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# **Poolside First Aid**

# Preventing Further Injury

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- Provide appropriate first aid treatment after removing the patron from immediate danger
- Remain calm and in control of the situation
- Call for assistance and activate the EMS
- Try to identify the victim and determine what went wrong
- Deal with friends or family of the injured party
- Provide crowd control
- Conduct both a primary and secondary survey of the patron's injuries
- Continue to monitor vital signs

# Preventing Further Injury

## Treating for Shock

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- Shock is a depression of vital bodily functions including reduced blood flow and inadequate oxygen supply that often occurs:
  - After a grave injury or trauma
  - Loss of blood or bodily fluids
  - A period of time without oxygen
  - Extreme stress
- Shock can be life threatening if not treated

# Preventing Further Injury

## Treating for Shock

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- Signs of shock include:
  - Weakness
  - Pale, clammy skin
  - Dilated pupils
  - Faint but rapid pulse
  - Irregular breathing
  - Vomiting
  - Restlessness or agitation
  - Loss of consciousness
  - Sensitivity to changes in ambient temperature
  - Lowering of body core temperature

# Preventing Further Injury

## Treating for Shock

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- Have the victim lie down
- Raise the victim's legs unless spinal injury is suspected
- Raise the victim's head or upper body if experiencing breathing difficulties
- If the victim is already unconscious, but breathing, place him on his side
- Maintain an open airway
- Cover him with a blanket to prevent heat loss, or place a blanket under him if he's laying on a hot pool deck
- Although the victim may be complaining of thirst, do not give fluids including water, unless arrival of the EMTs will be delayed for an extended amount of time

# Rescue Breathing & CPR

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- After making a water rescue, it may be necessary to perform rescue breathing and CPR
- Rescue breathing is given to someone who has stopped breathing
- CPR, or cardiopulmonary resuscitation, combines rescue breathing with external cardiac compressions to provide a mechanical pumping of the heart muscle, to circulate blood and to provide oxygen to the brain
- CPR is used to help save a life when a victim experiences clinical death, when he has stopped breathing and does not have a pulse

# Heimlich Maneuver for Drowning Victims

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- Specified by AHA Guidelines (JAMA 1986 and 1992)
- Controversial: Not all lifeguard and CPR training agencies agree that the Heimlich Maneuver should always be performed on drowning victims
- Water in lungs or airway may be blocking attempts to give rescue breaths
- Resistance caused by water in the lungs may force air into the stomach causing the abdomen to distend and the victim to vomit
- Distended abdomen presses on the diaphragm which interferes with lung expansion
- Rescue breathing may push water deeper into lungs causing further complications

# Heimlich Maneuver for Drowning Victims

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- If the victim is still in shallow water
  - Place the victim in a vertical position
  - Stand behind the victim
  - Perform the Heimlich Maneuver until water stops flowing from the victim's mouth
- If the victim is lying on his back on the ground or deck
  - Turn the victim's head to the side to allow water to drain
  - Straddle the victim
  - Perform the Heimlich Maneuver until water stops flowing from the victim's mouth



# Initiating CPR

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- Begin CPR if indicated (no pulse and no breathing) unless:
  - You would be putting yourself into a dangerous situation
  - There are signs, including rigor mortis, mutilation or decapitation, or tissue decomposition, that the person has been dead for a long time
  - There are written instructions not to resuscitate because of a terminal or fatal illness

# Initiating CPR

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- Once begun, do not stop CPR unless:
  - The victim recovers
  - It is unsafe to continue
  - You are too exhausted or otherwise unable to continue
  - You are relieved by trained medical personnel or a physician tells you to stop
- You may need to interrupt CPR for a short period to:
  - Call for help
  - Move a victim to a new or safer location
  - Check to see if you've been successful in restoring breathing and pulse

# Initiating CPR

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- Check that the environment is safe
- Observe the scene or question witnesses to find out what happened
- Check to see if the person is responsive by shouting "Are you OK?" or by gently shaking the person's shoulder
- If the person does not respond, phone for assistance by dialing 9-1-1
- While supporting the person's head and neck, carefully roll the person as a unit toward you and onto his back
- Put on protective equipment

# Universal Precautions

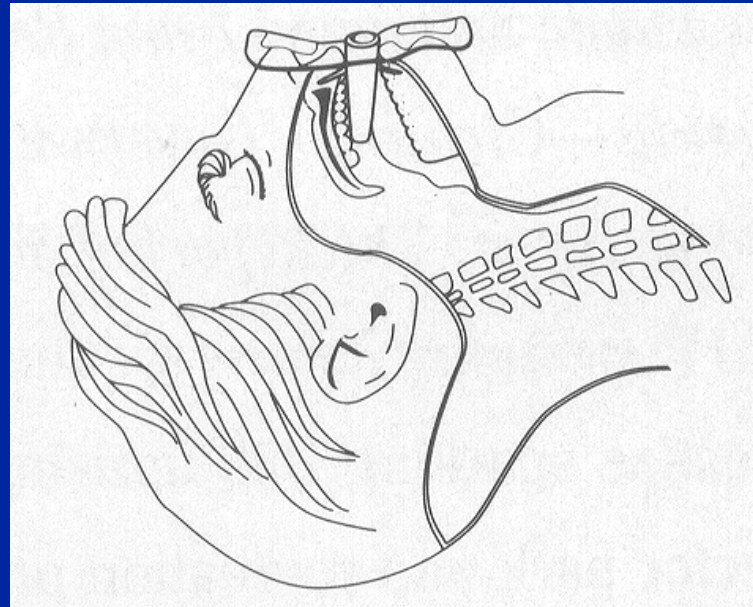
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- Take universal precautions to prevent disease transmission, particularly the spread of hepatitis and human immunodeficiency virus (HIV), during CPR
- Use barriers such as goggles, latex gloves and disposable gowns to protect you when there is a possibility that you may come in to contact with a victim's blood, saliva or other bodily fluids
- Remember, all blood and bodily fluids should be considered infectious

# Universal Precautions

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- Use pocket masks for performing rescue breathing
- Do not make direct mouth-to-mouth contact with a victim



# Rescue Breathing

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- Open the airway.
- If you see material in the victim's mouth, remove it with your finger using a hooking motion.
- Check for breathing.
- If the person is breathing: keep the airway open, monitor breathing and place the person on his side.
- If the person is not breathing: begin rescue breathing.
- Maintain an open airway.
- Pinch the victim's nose closed.
- Make a seal over the victim's mouth with the protective mask or airway barrier.

# Rescue Breathing

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- Give the victim 2 full, slow breaths.
- If the victim's chest does not rise and fall with the breaths, re open the airway, and try again.
- If still not successful at giving the breaths, begin first aid for a choking, unconscious victim.
- Check for a carotid pulse for 5 to 10 seconds
- If the person does not have a pulse and is not breathing: start CPR.
- If the person has a pulse but is not breathing: continue rescue breathing.
- After about 1 minute, check again to see if the person is breathing and has a pulse.

# CPR

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- Open the airway.
- If you see material in the victim's mouth, remove it with your finger.
- Check for breathing.
- If the person is breathing: keep the airway open, monitor breathing and place the person on his side.
- If the person is not breathing: begin rescue breathing.
- Maintain an open airway.
- Pinch the victim's nose closed.
- Make a seal over the victim's mouth with the protective mask.
- Give the victim 2 full, slow breaths.



# CPR

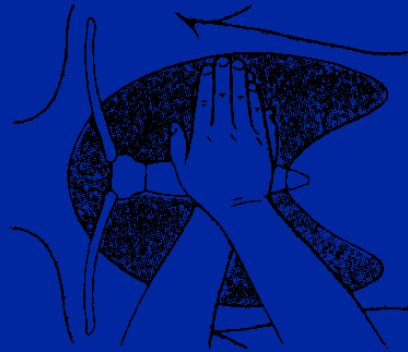
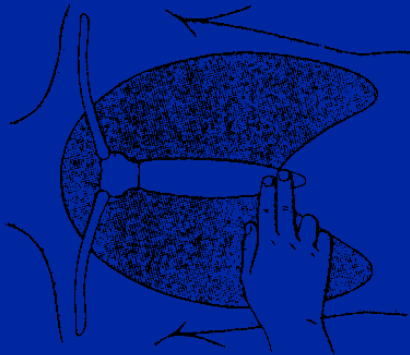
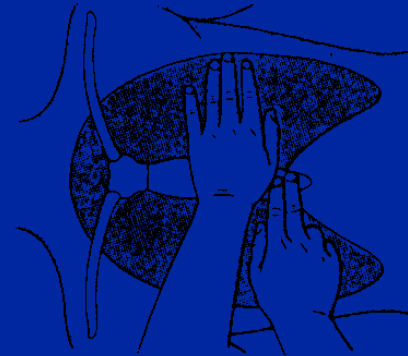
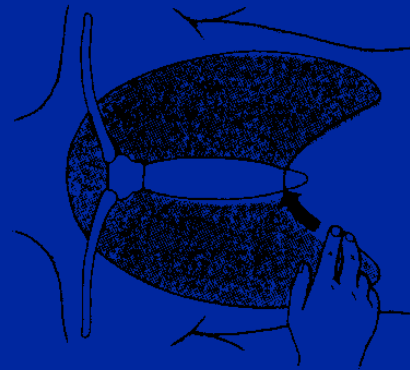
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- If the victim's chest does not rise and fall with the breaths, re open the airway, and try again.
- If still not successful at giving the breaths, begin first aid for a choking, unconscious victim.
- Check for a carotid pulse for 5 to 10 seconds
- If the person has a pulse but is not breathing: continue rescue breathing.
- If the person does not have a pulse and is not breathing: start CPR.
- Find the correct hand position.
- Press down on the sternum 1 and 1/2 to 2 inches to compress the heart between the sternum and spine.

# CPR

Find Correct Hand Position

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# CPR

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- Perform 15 compressions, while counting "one and, two and, three and...15".
- Open the airway and give 2 breaths.
- After 4 compression and breath cycles, stop and check for breaths & pulse.



# CPR

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- If the person is breathing, roll him on his side, keep the airway open and monitor breathing. If the person has a pulse but is not breathing, begin rescue breathing.
- If the person still does not have a pulse and is not breathing, give 2 breaths and continue CPR.
- Continue to check for pulse and breathing every few minutes.

# CPR

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- If a second rescuer is available to assist:
  - Finish the cycle
  - Check for pulse and breathing
  - Start CPR again with one rescuer performing the compressions and one giving the breaths
  - Change to one breath for every 5 compressions

# Choking (Unconscious)

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- Open the airway.
- If you see material in the victim's mouth, remove it with your finger using a hooking motion.
- Check for breathing.
- If the person is breathing: keep the airway open, monitor breathing and place the person on his side.
- If the person is not breathing: begin rescue breathing.
- Maintain an open airway.
- Pinch the victim's nose closed.
- Make a seal over the victim's mouth with the protective mask or airway barrier.

# Choking (Unconscious)

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- Give the victim 2 full, slow breaths.
- If the victim's chest does not rise and fall with the breaths, re open the airway, and try again
- If still not successful at giving the breaths, begin first aid for a choking, unconscious victim.
- Climb on top of the victim and straddle their thighs.
- Place the heel of the palm of one hand on the victim's abdomen, and place your other hand on top.
- Using both hands, press forcefully inward and upward on the victim's abdomen.
- Repeat the thrusts 5 to 10 times.

# Choking (Unconscious)

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- Open the victim's mouth.
- Place your thumb on the victim's tongue, and lift his jaw with your fingers.
- Use a hooking motion to dislodge and remove any visible object.
- Open the airway and attempt to give 2 breaths.
- Repeat the cycle of abdominal thrusts, finger sweeping, and attempting to ventilate.



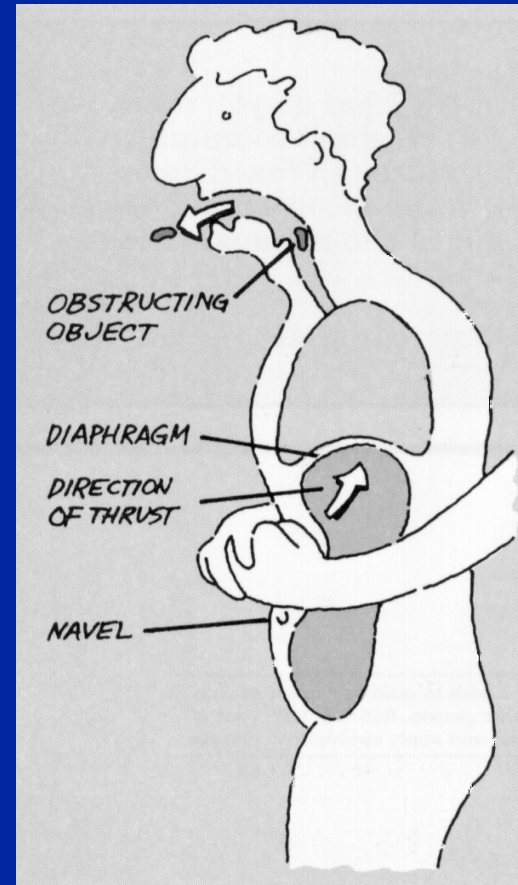
# Choking (Conscious)

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- If able to breathe, stay with the person and encourage them to keep coughing
- Do not interfere with the victim's attempts to clear his airway.
- Assume complete obstruction if:
  - Turning blue
  - Unable to breathe, speak or cough
  - Clutching at their throat
- Ask "Are you choking?"
- Yell for help.

# Choking (Conscious)

- Perform the Heimlich maneuver by standing behind the victim and putting both of your arms around the victim's waist.



# Choking (Conscious)

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- Lower your center of gravity so you don't fall over
- Be ready to support the victim's weight if he should become unconscious.
- Position your fist on the victim's abdomen.
- Press your fist inward and upward into the victim's abdomen.
- Repeat the thrusts.
- If the victim becomes unconscious, help them onto the floor.

# CPR for Children Ages 1-8

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- Reduce ventilation for to half a breath
- Use a smaller airway mask if necessary
- Reduce chest compression depth  $\frac{1}{3}$  to  $\frac{1}{2}$
- Perform chest compressions using the heel of only 1 hand
- Use a ration of 5 compressions to 1 breath
- Count “1 and 2 and 3 and 4 and 5 breathe”
- Increase compression rate to 100 per minute

# CPR for Children Ages 1-8

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- When performing rescue breathing without compressions, use a 1:3 ratio, and count “1 one thousand, 2 one thousand breathe”
- Perform abdominal thrusts with less force
- Visualize an object causing airway obstruction in finger sweeps

## First Aid

# Bleeding

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- Symptoms:
  - Blood
  - Rapid pulse
  - Pain
  - Bruising
- Treatment:
  - Apply direct pressure
  - Elevate bleeding limb above the heart
  - Apply pressure to arterial pressure points

First Aid

# Heat Stroke

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- Symptoms:
  - Hot, red, dry skin
  - Strong, rapid pulse
  - High temperature
  - Life threatening
- Treatment:
  - Quickly cool down body
  - Get the victim out of the heat
  - Immerse in cold water or wrap in wet towels
  - Treat for shock
  - Call 9-1-1

First Aid

# Heat Exhaustion

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- Symptoms:
  - Cool, moist, pale skin
  - Sweating excessively
  - Normal temperature
  - Nausea and vomiting
  - Headache, dizziness
  - Dilated pupils
- Treatment:
  - Have victim lie down in a cool and shady area
  - Stop all activity and rest
  - Replace fluids



## First Aid

# Hypothermia

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- Symptoms:
  - Shivering
  - Low temperature, blue lips and skin
  - Confusion
  - Sleepiness
  - Loss of muscle control
  - Slowed pulse and breathing rate
- Treatment:
  - Warm the body gradually
  - Get out of the cold
  - Change into dry clothing
  - Drink warm fluids

First Aid

# Poisoning

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- Symptoms:
  - Nausea, vomiting, and abdominal pain
  - Dilated or constricted pupils
  - Diarrhea
  - Convulsions
  - Breath odor
  - Unconsciousness
  - Presence of poisonous substance
  - Tissue damage or burns



## First Aid

# Poisoning

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- Treatment:
  - Call 9-1-1 or the Poison Control Center
  - Dilute poison -- have a conscious victim drink a glass of water
  - Induce vomiting (only upon medical advice) by giving 1 tablespoon (children) or 2 tablespoons (adult) of Syrup of Ipecac, then a glass of water
  - Send container, label, substance or vomit to hospital with the victim

## First Aid

# Convulsions / Seizures (Land)

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- Symptoms:
  - Rigid muscles
  - Spasms, flailing, jerky movements
  - Drooling
  - Loss of bladder or bowel control
  - May stop breathing
- Treatment:
  - Protect from further injury
  - Do not try to restrain the victim
  - Do not put anything in the victim's mouth
  - Perform rescue breathing or CPR if necessary

First Aid

# Seizures (Water)

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- Symptoms:
  - May aspirate water and drown due to unprotected airway
  - Rigid muscles
  - Spasms, flailing, jerky movements
  - Drooling
  - Loss of bladder or bowel control
  - May stop breathing

First Aid

# Seizures (Water)

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- Treatment:
  - Use a rescue tube to support victim and keep victim's head above the surface of the water
  - Maintain an open airway
  - Stay away from the pool edges to prevent victim from harming himself
  - After seizure has stopped, remove the victim from the water
  - Place victim on deck and on his side
  - Monitor vital signs
  - Perform rescue breathing if necessary

First Aid

# Fainting

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- Symptoms:
  - Unconsciousness due to reduced blood supply to the brain
  - Dizziness
  - Sudden collapse
  - Pale
  - Sweating and cool skin
  - Tingling sensation
  - Blurred vision

First Aid

# Fainting

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- Treatment:
  - Lay victim down flat on the pool deck
  - Lower victim's head below his heart
  - Loosen tight clothing
  - Do not throw cold water at or on the victim
  - Once conscious, have the victim sip water



## First Aid

# Electrocution

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- Symptoms:
  - Tissue burns
  - Smell of burning flesh
  - Ventricular fibrillation
  - Respiratory arrest
- Treatment:
  - Disconnect source of electrical current
  - Separate victim from source of electricity with an object made of a non conducting material
  - Provide rescue breathing and CPR if necessary
  - Treat burns

## First Aid

# Burns (1st Degree)

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- Symptoms:
  - Redness
  - Swelling
  - Pain
- Treatment:
  - Submerge burned area in cool water till pain subsides
  - Cover with a dry, clean cloth

## First Aid

# Burns (2nd Degree)

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- Symptoms:
  - Redness
  - Swelling
  - Pain
  - Blisters
- Treatment:
  - Submerge in cool water
  - Cover burn area with a moist, clean cloth
  - Treat for shock

## First Aid

# Burns (3rd Degree)

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- Symptoms:
  - Red, black, gray or white charred looking skin
  - Swelling
  - Extreme pain away from burn area
  - Blisters
  - Deep tissue damage
- Treatment:
  - Cover burn area with a dry, clean cloth
  - Keep airway open, monitor breathing and pulse
  - Treat for shock
  - Call 9-1-1

First Aid

# Pool Chemicals on Skin

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- Symptoms:
  - Itching
  - Swelling
  - Pain
  - May cause serious burns and tissue damage
- Treatment:
  - Rinse with fresh water for at least 15 minutes
  - Remove contaminated clothing

## First Aid

# Pool Chemicals in Eyes

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- Symptoms:
  - Pain
  - Burning sensation
  - Inability to see clearly
  - Eyes tearing
- Treatment:
  - Rinse the eyes with fresh water for at least 15 minutes
  - Patch both eyes
  - Transport lying down to the emergency room

First Aid

# Pool Chemicals Inhaled

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- Symptoms:
  - Coughing, wheezing
  - Respiratory distress
  - May stop breathing
- Treatment:
  - Get in fresh air immediately
  - Provide rescue breathing if necessary

## First Aid

# Pool Chemicals Swallowed

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- Symptoms:
  - Nausea, vomiting, and abdominal pain, diarrhea
  - Dilated or constricted pupils
  - Convulsions
  - Breath odor
  - Unconsciousness
  - Presence of poisonous substance
  - Tissue damage or burns
- Treatment:
  - Drink plenty of water (if directed)
  - Do not induce vomiting
  - Treat for poisoning