40 YEARS OF WISDOM

Representative cover

For a special pre-press price of $60 (40% off)*

The new **textbook** on **wilderness medicine** written by Dr. Frank Hubbell, the pioneer of this medical discipline and the founder of SOLO, the premier school of its kind in the US

335 pages | 100s of photos, illustrations, charts, and diagrams | a clear, concise writing style | gorgeous layout | designed to ***TEACH***

This is no average, boring, textbook!

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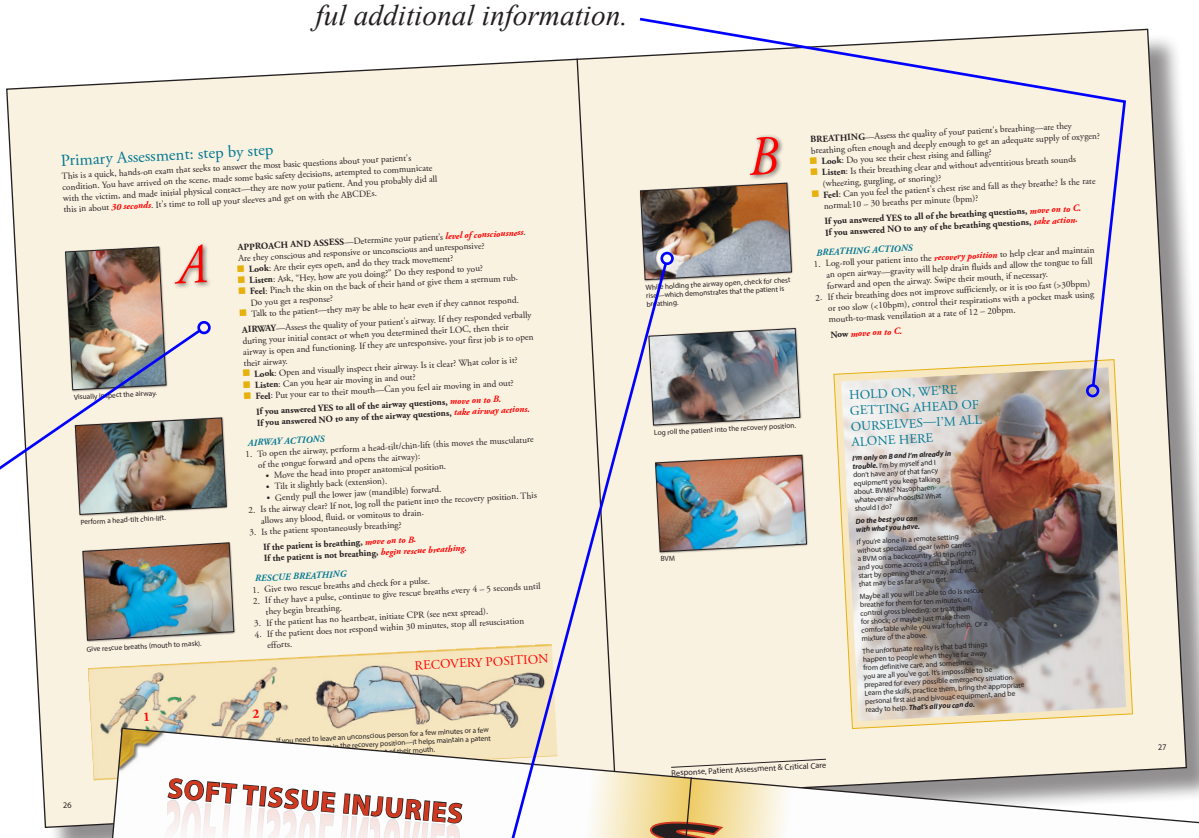
Let's take a sneak peek

Frequent sidebars provide useful additional information.



Primary Assessment: step by step

This is a quick, hands-on exam that seeks to answer the most basic questions about your patient's condition. You have arrived on the scene, made some basic safety decisions, attempted to communicate with the victim, and made initial physical contact—they are now your patient. And you probably did all this in about *30 seconds*. It's time to roll up your sleeves and get on with the ABCDEs.

A

APPROACH AND ASSESS—Determine your patient's *level of consciousness.* Are they conscious and responsive or unconscious and unresponsive?

- **Look**: Are their eyes open, and do they track movement?
- **Listen**: Ask, "Hey, how are you doing?" Do they respond to you?
- **Feel**: Pinch the skin on the back of their hand or give them a sternum rub. Do you get a response?
- Talk to the patient—they may be able to hear even if they cannot respond.

AIRWAY—Assess the quality of your patient's airway. If they responded verbally during your initial contact or when you determined their LOC, then their airway is open and functioning. If they are unresponsive, your first job is to open their airway.

- **Look**: Open and visually inspect their airway. Is it clear? What color is it?
- **Listen**: Can you hear air moving in and out?
- **Feel**: Put your ear to their mouth—Can you feel air moving in and out?

If you answered YES to all of the airway questions, *move on to B.*
If you answered NO to any of the airway questions, *take airway actions.*

Visually inspect the airway

Perform a head-tilt chin-lift.

Give rescue breaths (mouth to mask).

AIRWAY ACTIONS

1. To open the airway, perform a head-tilt/chin-lift (this moves the musculature of the tongue forward and opens the airway):
   - Move the head into proper anatomical position.
   - Tilt it slightly back (extension).
   - Gently pull the lower jaw (mandible) forward.
2. Is the airway clear? If not, log roll the patient into the recovery position. This allows any blood, fluid, or vomitous to drain.
3. Is the patient spontaneously breathing?

If the patient is breathing, *move on to B.*
If the patient is not breathing, *begin rescue breathing.*

RESCUE BREATHING

1. Give two rescue breaths and check for a pulse.
2. If they have a pulse, continue to give rescue breaths every 4 – 5 seconds until they begin breathing.
3. If the patient has no heartbeat, initiate CPR (see next spread).
4. If the patient does not respond within 30 minutes, stop all resuscitation efforts.

RECOVERY POSITION

1 2

...you need to leave an unconscious person for a few minutes or a few ... the recovery position—it helps maintain a patent ... their mouth.

B

BREATHING—Assess the quality of your patient's breathing—are they breathing often enough and deeply enough to get an adequate supply of oxygen?

- **Look**: Do you see their chest rising and falling?
- **Listen**: Is their breathing clear and without adventitious breath sounds (wheezing, gurgling, or snoring)?
- **Feel**: Can you feel the patient's chest rise and fall as they breathe? Is the rate normal:10 – 30 breaths per minute (bpm)?

If you answered YES to all of the breathing questions, *move on to C.*
If you answered NO to any of the breathing questions, *take action.*

While holding the airway open, check for chest rise—which demonstrates that the patient is breathing.

Log roll the patient into the recovery position.

BVM

BREATHING ACTIONS

1. Log-roll your patient into the *recovery position* to help clear and maintain an open airway—gravity will help drain fluids and allow the tongue to fall forward and open the airway. Swipe their mouth, if necessary.
2. If their breathing does not improve sufficiently, or it is too fast (>30bpm) or too slow (<10bpm), control their respirations with a pocket mask using mouth-to-mask ventilation at a rate of 12 – 20bpm.

Now *move on to C.*

HOLD ON, WE'RE GETTING AHEAD OF OURSELVES—I'M ALL ALONE HERE

I'm only on B and I'm already in trouble. I'm by myself and I don't have any of that fancy equipment you keep talking about. BVMS? Nasopharyn- whatever-airwhoozits? What should I do?

Do the best you can with what you have.

If you're alone in a remote setting without specialized gear (who carries a BVM on a backcountry 30 mile ride?) and you come across a critical patient, start by opening their airway, and see what may be as far as you get.

Maybe all you will be able to do is rescue breathe for them for ten minutes, or control gross bleeding, or treat them for shock, or maybe just make them comfortable while you wait for help. Or a mixture of the above.

The unfortunate reality is that bad things happen to people when they're far away from definitive care, and sometimes you are all you've got. It's impossible to be prepared for every possible emergency situation. Learn the skills, practice them, bring the appropriate personal first aid and bivouac equipment, and be ready to help. ***That's all you can do.***

SOFT TISSUE INJURIES

Controlling bleeding

1. Direct Pressure: Apply pressure directly over the wound and compress to stop the bleeding.
2. Pressure Dressing: To maintain constant pressure, place something absorbent over the wound, about ½ inch thick, and then wrap it with an elastic bandage.
3. Digital Pressure: The rare spurting arterial bleeder may require digital pressure by placing a gloved finger directly into a wound to compress the lacerated artery and stem the flow of blood. Once bleeding has been controlled for 20 – 30 minutes, stop applying pressure so the wound can be inspected and cleaned.
4. Tourniquet: The last resort—but can be life saving.

Long-term wound care

WOUND INSPECTION, CLEANING & BANDAGING

1. **Wound inspection and cleaning**—Once bleeding has been controlled for 20 – 30 minutes:
   - Remove dressings and closely inspect the wound.
   - Check circulation, sensation, and motion (CSM) distal to the injury.
   - Debride, removing any foreign material in the wound like sticks, grass, etc.
   - Clean around the wound with soap and water or with a dilute solution of iodine.
   - Clean the wound by irrigation with a forceful flow of sterile water or a dilute solution of iodine by using an irrigation syringe or water bottle.
2. **Dressing and bandaging**—Cover the wound with dry sterile dressings, and keep the area clean and dry.
   - Bandage the sterile dressings in place.
   - Change the dressings every 12 hours, and examine the wound for signs of infection.
   - If the wound is dirty, or you are unable to keep it clean and dry, cover the wound with a dressing soaked with a dilute solution of iodine (less than 2% strength), and change it every 6 hours.
   - Protect from further injury, freezing, and from contamination by proper bandaging.
   - If there are impaired CSMs distal to the injury, do all of the above, then splint (if applicable) and evacuate.

WOUND CARE *DON'TS*

- Don't tightly close a wound with butterfly bandages or suturing.
- Don't fill the wound with an antibiotic ointment.
- Don't leave a pressure dressing in place for more than 30 minutes.
- Don't allow the wound to freeze.
- Don't be afraid of causing a little pain to properly clean a wound.

SIGNS AND TREATMENT OF A SKIN INFECTION

1. **Early**—localized to the skin and wound area
   - Red (rubor)—due to dilated capillary beds, increased blood flow to the area.
   - Warm (calor)—due to the increased blood flow.
   - Swollen (tumor)—due to increased blood flow.
   - Tender (dolor)—due to swelling.
2. **Late**—severe and potentially life-threatening
   - Pus formation—a collection of white blood cells, may be draining from the wound.
   - Streaking up the extremity—due to infection traveling up lymphatics.
   - Swollen lymph nodes—infection has reached the lymph nodes.
   - Fever and chills—a sign that the infection is spreading systemically.
3. **Treatment of skin infections**
   - If possible soak in hot water with Epsom salt or dilute iodine solution.
   - Apply moist heat packs.
   - If the wound is closed, but swollen, gently open so it can drain.
   - The patient may need to be on an antibiotic, if lymphangitis or lymphadenopathy occur. If so, EVACUATE!

Specific injuries

CONTUSIONS

- Rest, Ice, Compression, and Elevation (RICE), to limit swelling.
- Protect and watch injury closely in cold weather as it will freeze quicker than undamaged tissue.

ABRASIONS

- Clean, debride, and wash thoroughly with soap and water.

LACERATIONS

- May bleed profusely or require pressure dressing.
- Control bleeding and maintain homostasis for 20 – 30 minutes.
- Cleanse well with copious irrigation.
- To treat a large gaping wound, control bleeding, cleanse with irrigation as usual, approximate the edges, but do not close tightly.

AVULSIONS

- Control bleeding.
- Rinse under flap with sterile water irrigation; place flap in proper anatomical position and bandage.

SECTION SUMMARY

AMPUTATIONS

- Wrap the amputated part in a moist sterile dressing and seal in a plastic bag.
- Immerse the bag in ice water and evacuate both the patient and the part to the hospital.

PUNCTURES

- Gently irrate to cause some bleeding to flush out wound.
- Monitor for infection. This is the most likely wound to become infected.

IMPALED OBJECTS

- Use common sense; if easily removed, remove it.
- Impaled objects **may be removed** if it is in an extremity, if it is metal in a cold environment, if it is too large or hard to cut off, or if it is in the cheek of the face (or the other one—buttocks).
- An impaled object **should be bandaged in place** if it is in the skull, face, or neck, in the chest (possibly penetrating the lungs), in the abdomen (possibly penetrating the abdominal cavity and damaging organs).

BURNS

Get the heat out

- Remove clothing over and around the burn site; cool with cold water for at least 15 minutes.

Burns by degree

- **Superficial:** First and Second degree burns
  - The area of the burn will turn red and may form blisters, but the patient has full sensation.
  - Cold-soak the burn with water for 15 minutes.
  - Protect the burn with a dry, sterile dressing.
  - Evacuate if the burn area is more than the size of the patient's palm.
  - If the burn area is large and painful, cover with moist dressings for comfort during evacuation.
- **Deep:** Third degree burns
  - The area of the burn may be red, white, charred, and blistered, and the patient will have no sensation—the burn is deep enough to destroy the nerves.
  - All deep burns must be evacuated.
  - Cold-soak the burn with water for 15 minutes.
  - Cover with a moist dressing and waterproof bandage to prevent evaporation.
  - Hydrate—force fluids as burns can cause severe dehydration.

BLISTERS

- Use sterile techniques; deflate the blister; then protect with moleskin, antibiotic ointment, and tape.

Bandaging skills

MATERIALS

Dressing: Sterile material put directly onto a wound site.

Bandage: Piece of material that holds the dressings in place.

Cravat: A large triangular piece of material that is used in very clever ways to hold dressings.

Elastic bandage: Elastic material 2" – 6" wide that can be used to hold dressings and also to apply compression.

SPECIFIC BANDAGES

Scalp bandage: To hold a dressing on the scalp (or to look cool).

Temporal/Jaw: To hold a dressing on the side of the head, to support the jaw.

Shoulder: To hold a dressing on the shoulder or upper arm and maintain range of motion.

Arm sling: To support the shoulder, upper arm, elbow, forearm, or wrist.

Hip: To hold a dressing on the hip or buttocks and maintain full range of motion of the hip.

Knee: To hold a dressing on the knee and maintain full range of motion (or to pad the knees if you plan on spending a lot of time kneeling).

Sprained ankle: To support a sprained ankle, or for an ankle hitch for a traction splint.

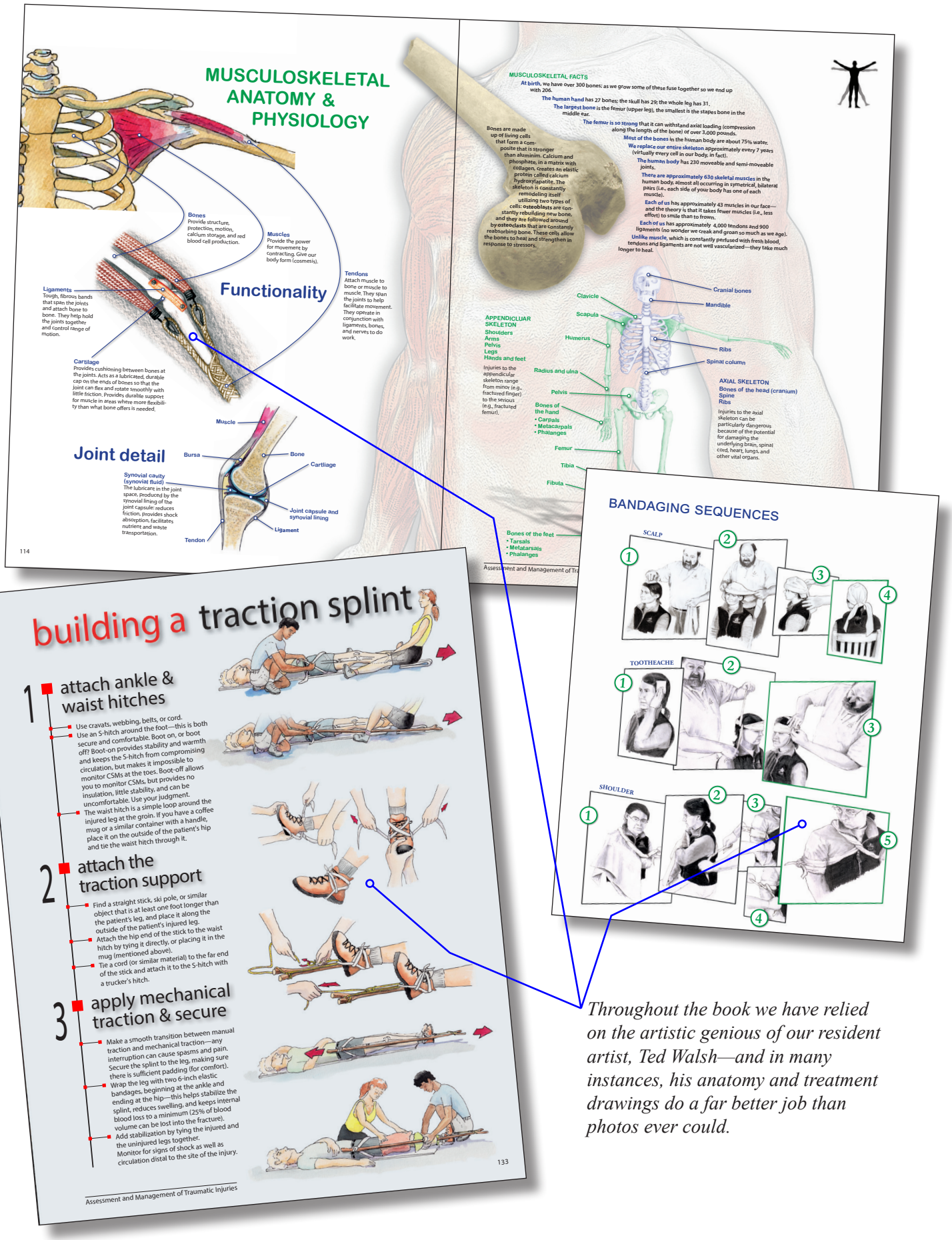
We've gone to great pains to make the images in this book realistic—it was hard to find a volunteer for this one.

Straightforward: no endless paragraphs, just concise text—the words you need, where you need them.

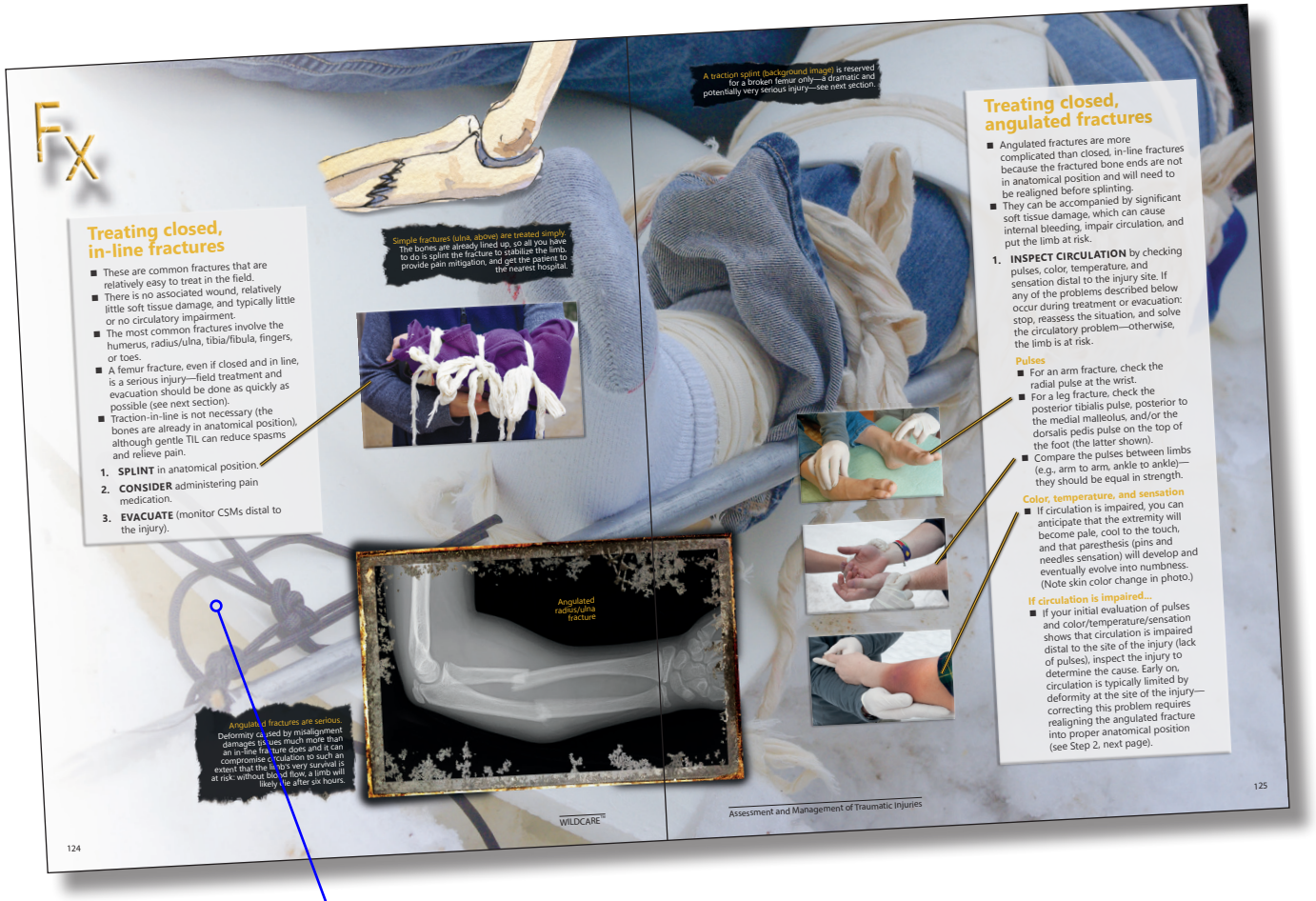
Crisp images that clearly show appropriate technique.

Section summaries put all the crucial stuff in one place.

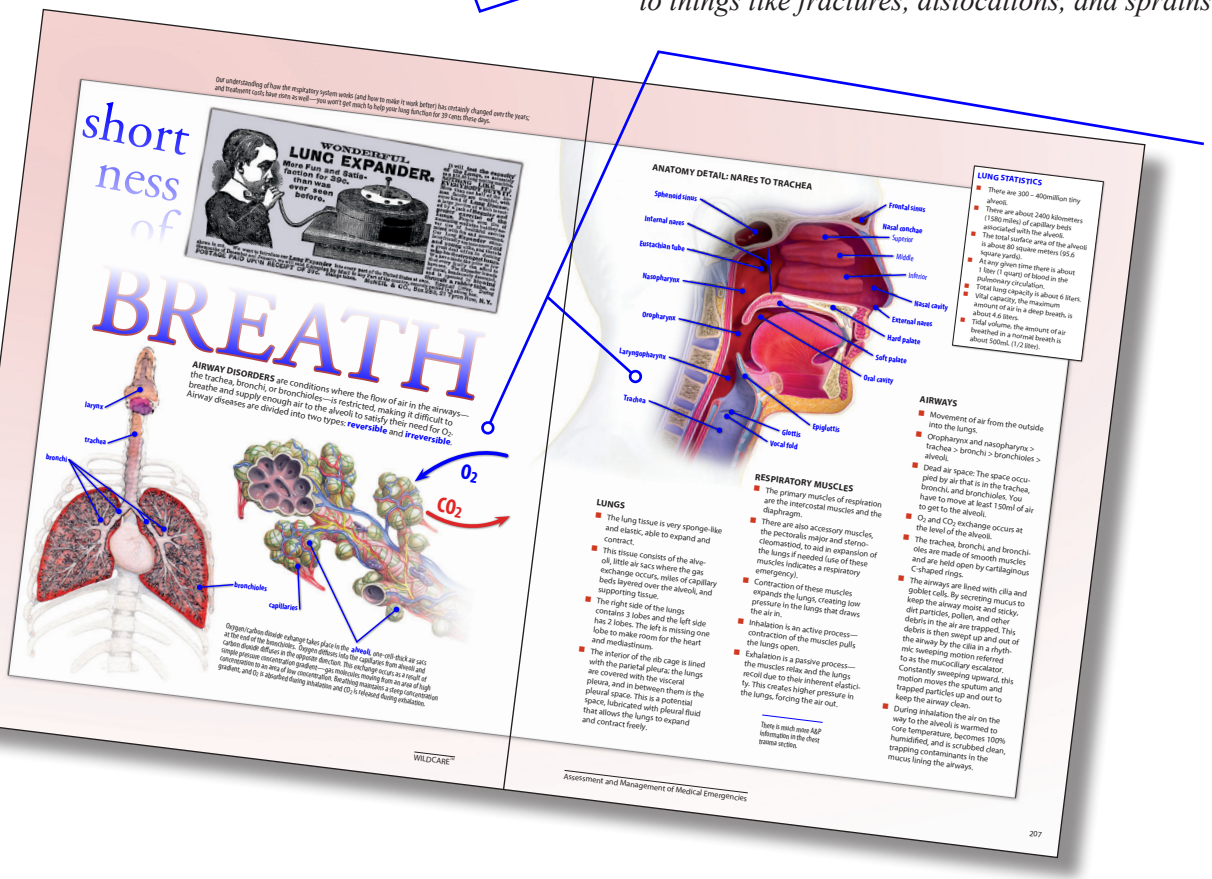
We've gone to great pains (ouch) to make the book visually fasinating as well as informative.



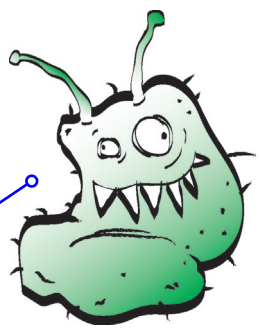
Throughout the book we have relied on the artistic genious of our resident artist, Ted Walsh—and in many instances, his anatomy and treatment drawings do a far better job than photos ever could.



We take subhects like trauma really seriously, devoting 125 pages to things like fractures, dislocations, and sprains.

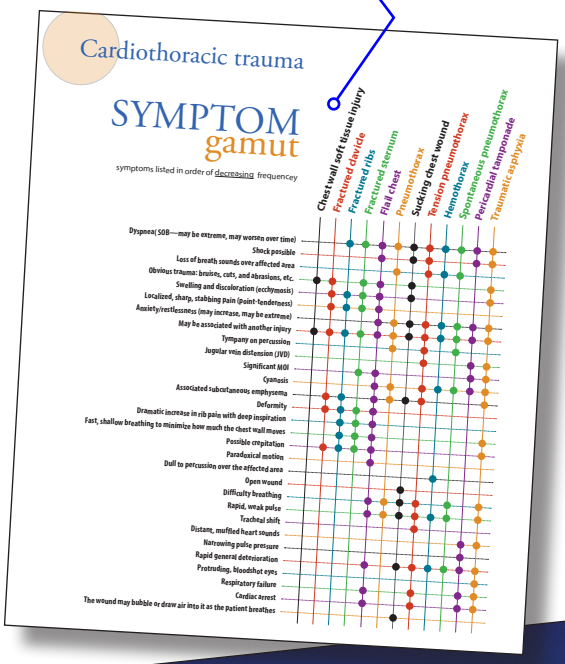


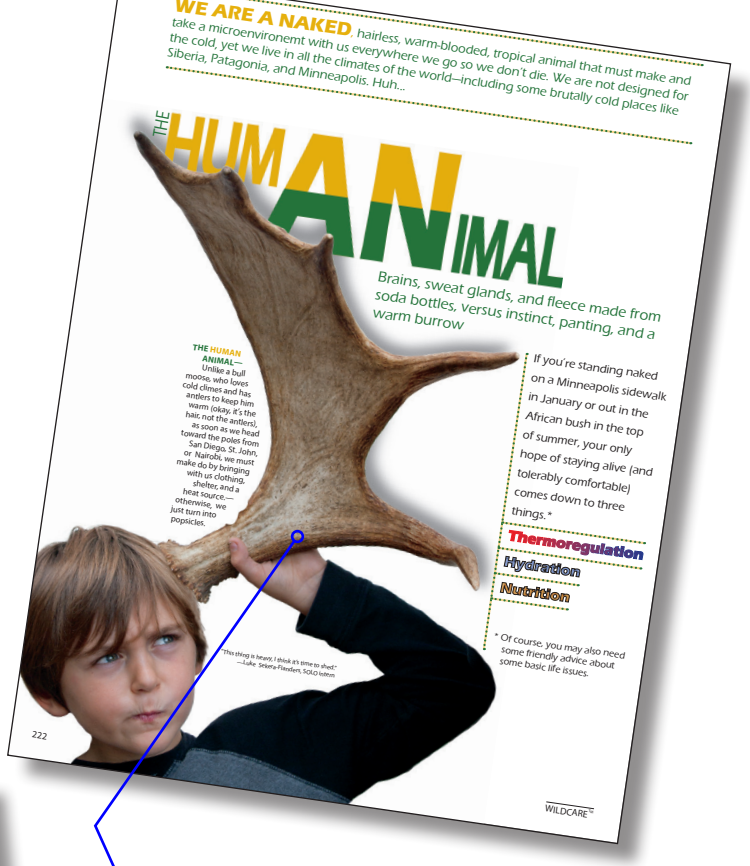
Medical emergencies, those sometimes-mysterious problems are covered in detail, with lots anatomy and physiology information to help make the underlying issues clear.



Our powerful, electron-based imagination microscopes allow us to bring you images so detailed that you'll never again wonder what things like the common cold might look like.

Every technical book needs charts and graphs—ours are really good.





Most textbooks are stuffy affairs that take themselves too seriously; we wanted out book to be a bit whimsical—even making things like thermoregulation fun and interesting

The environmental emergencies section is lavishly illustrated and comprehensive; while, in the back of the book we cover some critical side-topics, such as navigation and disaster medicine.

READY?

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