First Aid Basics

1. CPR (Cardiopulmonary Resuscitation)

Step-by-Step Guide

Cardiopulmonary resuscitation (CPR) is a lifesaving technique used in emergencies when someone's breathing or heartbeat has stopped. Knowing how to perform CPR can significantly increase the chances of survival until professional help arrives.

Adult CPR (Ages 12 and Older)

1. **Check for Responsiveness:**
    - Gently tap the person and shout, "Are you okay?"
    - If there is no response, call for emergency help (911 or local emergency services).
2. **Call for Help:**
    - If you're alone, call emergency services before starting CPR. If someone else is with you, send them to call for help while you begin CPR.
3. **Position the Person:**
    - Place the person on their back on a firm, flat surface.
4. **Open the Airway:**
    - Tilt the head back slightly by placing one hand on the forehead and using the other hand to lift the chin.
5. **Check for Breathing:**
    - Look, listen, and feel for breathing for no more than 10 seconds. If the person is not breathing or is only gasping, proceed to chest compressions.
6. **Perform Chest Compressions:**
    - Place the heel of one hand in the center of the person's chest, and place your other hand on top.
    - Keep your arms straight and use your body weight to compress the chest at least 2 inches deep at a rate of 100 to 120 compressions per minute.
    - Allow the chest to fully recoil between compressions.
7. **Deliver Rescue Breaths (if trained):**
    - After 30 compressions, give 2 rescue breaths. Pinch the nose shut, make a seal over the person's mouth, and give a breath lasting about 1 second, watching for the chest to rise. Repeat for a second breath.

    - Continue the cycle of 30 chest compressions followed by 2 rescue breaths until help arrives or an automated external defibrillator (AED) is available.

8. **Use an AED (if available):**
    - Turn on the AED and follow the audio and visual prompts. Apply the pads as instructed and allow the AED to analyze the heart rhythm. If a shock is advised, ensure no one is touching the person, then press the shock button.

9. **Continue CPR:**
    - Continue CPR until professional help arrives, an AED is ready to use, or the person shows signs of life (such as breathing or movement).

Child and Infant CPR (Under Age 12)

- The steps for child and infant CPR are similar to adult CPR, with some modifications.
- For children (ages 1-11), use one hand for chest compressions, and for infants (under 1 year), use two fingers for chest compressions.
- Always give rescue breaths for infants and children if trained.

When to Use CPR

CPR should be performed in the following situations:

- When a person is unresponsive and not breathing normally.
- When someone collapses suddenly, regardless of age.
- If there are signs of cardiac arrest, such as no pulse or abnormal breathing.

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2. Wound Care

Types of Wounds

Wounds can be classified into several categories, each requiring different management techniques:

1. **Abrasions:**
    - Caused by scraping or rubbing the skin against a rough surface, resulting in superficial damage.
2. **Lacerations:**
    - Deep cuts or tears in the skin, often caused by sharp objects.
3. **Puncture Wounds:**

- Small but deep holes created by pointed objects, such as nails or needles.

4. **Avulsions:**
    - Tissues that are forcibly torn away, often requiring medical attention.
5. **Burns:**
    - Damage to the skin caused by heat, chemicals, electricity, or radiation.

Basic Wound Management Techniques

Effective wound care is essential to promote healing and prevent infection. Here are steps to manage wounds properly:

1. **Wash Your Hands:**
    - Before touching the wound, wash your hands thoroughly with soap and water or use hand sanitizer to reduce the risk of infection.
2. **Control Bleeding:**
    - Apply gentle pressure to the wound using a clean cloth or bandage. Elevate the injured area above the heart if possible.
    - If bleeding does not stop after 10 minutes of direct pressure, seek medical attention.
3. **Clean the Wound:**
    - Rinse the wound under running water for several minutes to remove dirt and debris.
    - Avoid using hydrogen peroxide or alcohol, as these can irritate the tissue.
    - For abrasions, gently clean the area with mild soap and water.
4. **Apply Antibiotic Ointment:**
    - After cleaning, apply a thin layer of antibiotic ointment (like Neosporin) to help prevent infection.
5. **Cover the Wound:**
    - Use a sterile bandage or dressing to cover the wound. This protects it from dirt and bacteria while keeping it moist for optimal healing.
    - Change the dressing daily or whenever it becomes wet or dirty.
6. **Monitor for Infection:**
    - Watch for signs of infection, including increased redness, swelling, warmth, pain, or discharge. If these symptoms occur, seek medical attention.
7. **Get Medical Help if Necessary:**

- For deep lacerations, puncture wounds, or avulsions, or if a foreign object is embedded, seek professional medical care.
- If a tetanus booster is needed (usually every 10 years), consult a healthcare provider.

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3. Burns

Types of Burns

Burns are classified based on their severity and depth:

1. **First-Degree Burns:**
   - Affect only the outer layer of skin (epidermis). Symptoms include redness, minor swelling, and pain. Examples include mild sunburn.
2. **Second-Degree Burns:**
   - Involve the epidermis and part of the dermis. Symptoms include redness, swelling, blisters, and severe pain. These burns may require medical attention.
3. **Third-Degree Burns:**
   - Affect all layers of skin, possibly extending to underlying tissues. The burned area may appear white, charred, or leathery. There may be little or no pain in the affected area due to nerve damage. These burns require immediate medical attention.
4. **Electrical Burns:**
   - Caused by electrical current passing through the body. These can cause severe internal injuries and may not show external signs.
5. **Chemical Burns:**
   - Result from contact with strong acids or alkalis. The severity depends on the chemical and the duration of contact.

First Aid Response

Providing first aid for burns varies depending on the type and severity. Here's how to respond to different burn types:

First-Degree Burns:

- **Cool the Burn:** Hold the burned area under cool (not cold) running water for at least 10 minutes. Alternatively, apply a cool, damp cloth.
- **Apply Moisturizer:** After cooling, apply a soothing lotion or aloe vera gel to help relieve pain and moisturize the skin.

- **Take Pain Relievers:** Over-the-counter pain medications like ibuprofen or acetaminophen can help manage discomfort.

Second-Degree Burns:

- **Cool the Burn:** As with first-degree burns, cool the affected area under cool running water for at least 10 minutes.
- **Do Not Break Blisters:** If blisters form, do not pop them as this increases the risk of infection.
- **Cover the Burn:** Use a sterile, non-stick bandage or dressing to cover the burn and protect it from dirt and bacteria.
- **Seek Medical Attention:** If the burn is larger than 3 inches, located on the face, hands, feet, or over major joints, seek medical care.

Third-Degree Burns:

- **Call for Emergency Help:** These burns require immediate medical attention.
- **Do Not Cool the Burn:** Avoid immersing the burned area in water; this can lead to shock.
- **Cover the Burn:** Use a sterile, dry cloth or dressing to cover the burn. If possible, elevate the area to reduce swelling.
- **Monitor for Shock:** Be aware of signs of shock, such as pale skin, rapid breathing, or weakness, and lay the person down while waiting for emergency services.

Chemical Burns:

- **Flush with Water:** Immediately flush the affected area with copious amounts of water for at least 20 minutes, removing any clothing contaminated with the chemical.
- **Seek Medical Attention:** Get professional help as soon as possible, as chemical burns may require specific treatments.

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4. Allergic Reactions

Recognizing Severe Allergies

Allergic reactions occur when the immune system overreacts to a substance (allergen) that is typically harmless. Common allergens include:

- **Food Allergies:** Such as nuts, shellfish, dairy, and wheat.
- **Insect Stings:** Reactions can occur from bee, wasp, or hornet stings.
- **Medication Allergies:** Reactions to antibiotics, pain relievers, or other medications.

- **Latex Allergies:** Common among healthcare workers and those frequently exposed to latex products.

Signs of an allergic reaction can vary from mild to severe:

Mild Allergic Reactions:

- Itching, hives, or skin rashes
- Sneezing, runny nose, or nasal congestion
- Stomach cramps, nausea, or diarrhea

Severe Allergic Reactions (Anaphylaxis):

Anaphylaxis is a life-threatening reaction that requires immediate medical attention. Signs include:

- Difficulty breathing or wheezing
- Swelling of the face, throat, or tongue
- Rapid or weak pulse
- Dizziness or fainting
- Hives or rash spreading across the body

Responding to Allergic Reactions

Mild Allergic Reactions:

- **Antihistamines:** Over-the-counter antihistamines (like Benadryl) can help relieve mild symptoms such as itching and hives.
- **Avoidance:** Remove the allergen if possible and avoid further exposure.

Severe Allergic Reactions (Anaphylaxis):

- **Call for Emergency Help:** If anaphylaxis is suspected, call emergency services immediately.
- **Use an EpiPen (if available):** If the person has a prescribed epinephrine auto-injector (EpiPen), administer it as soon as symptoms begin. Follow the instructions provided with the device.
    - Inject into the outer thigh and hold for 3 seconds.
    - If symptoms do not improve within 5-15 minutes, a second dose may be administered if available.
- **Monitor the Person:** Keep the individual calm and lying down while waiting for emergency help. Monitor breathing and responsiveness.