

MARCH-PAWS | Medical Trauma Assessment & Treatment Reference Guide

Pre-treatment/Situational Awareness

1. Scene safety — look for continued danger- weapon/smoke/fire/cliff/etc
2. Determine if more than one injured person
3. Determine cause of injury if able
4. Self-protection from body substances — gloves, eye protection
5. Consider what level of help/evacuation is necessary, activate help EARLY as needed. If any life-threatening/MARCH injuries, evacuate urgently.

MARCH | Order of Assessment & Treatments of life-threatening injuries

M = Massive Bleeding | Quickly find and stop life-threatening bleeding

ASSESS: Look and feel for life-threatening bleeding* at site of wound, then also all 4 extremities, junctional sites (neck, armpits, groin), then torso including back.

**Life-threatening:* pulsing bright red blood, clothing soaked through with blood, blood pooling on ground; also possible with any internal chest/abdomen injury.

TREAT: Tourniquet (TQ) if arm/leg; Hemostatic gauze; Apply direct pressure with gauze for 3-5 min without releasing- then use elastic wrap to keep pressure, elevate limb; suture or super glue or staple or butterfly suture for wound closure

→ Place TQ 2" above wound OR high and tight if unclear or can't see wound

→ Convert TQ to pressure dressing in 2hrs if able; do not attempt after 6 hours.

A = Airway | Ask/Look/Listen for a blocked or compromised airway

ASSESS: Ask (if they can respond with normal voice, their airway is currently secure), Look (in mouth for visible objects/blood that obstructing airway), Listen (for snoring, gurgling or high-pitched breathing)

TREAT: Clear airway if visibly blocked (do NOT do a BLIND finger sweep); chin lift/jaw thrust; recovery position*; sit up/lean forward position; NPA ('nose hose')

→ An unconscious person's tongue can relax and slide to the back of the airway, blocking the windpipe (use jaw thrust, recovery position, or NPA).

→ If conscious, allow them to rest in any position that lets them breathe easiest.

→ Severe Allergic Reactions (Anaphylaxis) can cause rapid throat swelling (high-pitched breathing)- treat ASAP with EpiPen (10seconds!) and Benadryl 50mg.

**Recovery position* — laying on side, angled face-down with upper arm and leg bent 90 degrees to prevent them from being fully face-down.

R = Respirations (Breathing) | Look/Listen/Feel for difficulty breathing

ASSESS: Look (for rise and fall of chest, chest wall injuries —broken bones, bruising, entrance/exit wounds), Listen (for rapid, shallow, or difficulty breathing), and Feel (rapid movement chest wall, tender bones, wounds/holes)

TREAT: Any hole in chest/back- cover entrance & exit wounds with chest seal, if very slow/no breathing, give rescue breaths (mouth-to-mouth) every 5 seconds.

C = Circulation | Find/Treat Shock (vital organs are not getting enough bloodflow)

ASSESS: Blood loss, Confusion, Nausea, Thirst, Pulse- Rapid/weak/absent, Skin-Sweaty or cool/clammy/pale/gray.

TREAT: Ensure no more blood loss (M); Lay down/Elevate legs above heart; Drink fluids/electrolytes; keep warm; *EpiPen and Benadryl if Allergic shock.

H = Head & Hypothermia | Identify TBI (traumatic brain injury) and cold/low body temperature (hypothermia)

TBI / **ASSESS:** Unconscious or confused with head injury.

TBI / **TREAT:** Keep head elevated 30° above body; treat/optimize MARCH injuries

HYPOTHERMIA / **ASSESS:** Shivering, wet, confused, blood loss, shock.

HYPOTHERMIA / **TREAT:** Remove wet clothing; put on dry clothes and layers; insulate from ground and rain/wind; winter cap; sleeping bag; space blanket; hand warmers in groin/armpits; warm fluids; ensure no more blood loss (M).

→ Hypothermia is much easier to prevent than to treat, be early and aggressive about preserving body temps and staying warm.

→ Assume any person with serious injury, especially blood loss or shock, has hypothermia, even on hot day.

→ Hypothermia interferes with blood clotting which worsens bleeding.

REMEMBER: Activate necessary level of help/evac as early as possible

PAWS | Treatment after life-threats, treat as indicated/if needed

P = Pain: Assuming no med allergies, can use up to max dose ibuprofen 800mg every 8hrs (2400mg/24hrs) and acetaminophen 1000mg every 8hrs (3000mg/24).

→ NSAIDS (ie ibuprofen, naproxen, aspirin, meloxicam, Advil, Aleve) are processed through the kidneys, which need to be flushed with lots of water. Acetaminophen (Tylenol) is processed through liver. You can combine max dose of any one NSAID with acetaminophen, but not two NSAIDS together.

→ NSAIDS can impair clotting — avoid with Massive bleeding issues.

→ Opioids (ie oxycodone, hydrocodone) worsen breathing & shock, use caution.

A = Antibiotics: Deep/open wounds (broken skin/burns) likely need oral antibiotics

→ Superficial wounds may be treated with triple antibiotic ointment.

→ Signs of infection include: fever, increasing pain, redness, heat, swelling, pus

W = Wounds: Clean and cover — remove debris, irrigate with a lot of filtered water, wash with soap, cover with clean bandage/cloth.

S = Splint: Use stiff splints and padding to minimize movement of broken bones (also prevent movement of the joint above and joint below) or sprained joints.

→ Evaluate PMS (Pulse/Motor/Sensation) of limb before and after splinting.

→ Place c-collar or brace neck if major fall and/or pain/trauma to neck bones.

→ Rigid eye shield/cup to cover penetrating eye injury — do not remove object.