



# Boat Crew Training

## On-shore

## Situations that Causes Crew Fatigue:

- Operating in extreme hot or cold weather conditions
- Eye strain from sea spray or blurred windshield
- Effort of holding on and maintaining balance
- Exposure to noise
- Exposure to sun
- Poor physical conditioning
- Lack of sleep
- Boredom

## Watchful signs that identify fatigue

- Response to normal conversation
- Response in completing routine tasks



## Primary Symptoms of fatigue

- Inability to focus or concentrate
- Mental confusion or judgment error
- Decreased coordination of motor skills (hearing or seeing)
- Increased irritability
- Decreased performance
- Decreased concern for safety

## Preventative Measures:

- Adequate crew rest
- Dress appropriate for weather
- Rotate crews duties
- Provide food and refreshments
- Observe other crew for signs of fatigue

## Personal Requirements

- No physical requirements, but each Crew must demonstrate the ability to successfully do each task with good mobility and endurance to meet perhaps challenging and stressful situations.
- Each is charged with the responsibility to use good judgment & common sense when fulfilling duties.
- Use good judgment in self evaluation and decline prior to the mission if they do not feel capable or are under Doctors orders that would discourage the activity
- If noted that any Crew or Coxswain has a disqualifying physical or mental condition – that person is responsible to bring it to the attention of the Coxswain, FC, or order issuing authority.
- If any Crew or Coxswain is reported unfit, the Coxswain or Sr. officer is responsible to abort the mission. The reason for the disqualification is to be reported through the Chain of Command to the Director who will investigate and make determinations on the next steps

# WHY Would Someone Be De-Certified as Crew or Coxswain

**RISK**

To Yourself

To Other Crew Members

To the Safety of the Mission

## WHO's Decision is it to DE-Certify Someone

Personal

QE

Coxswain

FSO-OP

Any Elected Officer

Order Issuing Authority

Director

## Assessing the RISK

WHO'S JOB IS IT?

Everyone's

WHAT TO DO IF RISK IS HIGH?

For ANY situation that may adversely effect the safety of the mission- the mission is to be ABORTED.

WHO CAN ABORT THE MISSION?

- Coxswain
- Crew Member
- OP Officer
- FC
- VFC

# Crew Fatigue

## Surface Standards for Fatigue

- Good conditions 10 hours in 24 hr. period
- Adverse Conditions 8 hours in 24 hr. period
- AUX = 8 hr day max



## Crew First Aid

Crew Members providing first aid must do the following:

- Evaluate the scene
- Consider – if rescuers are trained and equipped properly
- Protect themselves from injury or infection
- Keep Calm
- Act Quickly
- Call for Assistance 911 or EMS
- Assess overall condition of victim
- Pass information to EMS
- Monitor for shock



## Handling And Transporting Of Injured

Transporting of injured persons is serious and can be expected by boat Crew Members

The Coxswain and Crew's duty is to transport the victim as rapidly as possible while preventing further injury, shock, or unnecessary pain.



## Moving a Patient

- Notify Station so appropriate medical help can be activated
- If possible avoid moving patient until all injuries are protected by properly applied splints, dressings, etc.
- If head/neck injuries are suspected, immobilize before moving
- Seek assistance before moving a patient
- If they are conscious – explain each step in advance
- Move carefully and deliberately with no extra movements than necessary
- Almost all are transported laying down

**The Auxiliary Policy regarding first aid is:**

The policy for rendering first aid, including CPR -

C.G. authorizes crew to render first aid **consistent with their training**



## Define dehydration, symptoms, preventive measures and treatment

The loss of body fluids through urination, sweating or respiration

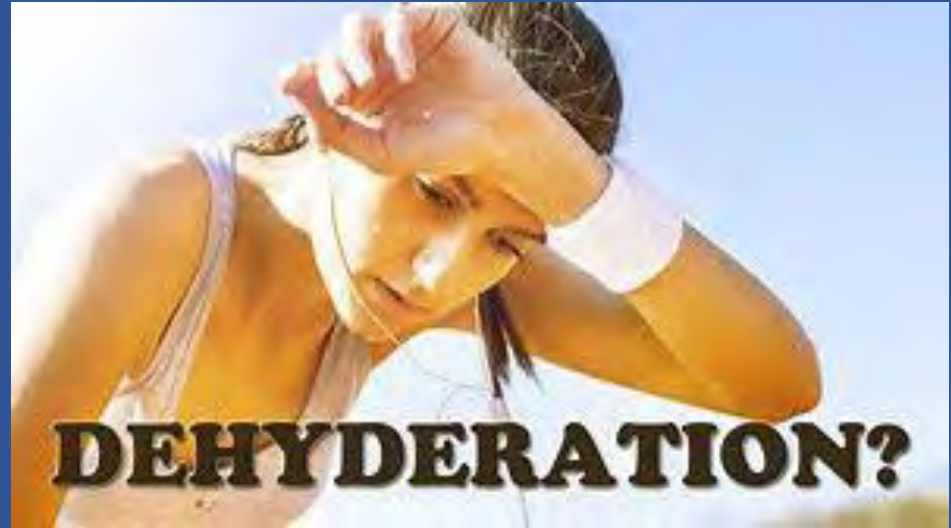
Symptoms:

- Thirst
- Discomfort
- Slow physical movement
- Loss of appetite
- Sleepy
- Temperature
- Dry mouth
- Dizziness
- Headache
- Difficulty in breathing
- Tingling in the arms and legs
- Bluish skin color
- Indistinct speech
- Inability to walk
- Cramping

Prevention/Treatment:

Drink fresh clean water or fruit juice or soup

Drink plenty of water and rotate crew



## **Heat rash, causes, symptoms, preventive measures and treatment:**

Loss of ability to perspire and decreased evaporative cooling of the skin

Pink or red minute lesions, Skin irritation(prickling), Frequent, severe itching

Rotate crew, Time out of the sun

Apply cool wet towels to the affected areas

## **Heat cramps, causes, symptoms, preventive measures and treatment**

Painful contractions caused by excessive salt and water depletion

Victims legs will be drawn up and excessive sweating will occur, victim may grimace and cry out in pain

Prevention is same as other heat related illnesses

Get victim to cool place, lie down, replace fluid loss – no salt, or salty fluids

## **Heat exhaustion, causes, symptoms, preventive measures and treatment**

This is the loss of too much water through perspiration

Person will collapse and sweat profusely, Pale skin, Pounding heart Nausea, headache and acts restless

Provide first aid and *get victim to proper medical care*

## Heat stroke, causes, symptoms, preventive measures and treatment

A complete breakdown of the body's sweating and heat regulating process

Operating in bright sun or hot environment

Skin is red, hot and dry, Headache, Weak /Rapid pulse, Confusion or delirium

Prevention is same as other heat related illnesses

*Most serious of all heat disorders, Get to proper medical care immediately*

## The Symptoms and Treatment for Shock

**What is shock and causes:**

Depressed physiological or mental state

Causes:

- Trauma
- Allergic reactions
- Hypothermia
- Drugs
- Toxins
- Heart Attack
- Emotional



## Symptoms of shock are:

- Restlessness
- Faint
- Thirst
- Nausea
- Weakness
- Anxiousness
- Fright
- Dizziness

## The treatment for shock

- Lay person down
- Elevate feet 8-10 inches
- Keep warm if required





## **The Symptoms and Treatment for Anaphylactic Shock**

### **Anaphylactic shock is:**

A rapid extreme allergic reaction (Acute Allergic Reaction)

### **The cause of Anaphylactic shock include:**

- Eating fish or shellfish
- Eating berries
- Oral drugs
- Insect stings
- Pollen or dust



## The symptoms of Anaphylactic Shock Are:

- Skin - itching, hives, flushing (redness)
- Swelling of lips, tongue, feet, throat, hands
- Wheezing
- Shortness of breath
- Coughing
- Nausea
- Vomiting
- Abdominal cramps
- Diarrhea
- Headache
- Loss of consciousness



## The treatment

Medication to counteract the allergic reaction and treat for shock

If necessary administer CPR

## If CPR is Not Necessary:

- Look for other injuries
- Lie the victim down – position victim on their backs if there are no head/neck injuries raise the legs 8-10” ( do not do this if they have difficulty breathing)
- Keep them warm – if they are not already overheated
- Check for medic alerts
- Get medical history
- Call for help
- Provide specific treatment if advised and trained to do so
- Moisten lips – do not allow patient to eat or drink, never give alcohol
- Handle gently
- Use CPR if indicated and ONLY IF TRAINED

## Types of Bleeding

Arterial - Coming from an artery

**Bright Red**, gushes with spurts and heartbeat

Venous - Coming from a vein

**Dark Red**, comes with a steady flow

Capillary - Coming from a small vein

**Bright Red**, oozes from the wound

## Control Bleeding

### Protect yourself!

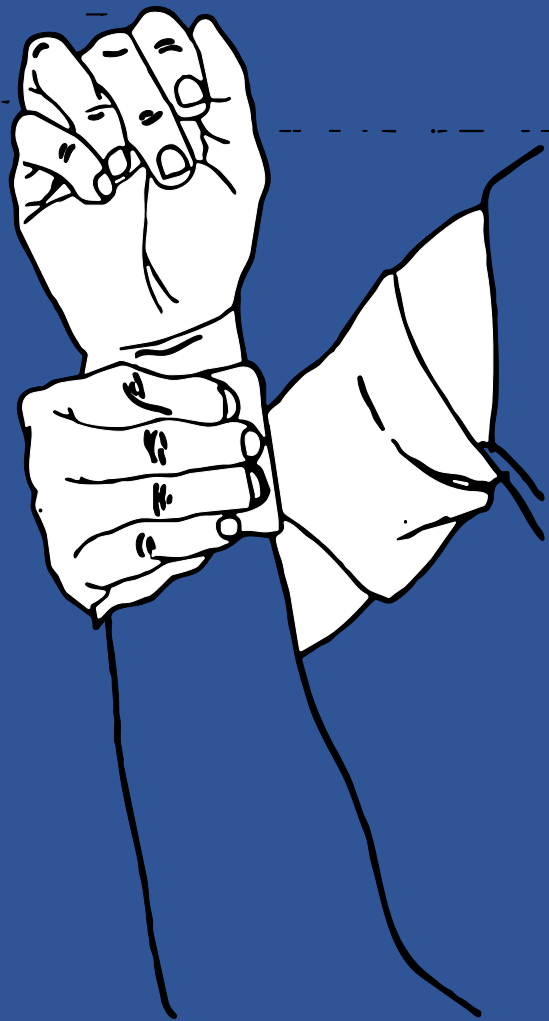
- Wear Rubber Gloves, mask, goggles, aprons
- Wash hands even after using rubber gloves

### Controlling Bleeding is Urgent

- Only 10 pints of blood in the body- death can be quick with an arterial bleed

### Control Bleeding with Direct Pressure Method

- Place gloved palm or sterile pad over wound
- Raise the wound so it is “higher than the heart”

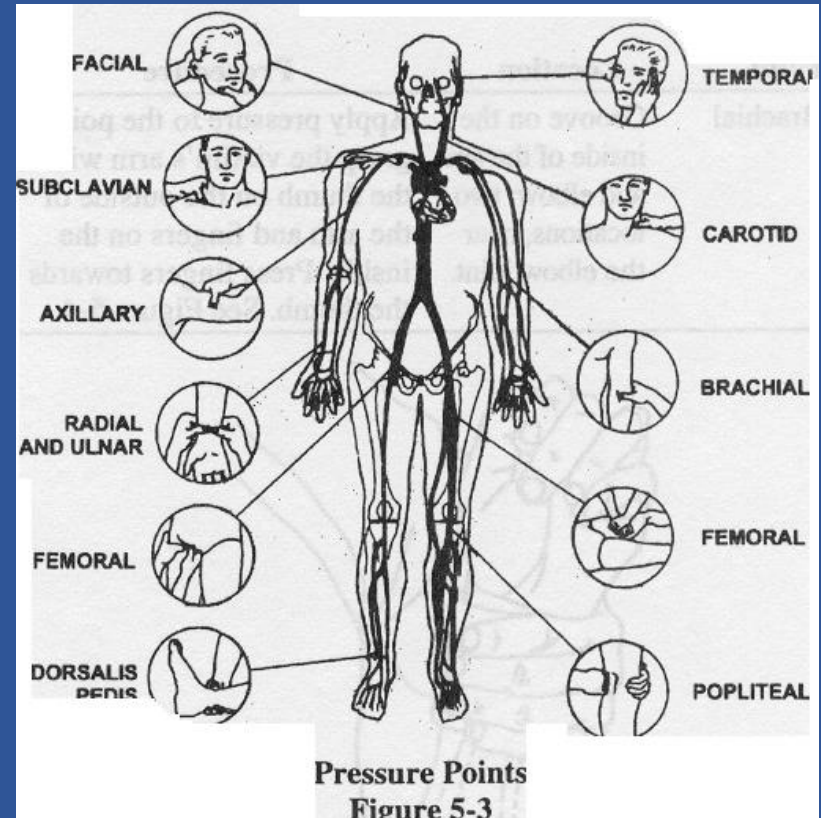


A pressure bandage can replace direct hand pressure. Tie a pad over the wound tying it off with a strip of cloth or bandage.

Apply Direct Pressure  
With Gloved Hand and Sterile Pad

## Identify Pressure Points

- Temporal
- Facial
- Carotid
- Subclavian
- Axillary
- Brachial
- Radial
- Ulnar
- Femoral
- Popliteal
- Dorsalis pedis



# Tourniquet method demonstrated

## Applying a tourniquet with a windlass device

Apply direct pressure to the wound for at least 15 minutes.

Use a tourniquet only when bleeding cannot be stopped and is life threatening.

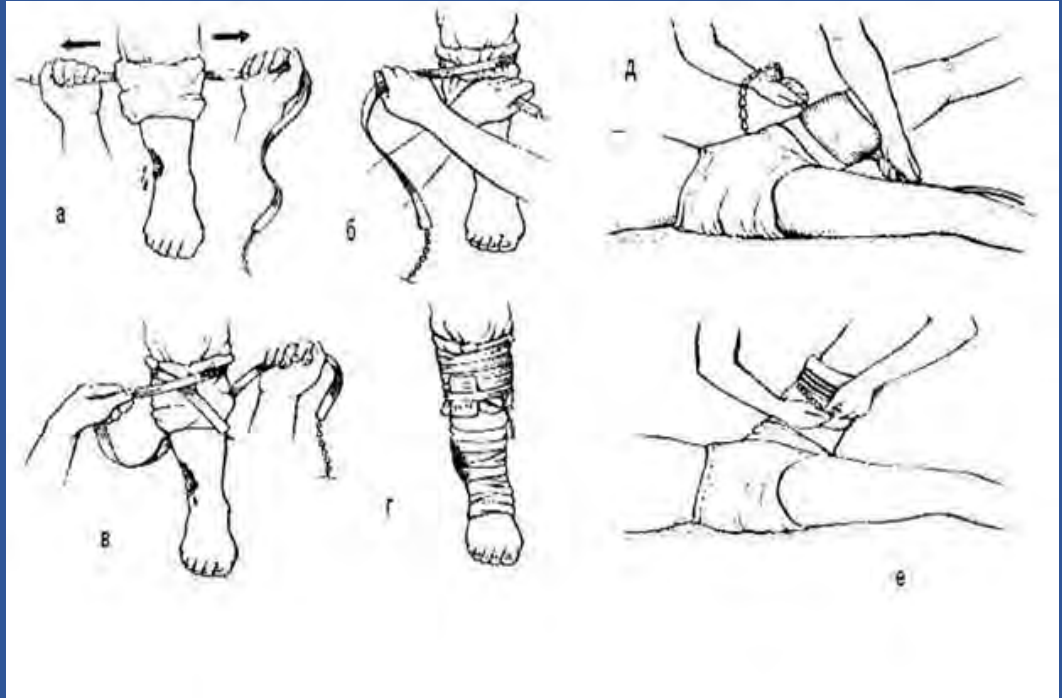
① Place a 2-3" strip of material about 2" from the edge of the wound over a long bone between the wound and the heart.

② Insert a stick or other strong, straight item into the knot to act as a windlass.

③ Turn stick to tighten tourniquet until pulse below the tourniquet cannot be felt.

④ Secure windlass in place with a second piece of material.

Keep tourniquet visible and monitor wound for bleeding. Note time and watch for swelling below tourniquet.



## Tourniquet

IF SEVERE BLEEDING CANNOT BE CONTROLLED BY ANY OTHER METHOD AND VICTIM IS IN DANGER OF BLEEDING TO DEATH USE A TOURNIQUET.

- Use on arms or legs only
- Use a constricting band above the bleed and tighten until blood stops flowing
- Place it 2 -3” above the wound (between the injury & the wound) or just above a joint if the wound is just below it.
- Attach a note on the victim giving the location of the tourniquet and time it was applied
- No note – write a “T” on the forehead of victim & time applied
- Leave tourniquet in plane view
- Only tighten enough to stop the bleeding
  - Do not loosen it once it is applied unless you can establish direct pressure or packing with pressure
- Treat for Shock – obtain immediate help!



## Burns

### Causes of Burns

- Thermal
- Chemical
- Sunburn
- Electric shock
- Radiation

### Classes of Burns:

- 1<sup>st</sup> degree – Mildest Form, the outer layer of skin redness, increased warmth, tender, mild pain
- 2<sup>nd</sup> degree – through the outer layer of skin generally heals easily, produces blisters, redness, and warmth
- 3<sup>rd</sup> degree – Penetrating all layers deep into of skin. Severe pain may be absent due to nerve damage. The color can range from white (lifeless) to charred.

### Basic First Aid Points:

1. Eliminate the source of the burning
2. Do not apply ointments
3. Try to prevent infection

## The symptoms, preventative measures and treatment for sun burn

### Symptoms:

Redness, swelling, or blistering of the skin

### Prevention:

Stay in the shade if possible

Use sunscreen of SPF15 or higher

Wear protective clothing, hat with brim and sunglasses

### Treatment:

Apply cool wet towels to affected area

## First Aid - Burns

### 1<sup>st</sup> & 2<sup>nd</sup> degree burns:

- ✓ Immerse in cool water until pain is relieved
- ✓ Flush a Chemical Burn for at least 20 minutes
- ✓ Cover with clean sterile airtight wrap (plastic food wrap over dressing works well)
- ✓ DO NOT BUST BLISTERS

### 3<sup>rd</sup> Degree Burns

- **Cover to reduce air exposure**
- **Cool the burn**
- **Do not remove clothing unless still smoldering**
- **Treat for Shock (even if not apparent)**
- **Monitor patients airway**
- Assess signs every 5 minutes
- **No food or drink to patient**
- No Ice on burns
- **No ointments**
- Burns to respiratory track are ALWAYS medical emergencies

## Chemical Burns

- Flush Completely for at least 20 minutes
- If it is a powder brush off as much as possible before flushing
- If it is in the eyes flush for 5 minutes, cover, with clean dry dressing – GET HELP
- Treat for Shock



## The symptoms of and Treatment for Hypothermia

### The sign and symptoms for hypothermia

- Cold skin
- Shivering
- Clouded mental capacity
- Breathing slow
- Pulse weak and slow
- Pupils dilated
- Speech slurred



### The treatment for hypothermia

Remove wet clothes and wrap with blankets and move to warm area

### The factors that increases the possibility of hypothermia

- Lowering of general body heat
- Swimming in cold water
- Exposure to cold

## The preventive measures used to increase the chances for cold water survival

- Wear a PFD or survival suit
- Don't swim
- Keep head covered

## The survival time for a person in the water in the local area of operations

40/50 degrees - Unconscious in 30/60 minutes, dead in 1-3 hours

## Identify Boat Crew Survival Equipment

The types of PFD's required to be worn when on patrol:



Type II



Type III



Type IV



Type V Anti-exposure



Dry Suit

## Required survival equipment that must be on PFD

- Signaling mirror
- Whistle
- Personal marker light
- Knife



## Use the Emergency Signaling Mirror

1. Signal mirror located and broken out
2. Sunlight reflected onto a nearby surface (hand, wall or boat)
3. Mirror brought to eye level, target sighted through hole, light spot on the target
4. Used horizon sweep to demonstrate attention-attracting technique



## The Use of Hand Held Distress Flares:

1. Signal broken out and identified whether day or night flare
2. Described proper use of flare according to manufactures instructions
3. Demonstrated the safe use of the flare (without igniting)
4. State the proper disposal of a used flare
5. State conditions when each distress flare would be most effective



## Boat Crew Survival Procedures

The key to survival is to not let it happen in the first place.

- A boat is less likely to capsize in deep open waters
- The chances are greatest chances are operating in heavy seas astern or larger breaking waves abeam.



### Precautions:

- Learn the boat interior – to combat disorientation due to being upside down
- Stow all loose gear
- Know location of survival equipment
- **BE READY TO GRAB A STURDY SUPPORT**

### Escape procedures:

- If trapped under a capsized boat seek the air pocket above.
- Gather crew in the air pocket
- Settle everyone down and focus on an escape plan

Escape procedures – develop Escape Plan

## *Make every effort to escape*

- Boat may sink or you may run out of air

- Check for survival and flotation equipment to take with you
- PFD's should be temporarily removed, tie a line to them to pull through after exit
- Avoid engine if it is still running
- If you are in the cockpit area, swim below the gunwales and surface beside the boat
- Best Swimmers go first trailing a line
- Poor swimmers next – followed by a good swimmer. (poor swimmers have a tendency to panic when left alone)
- The first swimmer taps the hull to notify remaining people they have escaped
- Everyone should stay with the boat or floating debris, climb on to hull if possible.

# *Make every effort to escape*

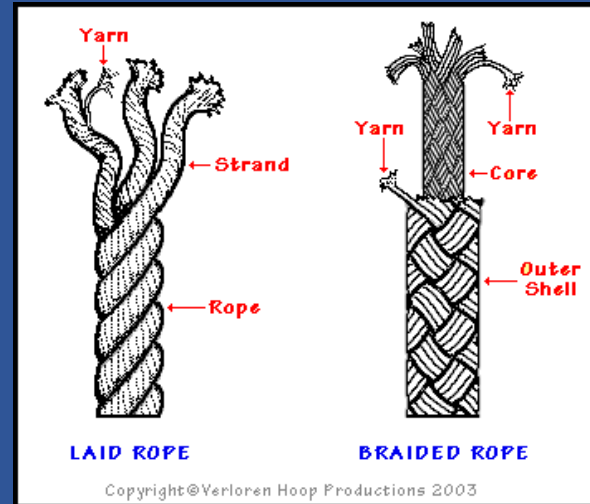
If stuck under the hull:

- Stay in the air pocket
- Shot and tap the hull when rescuers arrive
- Stay calm reserve air, limit physical activity, *try to get out*, reduce the risk of hypothermia

## Identify the Different Parts of a Line and the Hitches used in Line Handling

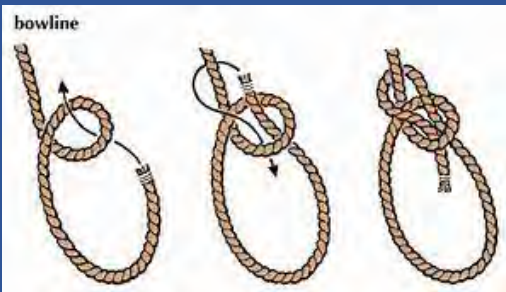
### The different types of line:

- a. Double braided
- b. Three strand (plain laid)

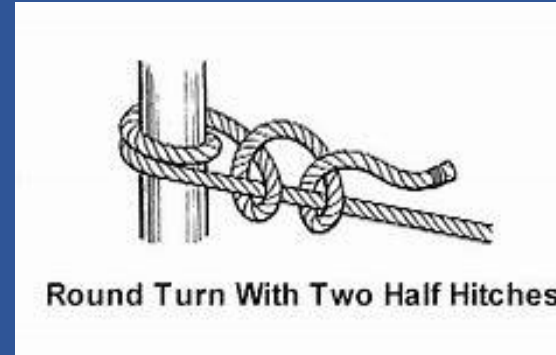


### Line material

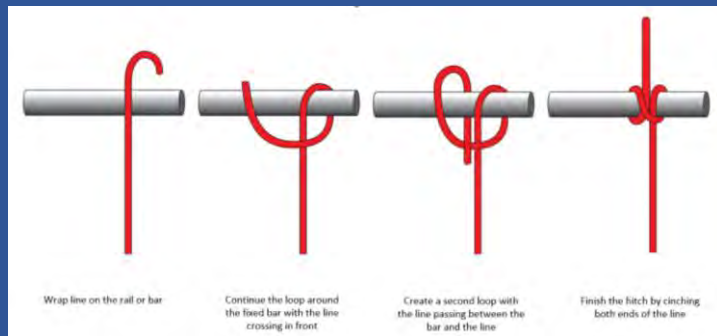
- a. Polypropylene, Synthetic line that floats, lack of strength, chafes easily
- b. Nylon, Synthetic, used for towing, stretches and is elastic(snaps back if broken)
- c. Natural fiber, lower breaking strength, likely to rot if stowed wet



Tie a bowline



Tie a round turn and 2 half hitches



Secure a line using a clove hitch



Tie Two lines together using a Sheet bend

## Identify Common Sound Signals Used by Ships And Boats

A short blast duration is 1 second

A prolonged blast duration is 6 seconds

The danger signal is 5 short blasts

### Accepted Maritime Distress Signals

- a. Red star shells
- b. Fog horn (continuous sounding)
- c. Flames on a vessel
- d. Gun fired at intervals of 1 minute
- e. Orange flag with black ball and square
- f. SOS
- g. MAYDAY by radio
- h. Parachute red flare
- i. Dye marker any color
- j. Code flags (November Charlie)
- k. Square flag and ball
- l. Wave arms
- m. Radio telegraph alarm
- n. EPIRB
- o. Smoke
- p. High intensity light flashing 50.70 times per minute

