FIRST AID
ARTIFICIAL RESPIRATION
AND
POLE TOP RESUSCITATION

CONTENTS

1. GENERAL

1.01 This section is being issued to provide instructions on the standard prone pressure method of Artificial Respiration and includes Pole-top Resuscitation which is intended to supplement the prone pressure method as an emergency measure under those conditions where it is impossible to quickly place the shock victim in the prone position, and can be applied safely. Rescue of victim and planning the rescue operations are covered in the following sections of the practices, and should be referred to for specific instructions:

Rescue of Employee from Manhole - G10.209
Rescue of Employee from Pole - G10.210
Rescue of Person from Live Wire on Ground - G10.211

1.02 Electric shock, gas asphyxiation and drowning are types of suffocation. Rescue victim without unnecessary danger to your own life, stop severe bleeding, then restore breathing by means of artificial respiration. BEGIN IMMEDIATELY AND DON'T GIVE UP. A person apparently dead has been restored after more than three hours of continuous artificial respiration.

1.03 In all cases where the employee has received a severe electric shock or is unconscious, have someone call a physician to the location as soon as practicable without delaying the rescue. If victim is conscious and, after receiving first aid can safely be moved, he should be taken where he may receive the services of a physician.

Note: If professional help is offered, i.e., doctor's services, use of inhalator, or resuscitator they should be accepted. However, interruption of manual artificial respiration should not be allowed.

2. ARTIFICIAL RESPIRATION

2.01 Standard Method - Back Pressure - Arm Lift

(1) Position of the victim - Place the victim in the face down, prone position. Bend his elbows and place the hands one upon the other. Turn his face to one side, placing the cheek upon his hands.

(2) Position of the rescuer - Kneel on either the right or left knee at the head of the victim facing him. Place the knee at the side of the victim's head close to the forearm. Place the opposite foot near the elbow. If it is more comfortable, kneel on both knees, one on either side of the victim's head. Place your hands upon the flat of his back in such a way that the heels lie just below a line running between the armpits. With the tips of the thumbs just touching, spread the fingers downward and outward.

(3) Compression phase - Rock forward until the arms are approximately vertical and allow the weight of the upper part of your body to exert slow, steady, even pressure downward upon the hands. This forces air out of the lungs. Your elbows should be kept straight and the pressure exerted almost directly downward on the back.

(4) Position for expansion phase - Release the pressure, avoiding a final thrust, and commence to rock slowly backward. Place your hands upon the victim's arms just above his elbows.

(5) Expansion phase - Draw his arms upward and toward you. Apply just enough lift to feel resistance and tension at the victim's shoulders. Do not bend your elbows, and as you rock backward the victim's arms will be drawn toward you. Then lower the arms to the ground. This completes the full cycle. The arm lift expands the chest by pulling on the chest muscles, arching the back, and relieving the weight on the chest. The cycle should be repeated 12 times per minute at a steady, uniform rate. The compression and expansion phases should occupy about equal time; the release periods being of minimum duration.

2.02 Additional related directions - It is all important that artificial respiration, when needed, be started quickly. There should be a slight inclination of the body in such a way that fluid drains better from the respiratory passage. The head of the victim should be extended, not flexed forward, and the chin should not sag lest obstruction of the respiratory passages occur. A check should be made to ascertain that the tongue or foreign objects are not obstructing the passages. These aspects can be cared for when placing the victim into position or shortly thereafter, between cycles. A smooth rhythm in performing artificial respiration is desirable, but split-second timing is not essential. Shock should receive adequate attention, and the victim should remain recumbent after resuscitation until seen by a physician or until recovery seems assured.

3. POLE TOP RESUSCITATION

3.01 Recent studies have indicated the superiority of the "Back Pressure - Arm Lift" method of artificial respiration. It seems only reasonable that the same principle applied to victims on poles would also be superior; however, emphasis should be made that the most important part of any type of resuscitation is not on the method, but how soon it can be put into effect.

3.02 The conditions surrounding the victim and the exposure of the rescuer to danger would have a marked relationship as to what method should be used and how soon it could be started. Wherever conditions and safety of the rescuer will permit, the following basic fundamental principles should be applied.

(1) GET THE FIRST BREATH OF AIR INTO THE VICTIM QUICKLY. This should be accomplished by simple compression of the chest by any means possible. The importance of early ventilation of the lungs is shown by the following:

% Chance for Survival	Minutes After Suspension of Breathing
98%	1 Min.
90%	2 Min.
55%	3 Min.
30%	4 Min.
15%	5 Min.

(2) If practical move the victim to a more desirable position described in the next paragraph; however, this should be done without interrupting the exchange of air in the lungs.

(3) The rescuer, after checking the conditions and assuring himself that artificial respiration can be safely administered, lets the victim hang from his safety strap, along side the pole. He should then take a position from which he can secure his safety strap around the pole and between the legs of the victim, then proceed upwards until the victim is straddling the strap. By moving the safety strap as high as possible on the pole, much of the victim's weight is carried by the rescuer's strap as he places his weight against it.

(4) COMPRESSION PHASE - Pressure can best be applied by rescuer locking his fingers over the upper abdomen, lifting up and back as he rocks back in his safety belt. This expels the

air from the lungs as the rib cage is compressed and the intestines are forced up against the diaphragm. After firm resistance is met release pressure by rocking forward.

Note: Sometimes electric shock produces a muscle block which can be broken by additional finger pressure up against the diaphragm.

(5) EXPANSION PHASE - Immediately after the completion of the compression phase, raise the arms beneath the victim's so the rescuer's elbows hook beneath the victim's arm pits. The rescuer again rocks back in his safety belt lifting the victim's shoulders up and back, simulating the American Red Cross Arm-Lift Technique. This expands the rib cage above normal which draws additional air into the lungs. After firm resistance is met, rock forward into position for the compression phase.

3.03 The compression and expansion phases, described should take approximately two and one-half seconds each.