptoms he will receive medical care. Most people do not die from black widow spider bites.

Another venomous spider found occasionally in this part of the country is the brown recluse spider—about ¼ inch long, with a violin-shaped mark on its cephalothorax. It is not aggressive but reclusive, and hides behind pictures or between floor boards. It comes out in the dark. If one brown recluse spider is found, there are probably more around.

Its bite doesn't hurt at the time of occurrence, but may become painful after one or two hours. A small grayish blister with a tiny spot of necrotic tissue will mark the bite. After several hours it

may become swollen and bruised looking. After several days it can become necrotic. Systemic effects are uncommon, but may be serious. They include clotting abnormalities, jaundice, and renal failure.

There is nothing that can be done in the field for this kind of bite except to suspect its origin. Exact diagnosis is difficult. Treat what symptoms can be seen, and get the patient to the ED.

There are two kinds of poisonous caterpillars in this area: saddlebacks and lo moths. Their spines contain the venom. If stepped on or picked up, the spines will puncture the skin with two rows of puncture wounds. Use cellophane tape or electrical tape to strip the spine away. Ice can be used to control the pain and swelling of caterpillar stings. These stings sometimes become infected, and on rare occasions cause anaphylaxis.

The tick is another unwanted creature of the summer. Some ticks carry Rocky Mountain Spotted Fever, which can be fatal if not treated. Symptoms of this disease occur 3–10 days after exposure, and include a sudden onset of a splitting headache and a high temperature. A reddish rash appears 2–6 days later, starting on the palms and soles of the feet and working its way toward the trunk, neck, and face.

To remove a tick, grab its head with tweezers, and pull it straight up. When a tick burrows into the skin it excretes a kind of "cement," which will come out with the tick. Don't pick it up with the fingers or crush it. You can be infected through an open cut.

## Poisonous Plants

Poisonous plants also affect various body systems. For example, all types of philodendron and dieffenbachia can cause mechanical injury. The leaves contain calcium oxalate crystals; biting a leaf is like biting on a pile of needles. Pain and swelling result that can cause airway obstruction.

Daffodil bulbs are sometimes mistaken for onions, and if eaten cause gastrointestinal distress, though they are not fatal. Pokeweed, which can be found throughout this area, is dangerous because it can cause severe hemorrhagic gastroenteritis. It has red stems and a stalk of white flowers which de-

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velop into berries that attract children. Green at first, pokeweed berries turn deep purple by the end of summer. Ten of these ripe poke berries have been fatal to a child. Twenty-to-thirty holly berries can also be fatal to a child.

Foxglove is the common name for the plant *Digitalis*. As one might expect, this plant contains cardiac glycosides. Children who chew on the flowers, leaves, and berries of a foxglove plant may be affected by the drug. Lily-of-the-valley and oleander are other plants with cardiac glycosides.

All parts of the rhododendron plant are potentially poisonous, as are other plants in the same family such as mountain laurel and azalea. There was a case in Europe of a woman who was poisoned by honey made by bees that had fed on rhododendron.

It is sometimes assumed that if any part of a plant is safe, the whole plant is safe. This may not be true. For example, a ripe tomato is safe, but the rest of the plant can cause damage to the gastrointestinal and nervous systems. The seeds, leaves, and bark of apple, pear, peach, plum, apricot, and cherry trees can cause cyanide poisoning if chewed and swallowed.

Ms. Soloway emphasizes that whenever there is a question about poison, whether from foreign drugs, street drugs, hazardous materials, industrial chemicals, very new or very old products, or natural creatures or plants, the answers can be found by calling a poison center. There are two centers available to this area. Both poison centers are open 24 hours a day, 7 days a week, with staffs of highly skilled nurses and pharmacists to answer questions. The poison centers collaborate on a central computer database that records symptoms and treatments, and each time a call is made it adds to the data collection.

For Baltimore City and the rest of Maryland, call the *Maryland Poison Center* at the University of Maryland School of Pharmacy (a MIEMSS consultation center), 301/528-7701 in the Baltimore area or 800/492-2414 elsewhere in Maryland.

For the District of Columbia and for Montgomery and Prince Georges counties, call the *National Capital Poison Center* at Georgetown University Hospital, 202/625-3333; TTY-625-6070.

—Erna Segal

## Families Discuss Brain Injury

"I don't understand why my wife says I don't visit her anymore at the hospital even though I was here just yesterday." "I just don't know why my son is using such harsh words around his mother when he knows that she doesn't appreciate such talk. Has he gone crazy?" "What can I do to help my boyfriend understand what I am saying to him? He seems to just stare into space." The questions and discouraging remarks go on and on for the family members of patients who have received traumatic brain injuries. At times, answers to these difficult questions are hard to find.

The speech-communication disorders program of the MIEMSS Shock Trauma Center and the Montebello Rehabilitation Hospital has recently completed a pilot series of weekly lectures and discussion groups dealing with the complexities of the brain-injured individual. The family education program was developed to increase the family member's knowledge about the speech and language difficulties commonly associated with traumatic brain injury and to offer suggestions on how to talk more effectively with the brain-injured individual. The program, which currently meets at the Shock Trauma Center and Montebello Rehabilitation Hospital, helps family members and friends of trauma victims to understand how the brain is involved in communicating thoughts and words to people.

"The concept of family education is not new to MIEMSS," says Roberta Schwartz, director of the speech-communication disorders program. "Each professional involved with patient care systematically reviews pertinent information with the family. This series of lectures will augment information presented at family conferences and bedside meetings with the physician, family service worker, and other care providers."

Weekly meetings are held in the evening when most family members and friends can attend. Topics for discussion are limited to cognitive-linguistic problems (difficulties in organizing and systematically remembering specific information) and to suggestions for improving communication skills. For example, characteristics of various levels of recovery are described in detail, utilizing the Rancho Los Amigos Levels of Cognitive Functioning Scale, which is

commonly used to describe behaviors exhibited by patients who have sustained traumatic brain injuries. Another lecture deals with how to use augmentative communication devices, such as computers and communication charts, with patients who cannot verbally communicate because of severe physical limitations that can be temporary or permanent. The subtle effects of brain injury are also discussed.

A similar program has also been initiated at the Montebello Rehabilitation Hospital to educate family members on strokes and the resulting speech and language difficulties.

Response to the pilot program thus far has been positive. Meetings have been well attended, with approximately 75 percent of the family members returning for additional sessions, some even after their family members have been discharged to a rehabilitation facility or home. Participants state that these sessions have helped to increase their understanding of the effects of traumatic brain injury.

Plans are currently underway to expand this family and community service on a permanent basis. The effectiveness of the program can be summed up in the following comment shared by one family member: "Understanding the common problems associated with traumatic head injury is very important in dealing with the long-term problems and adjustments. This education program is still another service provided to help my family cope with what has happened to my son."

For additional information regarding the family education program, contact Roberta Schwartz, MEd, CCC-SLP, director, speech-communication disorders program, or Bonnie Frankle, MS, clinical speech-language pathologist, MIEMSS, at 301/528-6101.

## Survival Strategies

(Continued from page 3)

car. I have been trained to make certain checks. Once I knew the car was safe and there was a patient who needed my care, I proceeded." You may be sued, but that is your defense in court. "Nothing says you have to go in if you think it is dangerous," they say. "Even the police look for appropriate backup."

—Erna Segal

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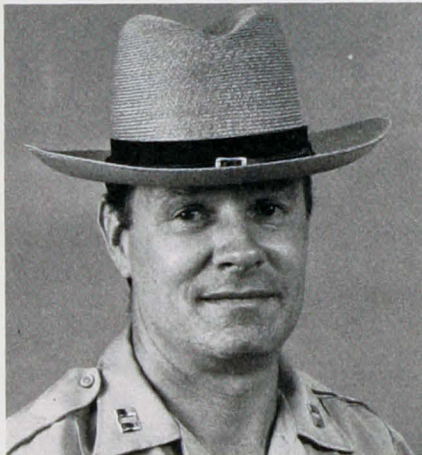
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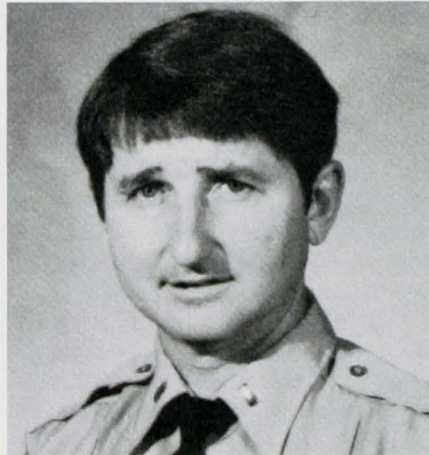


## Sumpter, Meeks Head MSP Aviation Div.



*Maj. Warner Sumpter*

Two men with combined law enforcement experience that totals almost 40 years were recently promoted to the top posts of the Aviation Division of the Maryland State Police (MSP). Maj. Warner Sumpter, Commander of the Aviation Division, and Capt. Forrest "Buck" Meeks, Assistant Aviation Division Commander, assumed their new duties in July and April, respectively, to fill the vacancies created when Maj. Gary Moore and Capt. George Wyatt were transferred to their new positions at MSP headquarters in Pikesville. Maj. Sumpter and Capt. Meeks are stationed at the division's headquarters at Martin State



*Capt. Forrest "Buck" Meeks*

Airport in eastern Baltimore County.

The MSP Aviation Division is responsible for a variety of aviation missions, including prisoner extrication, executive travel, and Med-Evac transports. Emergency medical runs account for the bulk of the flight time of the state police helicopters. In 1985, Aviation Division personnel, all of whom are law enforcement officers, completed 3,350 such missions throughout the state.

As commander, Maj. Sumpter oversees the administration and management of the Aviation Division. He is responsible for the system's budget and personnel and for ensuring that all mem-

bers of the division have the necessary qualifications and certification for their assigned duties.

Maj. Sumpter is a graduate of the University of Baltimore and of the Southern Police Institute's Administrative Officers' Course at the University of Louisville in Kentucky. He joined the MSP in 1968. Before he became commander of the Aviation Division, he was the Assistant Bureau Chief of the Special Operations Bureau and, from 1979 to 1986, served as commander of the Executive Protection Division.

Capt. Meeks assists the commander in the day-to-day operation of the division. His responsibilities include budgetary matters, operation and maintenance of air craft, and division planning. He is a pilot in the division and has logged more than 4,600 hours in flight time.

Prior to his promotion to assistant commander, Capt. Meeks was an operations officer for the MSP western region (serving the Baltimore, Frederick, and Cumberland section). He also worked in MSP Special Operations, a unit trained in the use of helicopters in situations such as high-rise fires, hostage crises, and wilderness searches. Capt. Meeks joined the MSP in 1966 and came to the Aviation Division in 1969.

—Linda Kesselring