Texas EMS
Messenger

Texas Department of Health

June 1990

Texas Department of Health

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Commissioner of Health

Texas EMS Messenger

June 1990 Volume 11, Issue 5

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COVER PHOTO: Dennis Gross leads cave rescue students through the final stages of a mock exercise. Gross is a paramedic/firefighter with Farmer's Branch Fire Department. Photo by Alana Mallard. See story page 20.

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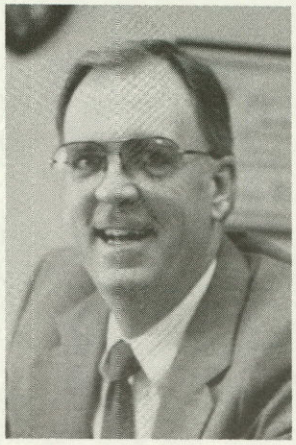
From This Side



Gene Weatherall
Chief
Bureau of
Emergency
Management

We certainly are excited about the new personnel certificates that are now being sent to all new and renewal registrants. Pam Price, Administrator of the State EMS Registry has been successful in getting EMS to be the first program in the Texas Department of Health to have main frame laser printed certificates. She is to be complimented on this outstanding accomplishment and we hope everyone enjoys the new upgraded certificate. If you would like to have one of these new certificates, contact your regional office for a duplicate certificate/ID card form. This form must be accompanied by $5.00, and will be processed within 90 days.

Bill Aston, Director of Harlingen EMS, told me to tell everyone that the Texas Ambulance Association gave me a standing ovation at their recent annual meeting. The truth of the matter is that Bill and Jim Dempsey, Executive Director of HALO Flight, were the only ones that stood up. The good news is that Pam West did get a real standing ovation at the Tri-State Trauma Symposium in Amarillo. My understanding is that Pam gave an outstanding presentation on EMS and she is to be congratulated on her efforts.

Congratulations are due Joe Rizzo of the Houston Fire Department. Joe may be the first person in the history of Texas EMS that has left EMS within the fire service and returned a few years later at his own expense. Joe was in the first Paramedic training course at the University of Texas Health Science center in Houston many years ago. Since regaining his Paramedic certification at Houston Community College he tells me that it is his personal goal to complete his career with the Houston Fire Department as a Paramedic.

The Educators Committee of TEMSAC certainly got everyone's attention in the state with their suggestion to increase the training hours for all levels of certification. The rumor that came from some of these committee meetings was that they were proposing to eliminate the Emergency Care Attendant certification level. While I would not even attempt to speak for the Educators Committee of TEMSAC, I certainly do not recall hearing anyone on that committee suggest eliminating the ECA. Probably what generated the statewide discussion was the suggestion by the Educators Committee that the hours for all levels of certification be increased.

There is discussion in the works of the development of an EMT completion course. If approved, this would give ECAs an opportunity to advance to the EMT level without starting from scratch. Many ECAs have had good classroom instruction and excellent experience that we feel should be recognized.

In discussing the issue of training hours with John Chew, the EMS Program Specialist with the Department of Transportation, he informs us that they are recommending **decreases** in hours of the EMS training programs. They are currently contracting for revisions to the Basic EMT curriculum and they have set the maximum number of hours for the new curriculum at 110. With these types of recommendations forthcoming maybe we should postpone any Texas recommendations regarding the hours of EMS training programs until we receive DOT's new curriculum.

We are hearing from many rural areas around the state that they would have serious economic and recruiting problems should the hours of training be increased. Recently the Texas Rural Economic Development Commission met and identified EMS training as one of their top priorities based on public hearings around the state.

Top 10 EMT Classes

January - March 1990

Includes only initial and refresher testing of classes of ten or more.

Coordinator/Location	Average Grade	Number Tested
1. **Kirk**/Fort Worth	92.06	18
2. **Reger**/Victoria	91.45	11
3. **Murray**/Arlington	90.56	16
4. **Murray**/Arlington	90.44	16
5. **Davis**/Pearland	88.67	12
6. **Lujan**/El Paso	88.36	14
7. **Stevenson**/Houston	86.82	22
8. **Coker**/Lockney	86.71	14
9. **Stevenson**/Houston	86.63	16
10. **Bavousett**/Slaton	86.27	15

A total of 1463 classes tested; average grade was 84.3.

Local and Regional EMS News

12-year-old resuscitates 57-year-old

A Kennedale youth who learned CPR just a month earlier saved his 57-year-old neighbor recently. Twelve-year-old Aaron McKeon wanted to learn CPR because everyone else in his family knew CPR and, according to the Fort Worth **Star Telegram**, Aaron "figured he might have to use it someday."

Aaron learned CPR in a life management skills class at Kennedale Junior High School.

Red Cross uses Messenger photo

The photo we printed on the cover of the March/April issue of the **Texas EMS Messenger** will be featured in a new text put out by the American Red Cross. Larry Newell, a Red Cross staff member in Washington, D.C., recently requested permission to use in a new emergency care book the photo of Austin's STAR Flight paramedics taking their patient from the helicopter.

Daniel Byram, a photographer with the Georgetown **Williamson County Sun**, took the photo.

Police officer and volunteer firefighter deliver baby

Dick Smith, editor of **Corrigan Times** and a veteran of the Bureau's EMS federal grant days, sent us an article from his newspaper that had a very happy ending. Corrigan police officer Don Mitchell and Corrigan Volunteer Fire Department Assistant Chief Ricky Sanders delivered little Justin VanDerZiel on March 10 before the Eastex EMS ambulance crew arrived. The ambulance arrived just as Mitchell reported, by radio over the infant's cries, that the baby had been born.

Mitchell and Sanders are EMTs. Baby and Mom are doing fine.

TEMSAC physician moves to San Antonio EMS

Donovan Butter, D.O., who fills an emergency physician slot on Texas EMS Advisory Council, began serving as San Antonio EMS assistant medical director on April 15. One of Butter's responsibilities will be the Bexar County Hospital District First Responder Program which dovetails with the San Antonio EMS system. Medical Director, Donald Gordon, M.D., said, "Our EMS Program will be enhanced by his participation and I am looking forward to an even more cohesive interaction between the first responders and our EMS service."

Butter, who worked for Public Health Region 1 office as a paramedic before going to medical school, also chairs the Bureau's Paramedic Certification Review Committee and serves on TEMSAC's Medical Directors Committee.

Texas paramedic in running for national award

Sherrie Wilson, a paramedic/firefighter with Dallas Fire Department EMS, received word from National Association of EMTs that she is one of three finalists for the NAEMT Paramedic of the Year award. Wilson became Dallas' first female fire cadet in 1977 and the system's first female paramedic in 1979. The award will be announced in Philadelphia later this month.

Austin's Allen Boutwell won the award in 1989 with his DWI Awareness Program.

Texas trains 13,000 in 1989

In 1989, 1,005 EMS classes were conducted across Texas compared with 808 on 1988. Nearly 13,000 students tested for EMS certification in 1989. PHR 5 based in Arlington and Abilene tested 3,732 students, and Houston's Public Health Region 4 tested 2,665. Other breakdowns: PHR 1, based in Austin and Temple - 1,632 students; PHR 2,

Local and Regional EMS News

Canyon and Lubbock - 937 students; PHR 3, El Paso and Midland - 1,012 students; PHR 6, Uvalde and San Antonio - 923 students; PHR 7, Tyler and Nacogdoches - 1,185 students; and PHR 8, Harlingen and Corpus Christi - 847 students.

A total of 3,276 ambulances were inspected in 1988 and 1989.

San Saba Volunteer EMS elects new president

Linda Sloan was recently chosen to serve as president of San Saba Volunteer EMS. Sloan, an EMT and course coordinator, is one of the founders of the San Saba EMS group. John Earl McPherson has served the group for the past year as president.

Golfers save Kendall County volunteer's father

Two golfers performed CPR on Burnet's Jack Rylant on March 14 at the Lampasas golf course, and Kendall County EMS EMT Becky Belcher credits the men with saving her father's life. Joe Miller of Beaumont and Calvin Sleeper of Austin responded to calls for help in another foursome, and when they discovered the stricken golfer had no pulse and was not breathing, they began CPR immediately and continued until Lampasas EMS personnel arrived and took charge.

Belcher said her father was transported to the Lampasas hospital and then taken by STAR Flight to an Austin hospital. Rylant was released from the hospital on April 9.

Miller learned CPR as an employee for Sterling Chemical in Texas City and Sleeper, who is an EMT, was certified in CPR with his employer, the Lower Colorado River Authority in Austin.

"While my father was in the hospital, these men came by to see how he was doing," said Kendall County EMS' Belcher. "I can't express the feeling I had when I met these two men who saved my father's life. They were both very humbled by the experience and simply said that they were glad they know what to do. They do not feel like they are heroes, but I know that our family owes a large debt of gratitude to them for giving our father back to us."

Houston EMT Association elects officers

Jim Becka, a paramedic and EMS instructional designer, has been elected president of the Houston EMT Association. He works for Hi Tech Ambulance of Houston and the City of South Houston EMS.

EMT Bob Murphey, an instructor at Texas Chiropractic College in Pasadena, was elected vice-president, and EMT-I Pat Watts was elected secretary. Watts works for Star Ambulance of Houston and volunteers for the City of South Houston EMS. She is also a certified firefighter.

The Houston EMT Association is made up of certified EMS personnel from eleven Houston area EMS organizations. For more information on the Houston EMT Association, contact Watts at (713) 944-9260.

Manchaca EMS makes the news

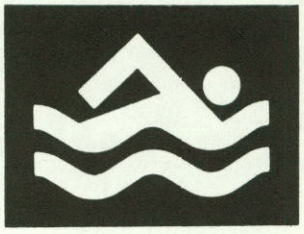
Manchaca Emergency Medical Services, a first responder group for Austin EMS, was recently featured in the **Austin American-Statesman**. The Turner family, Curtis, Carolyn and their daughter Carri, were the focus of the article.

Curtis Turner, an EMT for ten years, was a charter member of the Manchaca Volunteer Fire Department organized in 1967, and later joined EMS because they "needed more help, and I'd smelled enough smoke," said the April 5 article. Carri has been an EMT for a year; Carolyn Curtis is the EMS dispatcher.

Eighty percent of Manchaca EMS' calls are cardiac, but they respond to all of Austin's 9-1-1 calls in their area and stand by for Manchaca Volunteer Fire Department.

The National Safe Boating Council, Inc.

Water Rescues: Are we ready?



Each year, thousands of people lose their lives to water-related accidents in the United States and very few EMS personnel receive any formal water rescue instruction during their certification training. Unfortunately, of those thousands who die at least one will include a rescuer. Though most EMTs do not live around large bodies of water, nearly all live within one mile of a potential water rescue location. It may be a swimming pool, pond, lake, creek or stockpond. This makes every EMT in Texas a potential player in a water rescue situation. Therefore, the EMT must make it his own responsibility to prepare for this challenge.

There are numerous reasons why people drown but most drownings have several things in common. One of the most common contributing factors is alcohol. It is estimated that over 50% of all drownings and 70% of all boating accidents involve alcohol. The second factor is exhaustion. Weak and strong swimmers alike will someday find themselves faced with exhaustion. This usually occurs when a swimmer miscalculates the distance he is attempting. It also occurs when the victim is forced into waters that are moving too fast or must remain in the water for an

extended period of time. Another contributing factor to drowning is losing control. This becomes apparent when the victim panics,

"over 50% of all drownings and 70% of all boating accidents involve alcohol"

suffers cramps or becomes disoriented. A factor usually affecting the child or non-swimmer more than anything else is losing support. Stepping off a ledge, falling off an innertube, or slipping off a dock are several examples of losing support. The last major reason is getting trapped. This usually occurs in swiftwater situations but can also happen to the swimmer or skier who becomes entangled in submerged weeds or cables. Injured swimmers can also be included in this category. Injuries prevent the swimmer from escaping the life-threatening conditions, therefore, becoming trapped in their environment. Each of these factors must be taken into consideration during a water rescue attempt because they have a drastic effect on the success of the rescue.

Before attempting a water rescue, a plan must be formulated. The easiest planning phase for water rescues was developed by the American Red Cross and simply states, "Reach, Throw, Row, and then Go." These steps must be followed closely when making a rescue or it could have a disastrous effect on the outcome of the rescue. Skipping a step in planning in order to speed up the rescue process will probably cost the rescuer, as well as the victim, his life. Other aspects of the rescue that must be considered are the capabilities of the rescuer, the probability of a successful rescue and that the patient will be viable.

The rescuer must know his limitations prior to the rescue. How strong a swimmer is the EMT, what are the water conditions and what equipment is available? One of the foremost thoughts that should be on the rescuer's mind is what are the chances that the rescuer, as well as the victim, will survive? If the probability for the rescuer surviving is not 100%, the rescue attempt plan should be changed. And always, before entering the water, make sure that you are rescuing a viable patient. Many lives have been lost rescuing bodies, rafts and lifejackets.

After deciding that the conditions are right for a successful rescue, the first step of the plan is Reach. Extending a solid object to the victim for a rescue is a Reach. The rescuer's arm or leg or pike poles, fire hoses inflated with air, and attic ladders make great reaching objects. To reach, the rescuer must get a good base of support then extend the object to the victim. As the victim grabs the object, the rescuer can pull him to safety.

If you can't reach the victim without leaving shore or pool side, your next choice should be to Throw. Throw simply means that before going after the victim the rescuer should attempt to throw a floatable object to the victim. This will allow the victim to attempt a self-rescue. Throwing is one of the safest rescue attempts because the rescuer never loses contact with the ground and should not have to enter the water. Throwing can be accomplished by using an empty ice chest, life jacket, ring buoy or any other object that provides flotation. Ideally, the object should be retrievable by the rescuer. This can be achieved by attaching a line securely to the object being thrown. Commercial throw devices, know as rescue throw rope bags, are available and are relatively inexpensive. A rescue throw rope bag is a nylon bag holding sixty feet of line that feeds out automatically when thrown and can be easily stored on any ambulance or firetruck. A one gallon plastic milk jug filled with one inch of water, attached to a sixty-foot line accomplishes the same objective and can cost as little as $2.00.

When throwing an object attached to a line, it should ideally travel directly over the victim and land just behind him. This should provide the victim with rope contact even if he is thrashing around and does not see the thrown object. If the item being thrown does not have a line attached, it should land within reach of the victim but beside him. If the object lands in front of him the splash caused by the item could cause the victim to panic

by
Scott Springfield, EMT-P

Scott Springfield, a paramedic with Montgomery County Hospital District EMS in Conroe, is an advanced rescue diver, chair of the water rescue section of Texas Society of Search and Rescue, and president of Texas Association of EMTs. He was a finalist for NAEMT's paramedic of the year in 1989.

The easiest planning phase for water rescues was developed by the American Red Cross and simply states, "Reach, Throw, Row, and then Go."

more. If it lands behind him, he may not see it. Panic can also be caused if the object strikes the victim. Injuries can result if the object being thrown is too heavy or too solid. The other important thing to remember in a throwing rescue is to maintain a wide base of support. You don't want the victim to pull you into the drink with him when he does grab the rope!

If you are unable to throw something to the victim, your next choice should be to Row. This can be accomplished by reaching the victim in a boat. However, on a lake or pond that is not heavily traveled by boats this could be a major problem. If you are on a waterway that is traveled frequently by boats, you should have no difficulty in commandeering a watercraft. The rescuer must maintain control over the boat at all times during the rescue so the boat operator does not put the lives of the boater, rescuer or victim in further danger. If a boat is commandeered, the rescuer should maneuver the boat so that the victim can be reached by either an extended object or by the rescuer. Again, the rescuer must maintain a wide base of support for himself. Also, reducing the speed of the boat when closing in on the victim will prevent the boat from overrunning the victim.

If these three steps fail or the rescuer is unable to perform them then he must decide whether to enter the water and make a swimming rescue. This may be the most important decision an EMT will make in his entire career. A panicked victim can easily drown a rescuer as any lifeguard will testify. A panicked victim will try to climb on top of the rescuer in order to remain above the water, causing the rescuer to become submerged. This is why the rescuer may choose not to wear a lifejacket during a swimming rescue. Without a lifejacket the rescuer can submerge himself and dive underwater and away from the victim if the rescuer loses control of the rescue. If the victim swims after the rescuer, the rescuer should use it to his advantage and swim towards shore with the victim in pursuit. This will allow the victim to rescue himself if he reaches shallow waters.

"A panicked victim can easily drown a rescuer"

If the rescuer decides to go, he should take a reaching object with him. This will prevent the victim from coming in direct contact with his rescuer. If a swimming rescue is made, the rescuer must know his swimming and physical limitations. If the victim is panicked, the rescuer may wish to stand off from the victim until the victim becomes exhausted. This will allow a much smoother and safer rescue. Remember to always talk to your victim. This helps the victim understand what is happening to him and gives him a sense of security knowing that someone is there to help him.

There are many swimming rescue techniques. The main thing to remember during a swimming rescue is to plan your approach, and your victim contact in-water defenses should the rescue get out of control. As always, have a secondary plan because more than likely your first plan will fail. Have a back-up rescuer for yourself. Your life may depend on one.

I highly recommend that all EMS personnel seek additional water rescue training. Courses are available throughout the state and are relatively inexpensive. The American Red Cross, YMCA, and some city and county governments sponsor water rescue-related classes. Every EMT should take a lifeguard course, not only to learn water rescue techniques, but also to make the rescuer aware of his swimming limitations during a rescue. If the EMT cannot swim, I would strongly advise him to take swimming lessons, not just for the victim but for his own safety.

A rescue is only as good as the rescuer. You have accomplished nothing if you become a victim yourself!

Some Contributing Factors in Drownings:

Alcohol - drownings and boating accidents
Exhaustion - miscalculating the distance
Losing Control - suffering cramps
Losing Support - stepping off a ledge
Getting Trapped - swiftly moving water

by Alana S. Mallard

The Role of EMS in Do Not Resuscitate Orders and Living Wills

"If someone calls us, we do what we do. We will attempt to save that life."

People call for emergency medical services when they are desperate; they call when they are scared; and they call when it is too late for help. What about those times, though, when EMS is called, but the patient has made his wishes to die naturally known to his physician and family?

Terminally ill patients who wish to be allowed to die, even those with what are commonly referred to as Living Wills, present a genuine puzzlement to EMS personnel. The Living Will as defined by the Texas Legislature is a directive to physicians, not to EMS. Bill Coll, a paramedic and division administrator for City of Austin EMS, said his organization's legal department had determined that the job of their personnel was to save lives and they would be negligent if they failed to perform their duties.

Most EMS services who discuss DNR in their protocols require that medics initiate care, even in cases where relatives or caretakers say not to, and continue resuscitation until ordered to stop by the personal physician or medical control. EMS personnel who do not attempt to resuscitate a patient could be charged with failure to act.

A handful of EMS organizations, including one in Texas, Fort Worth's MedStar, register Do Not Resuscitate patients. In that organization, the patient completes the Living Will paperwork with the appropriate signatures, those of the personal physician and a second physician, and the personal physician formally verifies to the EMS medical director that the patient has a terminal illness and that the Natural Death Act has been complied with. When an EMS crew is dispatched to the address of a DNR patient, the medical director's orders come up on the dispatcher's screen telling the paramedics that they do not have to resuscitate. The presence of the paperwork must be verified in the hand file, the patient must be identified by a family member, and the family member must present a duplicate of the Living Will form to the EMS crew present.

Although workers in long-term care facilities such as hospices may know of their patients' desires to be allowed to die, staff members or family members may call EMS out of a desire for the passing to be less painful. They may not want EMS to perform CPR, but they are still asking for help. Unfortunately, perhaps, EMS personnel must do what they are trained and employed to do even in those cases.

A visit by EMS personnel to explain their legal obligation may be effective in educating caretakers of terminally ill patients. I talked with a nurse who worked for years with cystic fibrosis patients and who understands the frustrations of caretakers and of EMS. "When they call EMS, they are asking for a response," she said. "EMS standing orders are to resuscitate and, in effect, they have a duty to respond."

Terminally ill patients who wish to be allowed to die present a genuine puzzlement to EMS personnel.

Does your EMS have a DNR protocol?

What would you do if your were dispatched to a private residence and attempted to defibrillate a patient in cardiac arrest, but were told to stop by her son? What if the son showed you a form signed by his mother and her physician? What if her husband insisted that you get that thing hooked up to her and try to save her life? What if the next-door-neighbor physician ran in and told you not to resuscitate the patient?

Knotty questions like these make it imperative that EMS administrators and medical directors work with legal experts to develop protocols and operational policies for Do Not Resuscitate orders and Living Wills.

Health and Safety Code, Chapter 671, defines death. Health and Safety Code, Chapter 672, the Natural Death Act, lists procedures individuals must follow to provide in advance for withdrawal or withholding of treatment and provides for certain immunities in carrying out the directive.

What if the patient's husband sued you, your medical director, your supervisor, and your city and his attorney asked you during trial if you acted according to your organization's standard operational policies?

Rod Dennison, a paramedic and hazmat instructor is Public Health Region 1 EMS program administrator.

by Rod Dennison

HazMat Self-Study

Answers to May's Questions

These questions appeared in the May **Texas EMS Messenger**. Answer sources are **Hazardous Materials for First Responders** (Fire Protection Publications), **Hazardous Materials - Managing the Incident** (Fire Protection Publications), **Recognizing and Identifying Hazardous Materials** (FEMA Training Program), or DOT **Emergency Response Guidebook** (the "yellow book").

1. Responsibilities of EMS responders at hazmat scenes routinely include protection of themselves and prevention of EMS vehicle contamination. (b and c are correct)

Poor judgment on the part of improperly trained, over zealous EMS personnel will result in unnecessary personal injury, cause an additional burden on fellow rescuers and will diminish resources available for patient care. Only thoroughly trained, properly equipped personnel should be allowed in the hot zone or assigned to containment activities. This is typically not an EMS function.

2. Container shape, vehicle configuration, placards, location, and shipping papers are all clues to the presence of hazardous materials. (all answers are correct)

Cryogenic (super cold) liquids are stored and transported in distinctive, insulated tanks which usually have relief valves.

Pressurized gases (oxygen, helium, acetylene) are stored in cylinders similar in configuration to the familiar medical oxygen tanks.

Tanks of trucks carrying corrosive liquids are usually circular in cross section, longer relative to their diameter than other tanks and most have a series of circumferential stiffening rings. Carriers of gasoline and fuel oil are oval in cross section and have smooth sides.

The numbers on placards can lead to specific product identification. The placard's symbols and colors help identify general product characteristics. A skull and cross bones indicate poison, a 3 blade propeller warns of radioactivity, and the letter "W" with a slash through it means reactivity with water. Orange placards indicate blasting or explosive products, green means non flammable gas and red and white peppermint stripe is a warning of flammable solids.

Products located in chemical, plastics or fertilizer plants should be viewed with extreme suspicion. Pipelines, storage tanks and warehouses with unidentified boxes or barrels should be considered to be hazmat sources until proven otherwise.

Shipping papers are an excellent source of information regarding products being transported. Responders should be warned, however, that information in these papers is subject to human error and that even accurate papers are not required to contain comprehensive information about small quantities or certain varieties of potentially harmful substances.

3. Placards, labels, markings, and the human senses are all indicators of the presence of hazardous materials. Use of the human senses, however, presents special risks to responders because by the time a responder is close enough to an incident to use smell, taste, touch, or even sight to identify a product, he is also close enough to be killed by it. (d is correct)

State guidelines recommend ten to twelve hours of initial hazardous materials awareness and operations training for most EMS personnel. Topic areas include recognition and identification, patient handling, decontamination, and incident command. For information on training recommendations contact Louis Berry with the Bureau's Disaster Response Program at (512) 458-7550.

Initial hazmat awareness and operations training will be offered at the Texas EMS Conference in Austin in September.

HazMat Training?

by James Davis

James Davis, a paramedic with PHR 1 in Austin, worked as a Temple firefighter for five years. He is a trained hazmat instructor.

In October of 1986, after more than two years of fighting, the 99th Congress passed the Superfund Amendments and Reauthorization Act (SARA). The act was signed into law by President Reagan. The Act required certain governmental agencies, such as the Occupational Safety and Health Administration (OSHA) and the Environmental Protection Agency (EPA), to promulgate rules for the development of emergency plans and requirements for training of response personnel.

Title III of SARA is entitled "The Emergency Planning and Community Right to Know Act." This legislation was passed as a response to the tragedies of Bhopal, India and Institute, West Virginia. Both of these tragedies were the result of significant releases of hazardous materials into poorly trained and poorly informed populations.

Section 310 of Title III mandated that by April 17, 1987 each state governor would designate a state emergency response commis-

(see HazMat Training next page)

4. In anticipation of a hazmat incident all EMS vehicles should have at least a pair of binoculars and the DOT "yellow book." (a and c are correct)

The Department of Transportation **Emergency Response Guidebook** (the "yellow book") and a pair of binoculars are necessary so numbers, symbols, colors, etc., can be viewed from a safe distance and then immediately identified in the **Guidebook**.

5. You are called to the scene of a tank/truck roll-over. The truck's tank is smooth and cylindrical with rounded ends and is painted white.

A) The description fits the typical profile for a carrier of liquefied gases. (c is correct)

B) A red placard with a flame symbol indicates a flammable or combustible. The hazard class number "2" at the bottom of the placard identifies the product as a gas. (b is correct)

C) All the materials listed in the DOT **Guidebook** have been assigned 4-digit identification numbers. The yellow section of the **Guidebook** lists materials numerically by ID number; 1978 identifies propane. (b is correct)

D) The guide number, 22, is found in both the yellow and blue sections of the **Guidebook** next to the product name and ID number. (c is correct)

E) Guide 22 tells us that the main threats are fire, suffocation or poisonous vapors from burning product. (a and e are correct)

F) Again, the threats are fire and hazardous vapors, but those exposed would not be contaminated in the technical sense, therefore would not require decontamination.

Immediate actions at the scene could appropriately include allowing trained personnel to enter the area with firefighter protective cloth and SCBA, keeping all non-protected personnel upwind and uphill of the product and, in the absence of a local hazmat team, calling Chemtrec at 1-800-424-9300. The Chemtrec 1-800 number and additional information about Chemtrec are found in the **Guidebook** in the section "What is Chemtrec?" (a,b, and d are correct)

sion (SERC). July 17, 1987 was set as the date for each state emergency response commission to designate emergency planning districts and one month later, August, 1987, the state commission was to designate local emergency planning committees (LEPC). The committees have members from state and local governments, law enforcement, emergency management, fire, EMS, health, local environmental, hospital, and transportation agencies; broadcast and print media; community groups; and owners and operators of industrial facilities.

Section 303 of Title III sets requirements for comprehensive emergency response plans. The section outlines specific elements that, as a minimum, are to be included in each plan. One of the elements of this plan is "a training program." But how much training and how often remains a question.

Since Texas is not an OSHA state we must first look to EPA for the answer in rules published in 40 CFR Part 311. This, however, turns out to be a bit of a wild goose chase. The EPA simply adopts the substantive provisions of 29 CFR 1910.120 published by OSHA and effective on or after March 6, 1990. These rules apply to state and local government employees engaged in "hazardous waste operations." Employees involved in clean up or response to HazMat accidents and incidents are included in the hazardous waste operations group. The EPA defines a state or local government employee in 40 CFR 311.2 as "a compensated or non-compensated worker who is controlled directly by a state or local government."

Right about now it would be nice to know who is on your local emergency planning committee and how the LEPC is planning to use your organization at a hazmat incident. LEPC's are designated by Department of Public Safety, Division of Emergency Management. There are currently over 500 in the state.

29 CFR 1910.120(q)(6) states "training shall be based on the duties and function to be performed by each responder of an emergency response organization." Most EMS personnel are likely to place themselves at the "first responder awareness level." This level includes "those individuals who are likely to witness or discover a hazardous substance release and who have been trained to initiate an emergency response sequence by notifying the proper authorities of the release." These individuals would take no further action beyond notification. Those people at the awareness level shall have sufficient training or have had sufficient experience to objectively demonstrate competency in the following areas:

* An understanding of what hazardous materials are, and the risks associated with them in an incident.
* An understanding of the potential outcomes associated with an emergency created when hazardous materials are present.
* The ability to recognize the presence of hazardous materials in an emergency.
* The ability to identify the hazardous materials, if present.
* An understanding of the role of the first responder awareness individual in the employers emergency response plan including site security and control and the U.S. Department of Transportation's **Emergency Response Guidebook**.
* The ability to realize the need for additional resources, and to make appropriate notifications to the communications center.

According to a memo from the SERC training subcommittee, dated February 15, 1990, "a minimum standard of training applicable to all persons or even to each category of persons identified in the regulations cannot be established." What does all this mean to you or your organization? I think you need to ask yourself the following questions:

1) Can I readily identify my local emergency planning committee?
2) What plans has the LEPC made for my organization in the event of a hazardous materials release?
3) What is the reasonable expectation of training for my organization given current people and resources?

If you can answer all of the aforementioned questions you are on your way to determining how much training, and at what level, your organization needs. Remember, you and your organization best know what you can do.

For further information on levels of training, courses being offered, and available resources please contact the following organizations:

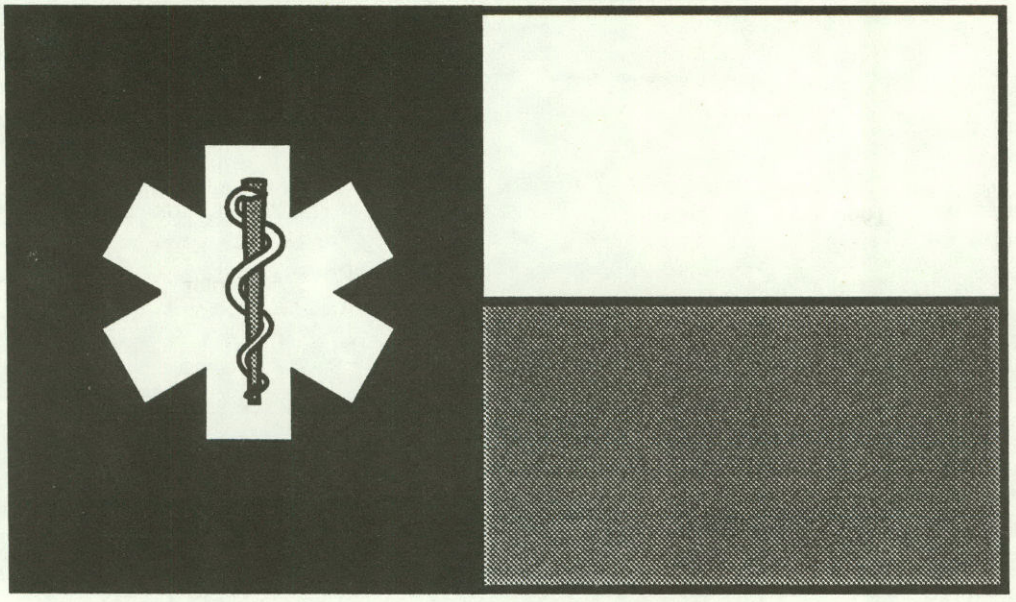
Texas Department of Health, Bureau of Emergency Management, Disaster Response Program; Texas A&M University, Texas Engineering Extension Service; Texas Department of Health, Public Health Region 1, EMS Program.

Texas EMS Conference '90

September 13, 14, and 15

DoubleTree Hotel

Austin, Texas



Registration Form

Pre-Conference Registration

HazMat		$ 20	_____
Water Rescue		$ 20	_____
(choose only one)			

Conference Registration

Before	9/1/90	$50	_____
After	9/1/90	$75	_____

Golf Tournament $25 _____

Volleyball Tournament $10 _____
Team Name:

_____

Valsalva Bowl $10 _____
Team Name:

_____

T-Shirt - great looking!
Mug - add to your collection!
Cap - new item!

(Total from box on right) _____

Grand Total $ _____

Item ordered	Size	Quantity	Price Each	Total
T-Shirt			$ 10.00	
Mug	(one size only)		$ 5.00	
Cap	(one size only)		$ 6.00	

T- shirt sizes: S M L XL XXL

Total $ _____

Make out your check to:
Texas Health Foundation

Mail this registration form and payment to:
Texas EMS Conference '90
P. O. Box 26399
Austin, Texas 78755-0399

Please print or type

Name_____

Home Address_____

City_____ State _____ Zip_____

Employer Name_____

Level of Certification or Licensure_____

Phone: Home _____/_____ Work _____/_____

Conference Sponsors
Texas Department of Health and Texas Health Foundation

For more information call 512/458-7550.

Texas EMS Conference '90 Highlights

Pre-Conference Events

Wednesday, September 12, 1990

Early Registration begins at 8am
Hazardous Materials Workshop, 9am - 5pm
Water Rescue Workshop, 9am - 5pm
Golf Tournament, 12:30pm - registration form on page 16

Conference Events

Thursday, September 13, 1990

Registration begins at 8am
Exhibits Open, 8am - 5pm
Opening Luncheon and Welcome, Noon
Panel, - "EMTs in the ER/RNs in the Ambulance"
General Session with Doug Key
Faculty Rappel, Social Hour in the Courtyard
TDH/SDH&PT Chili Cookoff

Friday, September 14, 1990

Valsalva Bowl Preliminaries
Continental Breakfast in the Exhibit Area
20 Workshops - attend 4
EMS Week Awards Luncheon
Valsalva Bowl Semifinals
Dinner, Valsalva Bowl Finals and Dancing

Saturday, September 15, 1990

Continental Breakfast in the Exhibit Area
12 Workshops - attend 2
Closing Session with Lt. Mark Warren
Drawing for Exhibitor Prizes and Teddy Bear
Adjourn at 1:00 pm, pick up CE certificates

Location

Doubletree Hotel
6505 N IH 35
Austin, Texas 78752
(Room reservation form on page 16)

Continuing Education Credits

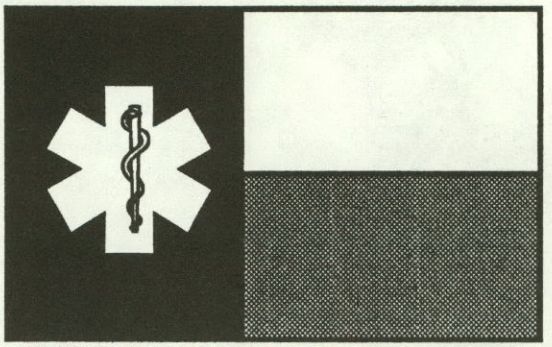
8 hours TDH EMS CE for pre-conference workshop
16 hours TDH EMS CE for conference
National Registry CE applied for

EMS Week Awards

Send in your nominations by September 1

Valsalva Bowl

Submit test questions, get CE



EXCELLENCE IN EMS

TEXAS EMS CONFERENCE '90
SEPTEMBER 13-15, 1990
DOUBLE TREE HOTEL
AUSTIN, TEXAS

Sponsors: Texas Department of Health, Texas Health Foundation

If you have questions about the conference and its activities, contact these individuals at (512) 458-7550:

Agenda and Program
- Alana Mallard

Exhibits
- Tom Ardrey

Registration
- Jan Brizendine

EMS Week Awards
- Steve Hosford

Hall of Fame
- Gene Weatherall

Valsalva Bowl
- Debbie Bradford

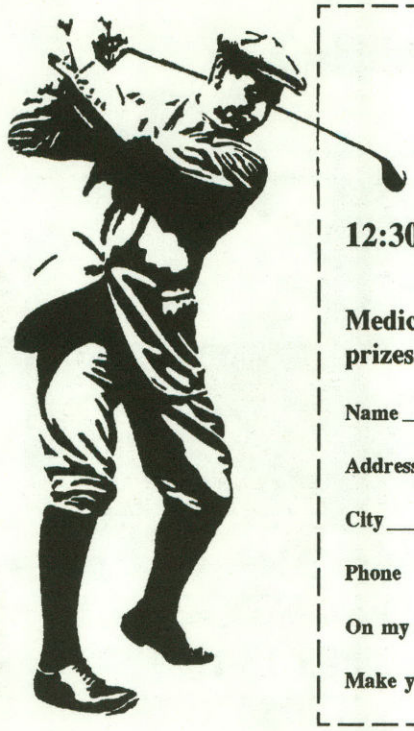
Golf Tournament
- Louis Hartley

Volleyball Tournament
- Bobbie Broadbent

Patch Board Collection
- Bill Baker

T-shirts, Caps , Mugs
- Debby Hollan

Photo Contest
- Pam Price



World Championship
EMS Golf Tournament

Sponsored by Medic Systems

12:30 pm - September 12, 1990 **Lago Vista Country Club**

Medic Systems of Houston is this year's tourney sponsor and will be offering great prizes and a sumptuous meal at the 19th hole. Sign up now!

Name _____

Address _____

City _____ **State** _____ **Zip** _____

Phone **(H) AC** _____ **(W) AC** _____

On my EMS Certification, I swear my average score is _____

Make your check for $25 to: Texas Health Foundation, **Mail to:** P.O. Box 26399, Austin TX 78755-0399

Mail to Hotel:

DoubleTree Hotel
6505 N IH 35
Austin, TX 78756

DOUBLETREE HOTEL
AUSTIN

512-454-3737
6505 N. IH35
Austin, TX 78756

DON'T FORGET
MAKE CHECK OR MONEY ORDER
PAYABLE TO DOUBLETREE HOTEL
DO NOT SEND CURRENCY

ORGANIZATION: Texas EMS Conference 1990 DATE OF FUNCTION: Sept. 13-15

ALL REQUESTS FOR THE ABOVE GROUP MUST BE RECEIVED BY August 22, 1990

Please reserve accommodations for: Print or Type

NAME _____ (LAST / FIRST) COMPANY _____

ADDRESS _____ CITY _____

STATE _____ ZIP _____ PHONE ( ) _____

SHARING ROOM WITH _____ NO. OF PERSONS _____

SIGNATURE _____

MONTH	DAY	YEAR	ARRIVAL TIME	MONTH	DAY	YEAR

ARRIVAL DATE ARRIVAL DATE

CHECK IN TIME 3:00 PM
CHECK OUT TIME NOON

PLEASE CHECK PREFERRED ACCOMMODATIONS

RATES	BED TYPE
☐ ONE PERSON $55.00	☐ KING BED
☐ TWO PERSONS $65.00	☐ TWO DOUBLE BEDS

(Suites available upon request.)

If tax exempt, please present exemption form at time of check-in.

IF RATE REQUESTED IS NOT AVAILABLE, NEAREST AVAILABLE RATE WILL BE ASSIGNED. THERE IS AN ADDITIONAL $10.00 CHARGE FOR THE THIRD AND FOURTH OCCUPANT IN EACH ROOM. RATES ARE SUBJECT TO APPLICABLE 13% TAXES. NO CHARGE FOR CHILDREN UNDER 18 OCCUPYING THE SAME ROOM AS PARENTS.

ACCOMMODATIONS WILL NOT BE CONFIRMED WITHOUT A CHECK FOR THE 1st NIGHT'S DEPOSIT OR USE YOUR CREDIT CARD # TO GUARANTEE YOUR RESERVATION. YOU WILL BE CHARGED FOR THE 1st NIGHT IF RESERVATIONS ARE NOT CANCELLED 24 HOURS PRIOR TO ARRIVAL.

CREDIT CARD # _____ EXPIRATION DATE _____

AMEX ☐ DINERS CLUB ☐ VISA ☐ MC ☐ CARTE BLANCHE ☐

Did You Read...?

by Tom Ardrey

...in the March 12, 1990 issue of **Newsweek** that Hermann Hospital in Houston lost $700,000.00 last year on trauma care alone? The article, "The Trauma in Trauma Care," goes on to say that there are a number of reasons for this: including the rising number of uninsured and crack cocaine!

...in the March 1990 issue of **JEMS**, in the article "Gynecological Emergencies" by Edward Dickinson, MD, NREMT-P, that ectopic pregnancies occur in almost 1.5% of all pregnancies? They are the leading cause of first trimester maternal death, according to that author. Said Dickinson, "An ectopic pregnancy that ruptures the fallopian tube can be just as lethal as a shotgun wound to the chest."

...the checklist of professional behavior, as presented in the February 1990 issue of **The EMS Leader**? The list includes:

. Professional appearance
. Sparkling clean equipment
. Organized office facilities
. Well kept records
. Attractive billing forms and stationery
. Professional phone answering
. Keeping your commitments
. Advancing your values through presentations to schools and service clubs
. Communicating what you do in a clear professional manner
. Responsible handling of confidential information
. Membership in and support of your professional organizations

...in the March 1990 issue of **Emergency Medical Services** that "many of today's young drug users are doing much more to themselves than 'just getting high' when they snort cocaine, smoke crack, and take speed or inject themselves with stimulants?" Dr. Louis R. Caplan, chairman of the Department of Neurology at Tufts University, School of Medicine in Boston, says "many are also having strokes. Recent studies show that stroke is a common and disabling complication in the use of many different street drugs."

...in the March/April issue of the Texas Association of Emergency Medical Technicians **Newsletter** about retropharyngeal abscesses being caused by the foil tabs used to seal fruit juice containers? The article states that since the use of this type container seal is becoming more prevalent, these seals should be considered to be another foreign body which might cause difficulty in breathing and swallowing in young children.

...and in the same periodical about the National Society of EMT-Paramedics appointing a product Evaluation Committee to evaluate the hundreds of new prehospital care products coming on the market each year? Many of these products are virtually untested, so far as usefulness, safety, and reliability are concerned. The society is looking for additional field test sites. Both BLS and ALS services are invited and encouraged to participate. For more information or to receive a test site selection questionnaire contact the National Association of EMTs at (816) 444-3500 or write to NAEMT at 9140 Ward Parkway, Kansas City, Missouri, 64114.

...in the April 1990 issue of **JEMS** under the heading "Current Research," that at the Albert Einstein Medical Center in Philadelphia, drug screens were performed on 169 trauma patients? These patients were selected at random over a period of nine months. The results showed cocaine rather than alcohol to be the drug of choice in the patient population. The screening indicated 54.4% of the patients were under the influence of cocaine; 37.2%, marijuana; 35.5 %, alcohol. Nearly one-fourth of those testing positive had two or more drugs in their systems. Author Gary A. Lindenbaum, M.D. concluded that "all patients admitted to a trauma center should be screened for drugs."

...in the first edition of **Currents in Emergency Cardiac Care**, the new American Heart Association and Citizen CPR Foundation newsletter, that of the 3200 fire departments in the United States, 65% (2,080) provide emergency medical services?

...in the March/ April 1990 issue of **Ambulance Industry Journal**, the quote from Carol Myers, President of that organization, regarding her own crash and subsequent experience? She said, "It's not really how clinically advanced your crews are that will be remembered by the patient. They can't possibly know what kind of training our people have: It's the kindness in their voices, the gentle touch, the hint of caring that will be remembered above all else."

Hermann Hospital in Houston lost $700,000.00 last year on trauma care alone.

Drug screening performed on 169 trauma patients showed nearly one-fourth of those testing positive had two or more drugs in their systems with cocaine rather than alcohol to be the drug of choice.

of the 3200 fire departments in the United States, 65% (2,080) provide emergency medical services.

TEMSAC

Transfers, licensure, trauma confidentiality emerge as key EMS issues

With a three-member panel moderated by San Antonio's Bill Donahue, Texas EMS Advisory Council hosted its first Legislative Forum on May 4. Key legislative issues identified by audience members were regulating transfers, increasing liability protection for emergency care providers, protecting the confidentiality of ambulance run records, funding trauma, and redesigning the personnel certification process either as licensure or permanent certification.

Legislative Forum panel members besides Donahue were Nancy Polunsky, TEMSAC consumer representative from San Angelo, and TEMSAC chair David Prentice, M.D., Houston emergency physician.

The crowd of approximately fifty included educators, administrators, medical directors, and field medics associated with EMS organizations that ran the gamut of volunteer, privately-owned transfer, fire department, and municipal services. After the nearly three-hour forum, Donahue said an ad hoc committee of TEMSAC would be formed to develop the issues into a proposed legislative package for proposal to the Texas Board of Health.

Jon Hilsabeck with Texas Hospital Association urged TEMSAC in its legislative recommendations to be "particularly considerate of rural hospitals" and to minimize transfer regulations so rural areas can operate in a safe and cost-effective manner. Hilsabeck also said one of THA's major initiatives in the 72nd Legislature will be to pursue funding for uncompensated emergency care for hospitals. Corsicana's Faye Thomas, a member of TEMSAC, represented Texas Ambulance Association when she said TAA was "concerned with transfer rules to insure standard of care." She suggested fines and revoking licenses for providers who did not meet standards.

Jamie Quiroga, a Houston transfer service provider, said she was "in favor of being regulated like any EMS provider." Quiroga said that in transfers she used her paramedic skills more and used more drugs than as an emergency responder. "If I'm in Houston or West Texas and an ambulance picks me up, I want to know it's an ambulance. With the melange of city, county, volunteer, and other services, we need standardization," said Quiroga. "The transfer industry needs to make the strides EMS has made." Quiroga also urged that industrial ambulances be regulated.

Permanent certification or licensure of EMS personnel dominated much of the public forum, with disagreement arising as to what members of the audience expected in terms of EMS recertification. The general discussion was that those present did not want to test to recertify, and that a higher level of professionalism was desirable. Polunsky suggested that the debate on permanent certification or licensure be kept alive by writing the **Texas EMS Messenger**.

Issues identified by Bureau staff for legislative consideration include assessing administrative penalties, erecting an EMS memorial on the Capitol grounds, establishing a first responder certification level, and regulating transfers.

At TEMSAC's quarterly meeting following the Public Forum, Donahue told council members, "We have raised expectations," by TEMSAC's invitation to the EMS public to participate in the legislative process, "and now we must produce."

TEMSAC members heard a report on the April 20 Public Hearing on the Proposed Rules for provider licensing. Those rules will go with minor changes to the Board of Health later this month for adoption and will probably become final in July. The Final Adopted Rules on provider licensing will be printed in the **Texas EMS Messenger**, possibly as early as August.

Educators Committee chair Joe Tyson reported on his committee's work on the certification and recertification rules. TEMSAC declined to vote on the package, choosing to study the committee's work and consider the rules for recommendation to the Board of

Prelimlinary work continues on trauma registry, hospital designation

The Trauma Technical Advisory Committee established by House Bill 18, the Omnibus Rural Health Rescue Act, met May 18 in its customary format of subcommittee meetings the evening before the full committee meeting. Subcommittee chairs Kenneth Mattox, M.D., and Erwin Thal, M.D., reported on the work of their Trauma Registry and Hospital Designation groups.

Registry subcommittee works toward first phase

The trauma registry subcommittee suggested revisions to a data collection document developed by the Bureau's EMS/Trauma Registry Program. When finally developed and adopted by the trauma committee the document will be linked to other data sources such as Department of Public Safety and Texas Department of Health, according to Mattox, and will be capable of downloading to other data sources.

The trauma registry process being considered could be in three phases, with participation by eight hospitals in the first phase. The first phase could last as long as six to eight months, said Mattox.

Preliminary draft outlines hospital roles

Thal's hospital designation subcommittee revised its recommendations for naming the levels of hospitals participating in the trauma system to: Comprehensive Trauma Center, Major Trauma Center, General Trauma Facility, and Basic Trauma Facility. Again, discussion centered on the wisdom of numbered levels as opposed to descriptive levels.

As Thal explained his subcommittee's work on Texas guidelines for designating hospitals in a trauma system, specific discussion centered on ATLS certification of ER physicians, whether a surgeon must be present for a major trauma patient's initial ER assessment, and credentials of an anesthesia care team.

At the trauma committee's next meeting, July 19, Thal's committee will discuss triage protocols, nursing criteria, and designation procedure.

TDH awards uncompensated care study

Udell Research Associates, Inc., won the Texas Trauma Project contract to study uncompensated trauma care. John V. Udell, Ph.D., was notified May 17 that the West Palm Beach, Florida, firm would receive the $155,000 contract.

The project will collect and analyze data on hospital costs of trauma care. A draft report on the trauma project is due November 1, 1990, and will provide information on uncompensated costs of trauma, average cost to treat a trauma patient, severity of trauma, and causes of trauma in Texas. The costs of indigent trauma will also be identified.

The Texas Trauma Project will be part of a report to the 72nd Legislature to support a request for funding for trauma systems development and uncompensated trauma care. The Omnibus Health Care Rescue Act charged the department with collecting trauma data on injuries by causes, uncompensated costs, and patient outcomes.

- Alana Mallard

(TEMSAC continued)

Health at TEMSAC's August 17 meeting. The committee's package includes recommendations to increase hours of training required for certification. Bureau Chief Gene Weatherall said the Bureau would not support increasing certification requirements at this time.

Proposed rules on certification and recertification will be printed in the **Texas EMS Messenger** as soon as they are proposed by the Board of Health, possibly in the September issue.

Readers are invited to send their ideas about legislation in writing to Texas EMS Advisory Council c/o Bureau of Emergency Management, 1100 W. 49th Street, Austin, Texas 78756. TEMSAC is interested in particular bill stylings or language that readers may think appropriate for proposed legislation.

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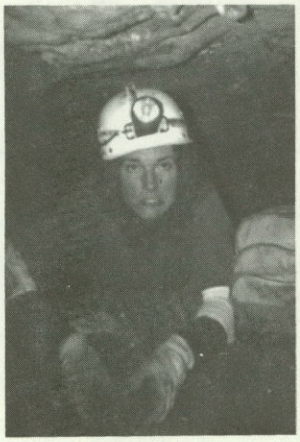
Llano EMS paramedic Wayne Matthews (right) supervises as Bill Armstrong, Parks and Wildlife Department superintendent at Devil's River State Natural Area, ties off during a simulated self-rescue on the side of the cliff.

EMS, Parks and Wildlife go underground



Story and Photos by Alana S. Mallard

Lifesavers. You find them everywhere. They serve as police officers, firefighters, EMS personnel, and hospital staff. They might come to the scene of an emergency in ambulances, fire trucks, police cruisers, or helicopters, and often the scene is a city intersection, someone's home, or a construction site.

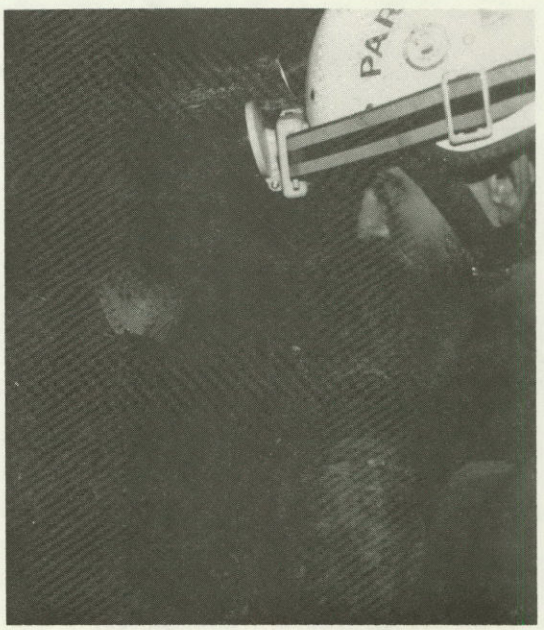
But park ranger Jesse Tarin heads out in his four-wheel drive truck across rough terrain covered with cactus and honeycomb limestone when he gets the call that a visitor to Colorado Bend State Park is in trouble. Sometimes, that visitor in trouble is a cave renegade explorer.

Texas has about 2,500 known caves according to Bill Elliott, a cave biologist who has surveyed many Texas caves. Over 300 speleologists who belong to grottos associated with the National Speleological Society explore, map and study Texas caves. Thousands of unaffiliated cavers, many of them inexperienced and equipped with just tennis shoes and a flashlight, explore charted and uncharted caves.

Tarin, an EMT and Texas Parks and Wildlife superintendent of San Saba county's Colorado Bend State Park, and several of his counterparts from state parks across Texas completed a three-day cave rescue course sponsored by Texas Department of Health last year to learn how to search for and stabilize injured or lost cavers. The course included high-angle rope work, medical considerations, rough terrain litter handling, in-cave patient management, cave search, and developing a cave rescue resource network.

According to Dick Willett, captain and law enforcement supervisor for the Parks Division of Texas Parks and Wildlife Department, there are twenty-two state parks with search and rescue capability and only six parks with rappelling and cave rescue capability. Willett would like to put together five or six teams of Parks and Wildlife personnel statewide to respond to high-angle emergencies and to perform cave and water rescue. Texas has over 100 operational state parks visited by 21,000,000 people each year. Last year there were about twenty-five EMTs in the park system.

Tarin's park, Colorado Bend, has two hundred caves including Gorman Falls, which are not open to the public. Once a month affiliated Texas cavers do exploratory survey-



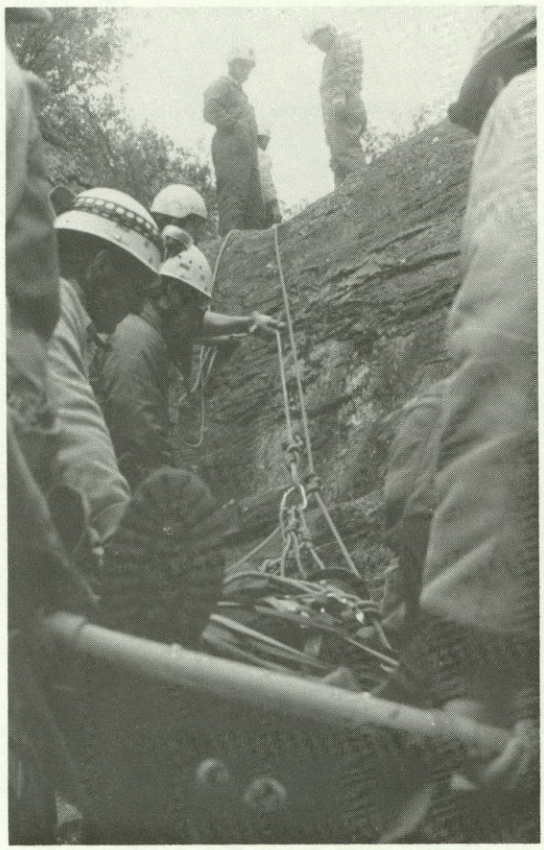
Rod Dennison watches as students manuever a squeeze in Gorman Creek Crevice during a mock rescue.

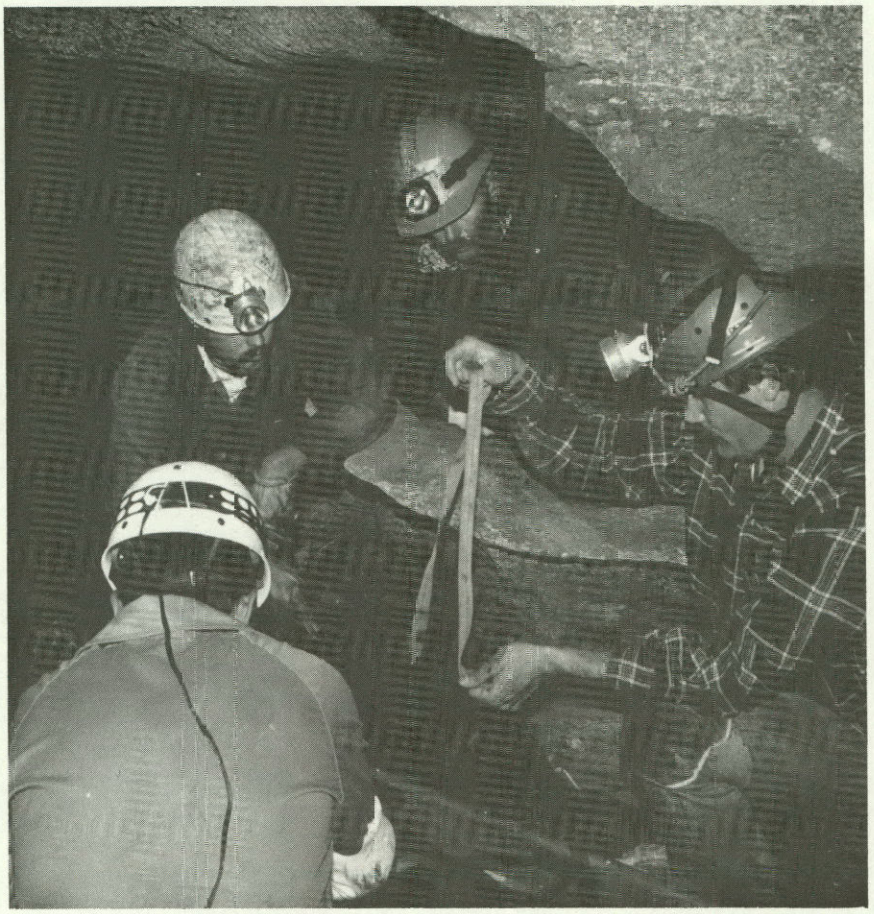
ing work in the caves of Colorado Bend. Enchanted Rock State Park, with over one thousand feet of three-foot high crawl space, is home to the state's second longest granite cave. Hundreds of rappellers and cave explorers visit Enchanted Rock, and in the last year personnel from Parks and Wildlife and nearby Llano EMS conducted at least six rescues. In Palo Duro Canyon State Park in the panhandle three or four rescues are conducted each year, according to Willett.

"Training like this teaches people their limitations," said Rod Dennison, a National Cave Rescue Commission instructor, paramedic, and Public Health Region 1 EMS program administrator. "This training gives Parks and Wildlife an appreciation for what will have to be done in a full-scale cave rescue, and what resources will be needed."

Dennison developed the cave rescue course for Parks and Wildlife personnel and taught the course with other Public Health Region 1 personnel and with personnel and assistance from McLennan Community College, STAR Rescue Association, and National Cave Rescue Commission. Instructors besides Dennison were Region 1's James Davis, Brett Marsh, and George Marquez and Temple Fire Department's Leroy Vargas.

Safety is the priority in cave rescue, as it should be in any other type of rescue, and the condition of the rescuers is paramount,





In Ciquerina's big room, Enchanted Rock State Park ranger Myron Welgenhausen (right) secures a patient in the Stokes basket.

Students hoist a patient cliffside as instructors observe (photo left) after instructors Dennison, Temple Fire Department's Leroy Vargas, and PHR 1's James Davis (left to right, photo below) demonstrate packaging technique.

Caves: A hostile environment

Caves have been called "our last frontier" by some speleologists, and the "only areas left to explore" on our planet. Exploring caves is dangerous and you should be well-prepared for any entry into a cave, whether for rescue or sport.

1. Cave with experienced cavers. Sanctioned cave groups, called grottos, are organized in several Texas cities. Contact Texas Speleological Association, Mike Warton, P.O. Box 8026-UT Station, Austin, Texas 78713, for information. These groups are a valuable resource for EMS in setting up a network in case your EMS group is called out to a cave incident.

2. Caves are dark, tight, wet, cold (or hot), and disorienting, so be prepared for a hostile environment. Coveralls, gloves, elbow and knee pads, a helmet with battery-powered light, drinking water, food, extra light sources and extra batteries, and flourescent trail-marking tape are minimal necessities.

3. Make sure someone knows you are going caving. Tell them when to expect you back and check back in with them. Leave something at the cave entrance to let people know that is where you are - sunglasses, a hat, a shirt.

4. Caves are a finite non-renewable resource. When you cave, do not leave anything in the cave, do not bring anything out, do not smoke, and do not touch any of the formations.

Take nothing but pictures, leave nothing but footprints, kill nothing but time.

the park personnel learned. "If someone goes into arrest in the hole," said Dennison, "it's a body recovery. You can't do CPR down in a cave or even in rough terrain. You endanger your healthy bodies when you try to do CPR in a cave."

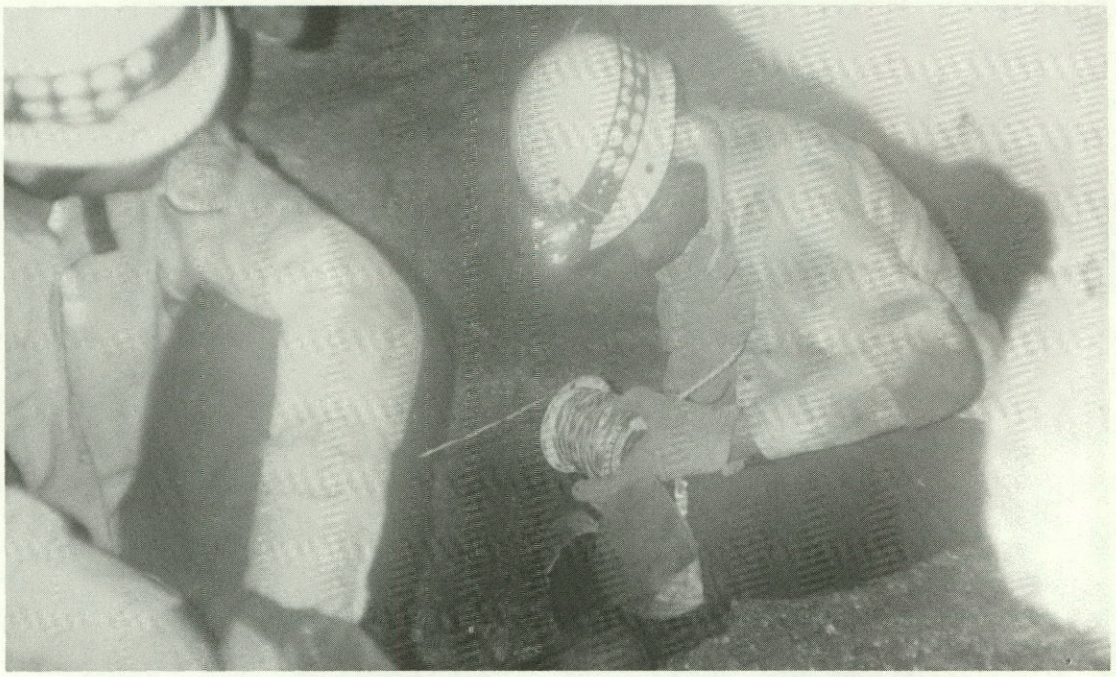
"In rescue, the victim is not your number one concern. You are," reiterated assistant instructor Gail McNeely from Public Health Region 1 in Austin. "The victim isn't even your number two concern," she told the rangers. "Your partners are. The victim is your number three concern."

Once an injured, lost caver is located, Marquez likened cave medical care to combat care: "If someone is the walking wounded, let them keep walking." If EMS personnel are non-cave trained, said Marquez, the first thing they want to do is splint a fractured arm or a sprained ankle. However, in cave rescue the right thing to do is to let a caver walk out if he can without endangering himself further.

Mock rescue patient Matthews is partially immobilized with the KED and a cervical collar as he is turtled on student rescuers toward the basket and eventual daylight.

Over the three-day training session, scenarios were played out in three caves and one set of cliffs which presented very different kinds of environments and rescue situations. In the four-hour mock rescue conducted on the last day, the patient's possible spinal injuries required immobilization, but he was in an area too small to pass a litter through. The parks rescue team sent word to the top to send down a Kendrick extrication device, sort of a body armor. The patient's spine was immobilized with the KED and a cervical collar and he was passed through the hole to the basket, where he was loaded in and carried to daylight.

The mock rescue, the "final exam" of the cave rescue training session for the Parks and Wildlife personnel, required the students to use everything they had learned during the three days of classroom, cave, and cliff training. The instructors chose the medic for the rescue, Fred Mares, who was then a law enforcement officer at Inks Lake, and the incident commander, Sinda Davis, a wellness coordinator for the law enforcement division of Parks and Wildlife Department. As the mock progressed, Davis assigned "first-in" search units, rescuers, and haul team members.



Wayne Haley, superintendent of South Llano River State Park near Junction, tests in-cave communications link with the command post as he gives a patient position report during the mock rescue.

In the mock rescue, the students first learned of a possible trapped or injured caver when a caving buddy ran up to the student group, screaming that she "had been in that cave over there when some rocks fell. There was a terrible noise and I yelled but there was no answer. Can you go find him?"

Scenario timeframe:

1415 Caver asks for help.
1430 Three initial response teams enter cave to search for trapped caver.
1503 First unit out, announcing they have narrowed down the caver's location to the third tunnel.
1536 Patient located, one unit comes out and asks for equipment.
1554 Equipment, except for basket, reaches patient.
1649 Patient begins moving.
1652 Patient reaches basket.
1758 Patient in daylight.

Elapsed time: 3 hours, 43 minutes

Willett considers cave rescue training a valuable part of being ready to protect park visitors. "We found out things we didn't know," said Willett, "and found some weak links in things we ought to know, like medical care, communications and the extended times required for cave rescues."

This is the kind of intense training, said Dennison, that helps groups and individuals answer important questions about cave rescue: Am I prepared? Do I know how to get prepared? Do I want to get prepared? Do I want to avoid this like the plague?

Colorado Bend State Park and San Saba county will be the location for an eight-day cave rescue training seminar June 16-23 sponsored by the National Cave Rescue Commission, National Speleological Society, Texas Department of Health, Texas Parks and Wildlife Commission, and San Saba EMS. Eighty cavers from all parts of the U.S. are expected to attend the national seminar.

Health department personnel have also conducted search and rescue training for Parks and Wildlife park rangers, as well as an advanced two-day cave rescue course sanctioned by the National Cave Rescue Commission.

Students derig after nearly four hours underground (standing left to right are Sinda Davis, Bill Armstrong, and Dick Willett).

Hospital overcrowding can be attributed to many things: trauma, AIDS, cocaine, insurance, staffing, finances, laziness. We can point to causes, but is there a solution for EMS?

EMS Faces Frustration

Crowded hospitals threaten prehospital care

Many problems affect EMS today: finding trained and experienced personnel; decay of skills and knowledge; shortage of volunteers; higher costs, which are reflected in both the rising expense of labor and the explosion of new and better equipment; and employee burnout.

In addition to these problems, other issues come to bear on the health care system such as the high percentage of our population which is either underinsured or has no health care insurance at all. Millions of people fall into this category in the United States.

One problem in particular creates real havoc with the delivery of prehospital care and that is the one of ambulance diversion because of emergency department closures. Few situations can be more frustrating to EMS personnel than to have a critical patient aboard the ambulance and receive a transmission from the ED refusing your patient because of an overcrowded situation in the hospital.

by
Thomas J. Ardrey
and
Alana S. Mallard

According to an article written by Marie Norberg in the April issue of **Emergency Medical Services** the problems of ED overcrowding and EMS diversion have become so severe that the American College of Emergency Physicians recently formed a task force to address the issue. A survey conducted by that task force revealed that forty-one states and the District of Columbia suffer from overcrowding. A similar poll conducted by the Emergency Nurses Association showed overcrowding exists in every state.

In Texas, overcrowding plagues nearly all the metropolitan areas. Dr. Donald Gordon, Medical Director of San Antonio EMS, says that the emergency departments wind up being used as intensive care units when hospitals feel that they are full and paramedics find themselves sent away to find an ED with open beds. "Hospitals feel that they have the right to divert EMS but will still evaluate patients who walk in or present themselves for emergent care. The MICU patient usually has been screened and is known to require urgent care and is therefore discriminated against in this process," said Gordon.

Dallas faces similar diversion problems, but medical director James Atkins, M.D., says "They can't refuse you. Legally, if you show up with a patient, they're liable if they refuse to accept the patient." Austin EMS periodically finds itself in diversion mode with dispatchers taking the hospital choice away from field medics and patients and assigning the receiving emergency department according to an accepted protocol.

Many factors contribute to this problem of overcrowding and subsequent diversion. In Norberg's article, Dr. Lewis R. Goldfrank, director of emergency services for Bellevue Hospital in New York City cites a lack of insurance and the high number of underinsured as major factors. He says, "We know there are in this country 35,000,000 people lacking medical insurance and another 35,000,000 with inadequate coverage." This lack of third party money to pay for emergency services creates a financial burden for hospitals which must pay

staff, provide the physical plant, and purchase and maintain equipment.

Dr. Stephen G. Lynn, Chairman of the ACEP task force on overcrowding, names as a major cause of overcrowding the dramatic increase in AIDS patients and the fact that these patients generally require longer hospitalization than others. In Texas the recent measles epidemics and flu have filled hospitals, and when rural hospitals close, as nearly sixty in Texas have over a three-year period, patients from the closed hospitals increase the bed census in existing hospitals.

According to Atkins, hospitals across the state and across the country are closing their doors to trauma. "Hospitals have diverted trauma patients in Fort Worth, Dallas, and Houston," he said at a recent legislative forum. Atkins supports a fee to pay for uncompensated trauma care and suggests "a penny a bullet." Trauma patients are typically young, uninsured, and unemployed, said Atkins, contributing to lack of compensation for trauma care.

In what may be the worst case of drive-by in the nation, Atkins said trauma patients in north Fort Lauderdale, Florida have ninety minute transports. Patients have to bypass thirty-seven hospitals to get to the first emergency department to accept trauma, a hospital in south Miami.

Jim Hayes, M.D., director of the emergency department at Methodist Hospital in Dallas said Methodist has a 6 1/2 % collection rate for penetrating trauma and a 50% rate for blunt trauma. Another problem with trauma is that it gobbles up all available resources on Friday and Saturday nights, typically. "Besides being the least likely care to be reimbursed and having the highest rate of malpractice suits, "said Atkins, "overworked hospital staff are giving up their Friday and Saturday nights to take care of trauma patients."

Real-world phenomena such as AIDS and trauma, the underinsured and the uninsured, and overworked hospital staff will not disappear and the problem of overcrowding exists for real in our state. Some cities have developed contingency plans for diversion. In Austin, where there are four emergency departments, field personnel know in advance if a hospital has no room and Austin EMS dispatchers divert the crew and patient to another hospital.

In a recently documented complaint in Texas an EMS vehicle notified the nearest hospital that they were about twelve minutes out from that hospital with a patient who had been found unconscious and unresponsive, and who had a respiration rate of approximately 50. A blood pressure reading was unobtainable. The hospital radioed the ambulance back that the Emergency Department was closed. The ambulance personnel twice told the ED that this patient was critical and that they were at that time on hospital premises and in the ambulance bay. The ambulance crew reported that they were told to drive on to another facility and that no one from the ED came out to check on the patient's condition. The ambulance then proceeded to the next nearest ED, which was six to eight miles away. Enroute, the patient coded and died.

The hospital's action, according to a complaint filed by Texas Department of Health, was in violation of Section 9121 of the Consolidated Omnibus Budget Reconciliation Act (COBRA) of 1985 because the patient was brought to the hospital by ambulance and a request was made on the individual's behalf for examination or treatment for a medical condition.

An investigation revealed the patient was not provided an appropriate medical screening examination within the capability of the hospital's emergency department to determine whether or not an emergency condition existed. Further, the hosptal's drive-by policy, implemented one month before this incident but not yet presented to or approved by the medical staff, stated that when beds in critical care areas were full the drive-by status would be implemented, but that no patient, regardless of mode of travel, would be refused care.

In this case, the health department recommended termination of the hospital's participation in the Medicare provider program. Fortunately for the hospital, they submitted a plan of correction during the health department's observation period.

"Trauma care is a service our hospital provides," said Hayes of his hospital's commitment to emergency department patients, "but we cannot provide it forever." With single-digit collection rates on the most expensive care provided in the ER, something is going to have to give.

Are you *Fit* or are you FAT?

by Alana S. Mallard

I recently reread a book I read in 1977 when it was first published, **Fit or Fat?** by Covert Bailey. The book has a message that serves caregivers well - we need to take care of ourselves, too.

Being fit or fat, says Bailey in his book, is not a choice that you make each time you decide to go on **another** diet to lose ten pounds **again**, but a choice that you make over your lifetime. It is not so much how much you weigh, but whether that weight is made up of lean, firm muscle propelled by a healthy heart or of too many fatty deposits in your muscles (including your heart) which may weigh less than muscle but do nothing for you.

Overweight or overfat--that is the question. And that is also the topic of one chapter in **Fit or Fat?** explaining the problem of overeating and underexercising. "Up to the age of fifteen, the majority of us are very active, using calories as fast as we eat them. But then we 'grow up.' We settle down to the adult activities of drinking, working, and commuting in cars. Our muscles gradually become less dense, less lean, and more fatty."

Weight is often confused with fat. Says Covert, "You can make no realistic determination of how fat you are by your weight." When you do not use your muscles in physical exercise fat deposits in your muscles and your muscles grow smaller. Fat literally replaces your muscles; but you do not gain weight, you just gain fat.

The author gives a personal experience in the book of his fat/weight gain. The author "got fat" for five years after he quit exercising, then when he turned 32 he act- ually began to gain weight. The weight gain began after he filled his muscles with fatty deposits. Once he began depositing fat outside his muscles under the skin, that was when he began gaining weight. The culprit for the author, as for so many others of us who notice a few pounds going on where we don't want them, was overeating and under exercising.

This book has a simple message for fitness: Figure out your correct weight, then do 12 minutes of aerobic exercise everyday, and balance your diet with adequate amounts of protein and carbohydrates.

CORRECT WEIGHT

Ideal weight is determined by the size of a person's frame, or Lean Body Mass. If you have large bones and muscles, your ideal weight is greater than for a person of the same height who has slender bones and muscles.

Also, as people age, they generally become less active and so lose some of their muscle mass. Their ideal weight is less than an active or younger person of the same size.

Approximately 22% fat is a healthy percentage of fat for women; and 15% fat is a healthy percentage for men. A higher percentage of fat means that you are not getting enough exercise, or you are eating too many calories.

Your Lean Body Mass, or ideal weight, determines how many calories you should consume, because it is our muscles that consume calories. The fat part does not need calories; fat is calories.

This book does not give any tables or charts to tell you your correct weight, and in fact, says that the term "correct weight" is ambiguous. The point is that weight is not the issue, fat is.

AEROBIC EXERCISE

The ultimate cure for obesity is exercise. Aerobic exercises ideally make the muscles work hard enough to need lots of oxygen, but not so hard as to exceed the ability of the heart and blood to deliver the oxygen.

This author claims that 12 minutes of aerobic exercise is practically magical. Every day, at least 12 steady, nonstop minutes of exercise which raises your heart rate to 80% of its maximum rate is the most efficient way of removing the marbling of fat and changing metabolism so you will not get fat anymore.

The author warns the reader that work activity that tires us out -- such as carrying loads of clothes to the washer, hauling the trash to the curb, and lifting stretchers into ambulances -- is not the same as athletic exercise which raises the heart rate and increases our metabolism. Running, jogging, skiing, jumping rope, walking, cycling, ice and roller skating, swimming, and mini-trampoline work are some examples of aerobic exercises (although some of these require 15- or 20-minute nonstop sessions rather than 12-minute sessions).

Fitness is lost if you exercise two days or less a week. Fitness is maintained if you exercise three days a week. Fitness is improved if you exercise six days a week.

BALANCED DIET

Fasting depletes muscle and high meat/low carbohydrate diets still have more fat because of the marbling in the beef, says this author. (Remember, this book was written in 1977 before the trend towards chicken and fish as meat protein sources.) And eliminating carbohydrates to eliminate calories takes away valuable and necessary roughage.

This book supports what many newer books and authorities maintain: that complex carbohydrates, such as fruits and vegetables, rice and other grains, breads and cereals take longer to digest; protect us from colon cancer, diverticulitis, and appendicitis; and are very, very good for us.

About fats, this author says if we eat lean meat and vegetable protein, we will get plenty of fat for our diet. We should decrease dietary fat as much as possible. There is plenty of fat hidden in other foods.

Fasting will encourage our bodies to become fatter. The body gets stressed in a fast and changes food into fat. Balanced eating throughout the day keeps the body's metabolism going, and metabolizes calories into muscle as long as you maintain your exercise level.

JUST DO IT

Don't ask how much you should weigh. Stop shooting for an ideal weight! Shoot for health; for being physically fit. The cause of excess fat is poor muscle tone. Like the Nike ads, this book tells us to "Just do it." Start now, and twelve minutes of nonstop, steady aerobics each day will increase fitness for your lifetime.

Around The State

June 22, 1990, **HIV/AIDS Requirements & Guidelines for Public Safety Officials**, Austin, sponsor: TX Department of Health, contact Galco Service Consultants, P.O. Box 1414, Georgetown, TX 78626-1414, (512) 863-2098.

July 12 - 15, 1990, **Clincon '90**, Hyatt Orlando, Kissimmee, Florida. Contact the Florida Chapter ACEP at (407) 281-7396.

July 29 - August 3, 1990, **28th Annual Industrial TX Firemen's Training School**, College Station, TX. (409) 845-7641 for information.

August 2 - 4, 1990, **Sixth Annual Colorado Trauma Symposium**, Beaver Run Resort, Breckenridge, Colorado. Linda Metcalf, 777 Bannock Street Third Floor West, Denver, Colorado 80204-4507, (303) 893-6266.

August 24 - 26, 1990, **Idaho Emergency Medical Conference**, Boise, Idaho. Linda Ady (208) 334-5994.

September 7, 1990, **5th Annual Air Rescue Seminar**, Beaumont, TX. Air Rescue, Baptist Healthcare System, P.O. Drawer 1591, Beaumont, TX 77704, (409) 839-5620.

September 13 - 15, 1990, **TX EMS Conference '90**, DoubleTree Hotel, Austin. Call the Bureau of Emergency Management at (512) 458-7550 for information.

September 16 - 22, 1990, **EMS Week.**

October 9 - 11, 1990, **Second Annual Industrial Rescue Competition**, Sweeny, TX. Kay Roop, Baton Rouge, Louisianna 1-800-647-7626 for details.

November 15 - 17, 1990, **10th Annual Trauma Symposium**, El Paso Marriott Hotel, El Paso, TX. Wendy Younger, 217 Vista Rio Circle, El Paso 79912-2125.

EMT-I, EMT-Ps needed offshore. Shifts vary, $795/week + overtime. Requires Texas or National Certification. In-hospital and/or Military Corpsman experience. Resume: OPI, Health Services, 96 W. Front St, Orange, TX 77630.

EMT-I/Paramedic: Texas Dept. of Criminal Justice, locations in Houston, Gatesville, Palestine, Huntsville, Rusk. $19,464, excellent benefits. TDCJ-ID, P.O. Box 99 Personnel Annex, Huntsville, TX 77342 (409) 294-2755.

Paramedics: part time positions at Houston's Fame City. Hi Tech Ambulance, 8511 Holt, in the TX Medical Center area, or Jim Becka, P.O. Box 301030, Houston 77230-1030.

Paramedic: Firefighter trainee, must be EMT-P certified. Send resumes to Houston Fire Department, Personnel Dept., Selection Services Division, 500 Jefferson, 5th floor, Houston 77002.

Paramedics: MedStar, Fort Worth, interested in EMT-Ps with ACLS, National Registry and PHTLS. Competitive salaries and benefits. Call (817)927-4455 for more information.

Paramedic Director: Refugio County Memorial Hospital District. Resume: Refugio County Hosp. Dist., 107 Swift St., Refugio, TX 78377 or Haskell Silkwood (512)526-2321.

Associate Medical Director: Coordinate and supervise all aspects of ALS training and continuing education programs for EMTs. Paramedic, RN or equivalent required. ACLS certification. Experience in paramedic education and EMS operations. Dept. of Surgery, TX Tech Univ., RAHC, 4800 Alberta Ave., El Paso, TX 79905. Sandra Mendez (915)545-6860.

Flight Nurse/Paramedic: Experienced ACLS certified nurses for part-time Austin, Dallas, Houston. Flight time available Worldwide flights. Top Pay! Resume and picture to Ted L. Edwards, M.D., Medical Director, Air Ambulance America, P.O. Box 4051, Austin, TX 78765-4051.

Paramedics: Will assist you in the development of your clinical evaluation skills. Offshore oil and gas production. Texas or National Registry Certification. ACLS, BTLS, basic computer skills desirable. Resume: Medic Systems, P.O. Box 690928, Houston, TX 77269-0928.

For Sale: Life Pac 5 monitor, defibrillator, battery charger, and accessories, call (512)449-1902 or (512)449-2500.

For Sale: Resusci Anne supplies, disposable lungs and parts, Manikin and suction unit repairs. Call Devin Zaring (713)484-8382 or write Manikin Repair Center, 11504 Hughes Rd #107, Houston 77089.

For Sale: Horton 501X type III Modular Ambulance, 1985 Ford E350 Chassis. Other EMS equipment available. Call evenings (814)226-7276.

For Sale: Three Motorola Mx-340 Portable Radios, $500 for each unit. Standard Hx 300 Portable Radio with charger, $300. Bobby Motes (512)729-2112, POB 821, Rockport 78382-0821.

Needed: Portable suction unit, adult traction splint, child traction splint, MAST-Trousers, Randy McCoy, Elkhart (214)764-5566.

For Sale: 1988 Collins Type I Modular Ambulance, excellent condition, $30,000, Floyd Clark (512)776-0025.

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Texas Department of Health
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