



The Schafer Prone Pressure Method of Resuscitation.

The Silvester Method of Resuscitation (victim supine).

## RESUSCITATION AND FIRST AID

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This article is condensed from the chapter on Resuscitation and Water First Aid in Dr. Thomas Kirk Cureton's new book, "Warfare Aquatics," and is reprinted with permission of the Stipes Publishing Co. A review of the book may be found on page 30.

A THIS time there are four methods of resuscitation in common use:

1. The Silvester method which is widely used by the United States Coast Guard operators and is in use by doctors and first aid workers when it is desirable to put the patient on the back.

2. The Schafer method which is preferred by the American Red Cross in its first aid work.

3. The Nielsen method which has increased greatly in popularity.\*

4. Mechanical resuscitation with the E & J or McKesson equipment.

Modern workers in resuscitation should be trained in all of these methods because they will all be found in use and each one of them has advantages under certain conditions.

## Nielsen Method

This method was devised by Colonel Nielsen in charge of the Danish Life Saving work where it is generally considered superior to the Schafer method. The physiological evidence has been interpreted by Colonel Nielsen and others in favor

\*Lt. Col. Holger Nielsen and the Danish Resuscitation Commission: Dr. H. Bendlsen (Chairman), Dr. Svend Hansen, Dr. Paul Guildal, C. Holstein-Rathlou, Prof. August Krogh, Dr. J. Lindhard, C. B. Pederson, Dr. F. Svendsen.

of this method because it more nearly corresponds to natural deep breathing and offers greater stimulation to circulation. It also decreases the potential danger of causing internal injuries by great pressure on the abdominal organs. It affords an easier position from which to operate than the Schafer method. It also leaves the greater part of the body free to be worked upon with massage. The operational instructions are as follows:

1. The side of the face is placed on the back of one or both hands which are bent at the elbows and crossed under the face. The body is freed as quickly as possible of tight garments and the nose and mouth are checked to see that they are perfectly free to breath. A slap on the back is given to help open the mouth and make the tongue fall forward.

2. The operator kneels on one knee at the head of the victim and presses downward on the shoulder blades with the palms of the hands and with fingers widely separated. Pressure is exerted evenly and smoothly in the downward direction for about 2½ seconds.

3. The operator relaxes the pressure and seizes the upper arms just above the elbows and lifts them vigorously upward for 4 or 5 inches to assist the expiration of the chest and the inspiration of the air. This is a unique feature of the Nielsen method. The arms are lowered and the cycle is repeated at a rate of approximately 2½ to 3 seconds relaxation and stretching on the chest.

4. During the application of the movements supplemental treatment is applied in the way of hot pads or stones, vigorous rubbing of parts of the body toward the heart, slapping the bottoms of the feet and other methods of reflex stimulation.

5. A change of operators is made whenever needed without interfering with the respiratory movements.

## Silvester Method

A brief description of the Silvester method of resuscitation is given as follows:

1. The subject is placed upon the back and the mouth is cleaned and the tongue pulled forward.

2. The operator works from the head end and places his hands over those of the subject. The subject's arms are raised sideward and upward to an overhead position for 2 seconds. This movement assists the inspiration.

3. The hands are placed back on the chest over the lower ribs and pressure is exerted downward for about 3 seconds until as much air has been forced out of the chest as possible.

4. The movements are continued at a rate of about 12 to 15 per minute.

5. Supplemental treatment is applied by an assistant. It may be necessary to tie the tongue forward or to hold it. It can easily be determined from this position whether the subject is breathing or not. If the cheek is lowered to a position direct-