ENABLING OBJECTIVES:

3.29 Explain the functional operation of the following Rescue Devices per NWP 3-50.1:

   a. Double Rescue Hook
   b. Modified Rescue Strop
   c. Quick Strop
   d. Rescue Net
   e. Rescue litter/SAR MEDEVAC Litter, Trail Line and Gloves
   f. Rescue Seat

3.30 Demonstrate procedures for placing a survivor into the following rescue devices in a water environment:

   a. Double Rescue Hook
   b. Modified Rescue Strop
   c. Rescue Litter/SAR MEDEVAC Litter

TOPIC OUTLINE

A. COMMUNICATION PROCEDURES:

1. Efficient communications keeps pilot, hoist operator, deck crew and swimmer aware of a developing rescue situation and allows rescue platform to provide needed support to swimmer (i.e. deployment of rescue devices).

2. The radio offers an optimal secondary means of communications.

3. ________________ are the primary means of communication between Rescue Swimmer and the rescue platform in a maritime environment.

   a. All crewmembers must be familiar with the meaning of standard hand signals.

   (Turn to Diagram Sheet 4.3-1, page 114)

B. DOUBLE RESCUE HOOK

1. The Double Rescue Hook is the ____________________________.

   a. All other rescue devices can only be used with the Double Rescue Hook.

   b. Load ratings of the Double Rescue Hook (per the NAVAIR 13-1-6.5):

      (1) Large hook, rated at __________ lbs., shall be the only hook to hoist ____________.

      (2) Small hook, rated at __________ lbs., is to be used only for lightweight items such as mail.
(3) The equipment ring, rated at __________ lbs., is used to hoist light equipment and mail.

c. Night-time Illumination

(1) Attach chemlight strap to __________ and attach __________ to strap.

2. Procedures for helo-deployed rescue hook.

<table>
<thead>
<tr>
<th>WARNING</th>
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<tbody>
<tr>
<td>Never touch any rescue devise before it is __________, as doing so may cause electrical shock. Helicopter rotors can build up a significant static electrical charge.</td>
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a. Procedures for hoisting swimmer alone:

(1) Signal for pickup.

(2) Allow hook to __________.

(3) Connect “V”-ring to large hook.

(4) Perform safety check.

(a) __________.

(b) __________.

(5) Signal for “up-hoist”.

b. Procedures for hoisting survivor alone:

(1) Signal for pick-up.

(2) Allow hook to ground.

(3) Connect survivor’s __________ (center of chest) or __________ (right shoulder) to large hook.

(4) Perform __________ to ensure survivor is not entangled in the hoist cable.

(5) Signal for “up-hoist”.

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c. Procedures for hoisting survivor and swimmer simultaneously:

1. Connect the Rescue Swimmer’s _________________ to the survivor’s lifting device.
2. Signal ready for pickup.
3. Allow hook to ground.
4. Connect ________________ of Rescue Swimmer’s harness to large rescue hook.
5. Perform ________________.
6. Signal for up hoist.

**WARNING**
Do not place fingers in or around the _________________ spring due to the possibility of a crushing injury during hoisting operations when the hoist reaches the upper limit switch.

C. **MODIFIED RESCUE STROP**

1. Rescue device used with Double Rescue Hook. The Modified Rescue Strop is a buoyant device with a red waterproof cover designed to accommodate _____ survivor. A webbing strap runs through the cover and has a “V”-ring at both ends for attaching the _________________. Two arm retainer straps are attached _________________.

2. Night-time Illumination

_____ Chemlights are attached to the chemlight strap. Strap is attached to Rescue Strop lower “V”-ring by the crewman.

3. Procedures for use:

**NOTE**
Arm retainer straps shall be in the ____________ position when lowering the Rescue Strop.

a. Signal for pick-up.

b. Allow rescue device to touch water.

c. Approach hoist with survivor in an appropriate carry.

d. Working _______________ the survivor, with the arm retainer straps ____________, the Rescue Swimmer shall pass the _______________ of the strop under one arm, around the back and under the other arm.
e. Connect the Rescue Strop free end lifting “V”-ring to the large hook.

f. Position the Rescue Strop tightly under the survivor’s ____________ and on the upper half of the ____________________________.

WARNING
Arm retainer straps shall always be used when hoisting survivor with the Rescue Strop. This prevents the survivor’s arms from _________________.

g. Pass the arm retainer straps ________ the survivor’s arms, route __________________________ and across the survivor’s chest.

h. Connect the snap-hook arm retainer strap to the “V”-ring arm retainer strap.

i. Pull webbing on the “V”-ring arm retainer strap until the arm retainer straps are secured tightly around the survivor’s arms.

j. If swimmer is to be hoisted, connect swimmer’s lifting __________________________ to large hook.

k. ________________________________.

l. Signal ready to be hoisted.

m. Rescue Swimmer and survivor are hoisted up to the aircraft. After reaching the aircraft, the Rescue Swimmer and crewman shall assist the survivor inside the aircraft.

n. Once the survivor is inside and on the deck of the aircraft, the Rescue Swimmer shall maintain ________________ of the survivor until the crewman gives a thumbs up. A thumbs up indicates to the Rescue Swimmer that the crewman has the survivor in positive control within the aircraft.

D. RESCUE NET


   WARNING
   In order to utilize the net, the ________________ must be locked in place to prevent the net from collapsing on the survivors. Collapsing of net could result in the survivor(s) drowning.

2. Primary used for ________________ rescue.

3. Never send ______________________ victim up alone in rescue net.
4. Flotation for two persons.

5. A “V”-strap is provided for ________________________________.


   Two chemlights are attached to the strap. Chemlight straps are attached to nylon rope __________________________ on both sides of the net opening.

7. Procedures:

   a. Signal for net.

   b. Allow device to ground.

   c. Place Rescue Net opening directly in front of the Rescue Swimmer ___________ disconnecting it from the rescue hook.

   d. Place survivor in a collar/equipment tow and swim into rescue net backwards while positioning the survivor on either side of the net ________________.

   e. Ensure that the survivor’s body is entirely in the net.

   f. Place one arm across the net.

   g. Signal for up hoist.

   h. When net reaches the helicopter, the crewman shall hook up the ______________ from the Rescue Net to the ______________. The crewman shall assist the survivor inside the helicopter.

---

**WARNING**

Survivor shall not attempt to get out of the rescue net until __________________________.

---

**E. RESCUE LITTER/SAR MEDEVAC LITTER**

2. Litter Characteristics:

   a. Both are for use with suspected ______________ victims and __________ survivors.

   b. Both are designed to be used __________ or in water with __________ assemblies.

   c. Rescue Litter requires a flotation kit for over water use. When flotation is installed litter floats with patients head slightly reclined from the vertical.
d. Both have a two piece rescue litter hoisting sling, which are attached to the Double Rescue Hook. Sling is color coded short and long.

e. The SAR MEDEVAC Litter folds in half and can be stored in a backpack and weighs approx. . It can be hoisted or with its own sling, making it especially useful in restricted access situations. Overland, two rescuers can carry the litter between them using the two adjustable carrying harnesses.

b. Night-time illumination.

Two chemlights are attached to each strap. One strap is attached to the of the litter, one to the.

g. Both litters utilize a controlled by the swimmer in the water to control litter deployment and stabilize the litter during hoisting.

(1) 

(2) Three eights inch thick polyethylene, diamond-braided rope.

(3) A weak link is incorporated, designed to break if the trail line becomes entangled.

(4) Gloves and line are deployed together via a shot bag.

3. Securing Survivor to the Rescue Litter:

a. Rescue Litter has straps. They are stowed with four retaining straps.

b. Procedures for securing survivor:

(1) The rescue swimmer shall guide the survivor into the positioned litter by using the collar tow or equipment carry.

(2) Once positioned, the swimmer shall take the top restraint strap from the front of the litter and secure it around the survivor’s chest. The strap is pulled loose from the right side, placed under the arms but over the chest, and attached to the fitting on the left.

(3) Next, working from the chest strap down, secure the rest of the restraint straps.

(4) Once the restraint straps are secured, attach the chest pad over survivor’s arms. The rescue swimmer may encounter some difficulty if survivor has flotation; however,
4. Securing survivor to the SAR MEDEVAC Litter:
   
   a. Litter will need to be assembled by ____________ prior to lowering to swimmer.
   
   b. Litter has integral ____________ and head restraint, four patient restraint straps, one chest flotation pad assembly strap, and one ____________ assembly.
   
   d. Procedure for securing survivor:
      
      (1) The rescue swimmer shall guide the survivor into the positioned litter by using the collar tow or equipment carry.

      (2) Once positioned, the swimmer shall take the top restraint strap from the front of the litter and secure it around the survivor’s chest. The strap is pulled loose from the right side, placed under the arms but over the chest, and attached to the fitting on the left.

      (3) Next, working from the chest strap down, secure the rest of the restraint straps

      (4) Properly adjust foot restraint assembly.

      (5) Once the restraint straps are secured, attach the chest pad over survivor’s arms. The rescue swimmer may encounter some difficulty if survivor has flotation; however, flotation shall not be removed. Instead, remove chest pad from litter and continue with rescue. If practical swimmer will return chest pad back to helicopter when hoisted.

      (6) Secure head restraint assembly if possible. Do not remove survivor’s helmet if ____________ Injury is suspected.

4. General Litter procedures:
   
   a. Signal for litter. ____________ will come out first.

### WARNING
The weight bag shall be deployed so as not to strike Rescue Swimmer or survivor.

b. The ____________ shall deploy the trail line ensuring that it as attached to the litter. The gloves shall be tied on by a slipknot locate just above the weight bag.

### WARNING
The rescue swimmer ____________ wear trail line or authorized rescue swimmer gloves with leather palms in order to prevent rope burns to the hands.
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AND PROCEDURES

c. Put on gloves

d. The Rescue Swimmer shall pull on the trail line gently until the entire line is deployed.

e. Signal ___________ indicating ready for litter.

f. Use trail line to ___________ the litter and pull it into position as it is lowered.

g. Allow rescue device to touch water.

h. ___________ Hoisting slings from rescue hook, placing hoisting slings outside litter. Do not ___________.

i. Position survivor on litter, adhering to warning regarding survivor’s buoyancy and self-righting feature of the litter.

j. Secure survivor using procedures appropriate to the litter.

k. Ready the Rescue Litter hoisting sling and signal the aircraft to _________________.

l. Hook the rescue Litter hoisting sling (both sides) to the large hook.

m. Conduct pre-hoisting safety check, ensuring survivor is securely within litter, litter is attached to large hook, ________________ (aircraft dependant), sling cables are in correct positioning, ________________, and cable is clear and not wrapped ________________.

n. Signal for up-hoist.

NOTE
Extreme care shall be utilized during trail line evolutions in _______________. Cease hoisting immediately if the weighted bag becomes snagged on the bottom. Hoisting when this occurs may cause possible harm to personnel and/or equipment.

p. Swimmer remains in water, taking a slight ___________ on trail line, stabilizing the hoist, and keeping the litter oriented ___________ to the longitudinal axis of the rescue platform. Upon reaching the rescue platform, maneuver survivor aboard per platform specific procedures.

q. When litter is at the aircraft entrance, the swimmer shall use the trail line to maneuver the litter such that the survivor.

NOTE
The confined space in the H60 cabin requires the litter to enter feet first in order for the crewman to properly attend to the survivor.

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PRIMARY RESCUE DEVICES
AND PROCEDURES

r. With the litter and ____________ on board, the crewman shall lower the hoist cable and recover ________________.

F. RESCUE SEAT

1. ____________________________ for sitting.

2. Bright ______ flotation collar for high visibility.

3. Swimmer or survivor must lower the flukes.

4. Two adjustable yellow safety straps with friction adjusters.

5. Used for both ________________ rescue.

   
   a. Chemlights are attached to the rescue hook equipment ring.

7. Procedures for use:
   
   a. Signal for device.

   b. Allow device to ground.

   c. Pull down fluke and have survivor sit on it, facing the rescue seat.

   d. Pass adjustable safety straps under rider’s __________ and around their __________ and secure strap to the v-ring tighten until survivor is secured against flotation collar.

   e. Have survivor wrap arms and legs around flotation collar.

   f. Perform final ____________.

   c. Signal for “up-hoist”.

   NOTE

If the swimmer elects to be hoisted with the survivor, the rescue swimmer shall wear the adjustable safety strap in the same manner as the survivor.
G. NIGHT UTILIZATION OF RESCUE DEVICES.

Normal hook up procedures are used at night. Chemlights are attached as appropriate.

**WARNING**
Due to low visibility at night, the Rescue Swimmer must pay particular attention to ensure all safety straps, harnesses, etc. Are properly installed. Failure to do so could result in __________________ to the survivor/Rescue Swimmer.

H. RESCUE EQUIPMENT INSPECTION.

1. Visual inspection prior to use.
   
   a. Inspect fabric for cuts, deterioration, and ________________.
   
   b. Inspect seams for proper adhesion and stitching.
   
   c. Inspect all hardware for security of ___________________________ and if applicable, ease of operation.
   
   d. Check for sharp edges and projections.
   
   e. _____________ inspection cycle for equipment conducted by maintenance personnel.

**WARNING**
Unauthorized modification to, and deviation from, prescribed life support and survival equipment by individual crewmembers could create unknown safety hazards.