EMT: Assessment, Vital Signs and Special Patients

Measuring vital signs correctly, mental status traps, arrest with equipment and devices, pregnancy, infants, single-ventricle children and patients with functional needs

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VITAL SIGNS: TECHNIQUE AND TRAPS

SIGN	DO	TRAP
Respirations	Count unannounced, fingers still on the wrist, 30–60 s; note depth and effort	Announcing it slows breathing; 15 s counts read low
Irregular pulse	Count the apical rate for a full minute; report apical and radial rates	Radial count misses weak beats (pulse deficit); never average
Blood pressure	Bladder width about 40% of arm circumference, length 80–100%	Too small reads high; too large reads low; automatic cuffs err in fast or irregular rhythms
Pulse location	Measure the BP (en route if needed) and trend it	Radial pulse does not prove SBP 80 or more
Capillary refill (adult)	Weigh it with mental status, pulses, BP and trunk skin	Slower with age and cold skin; a weak test alone
Pallor, dark skin	Inner eyelids, lips and mouth, palms	Nail beds least accurate; do not compare with your own skin

Baseline vitals and reassessment intervals: see EMS Patient Assessment. Stable patients get at least two sets.

MENTAL STATUS TRAPS

- Looks psychogenic (hand falls beside the face, eyes resist opening): still manage as unresponsive. Airway, glucose, full assessment, transport; document findings, not labels
- Sternal rub is discouraged. No ammonia capsules or pain to prove a point
- Cervical cord injury: limbs and chest may not feel pain. Use a central stimulus such as supraorbital pressure; record limb findings as spinal
- Dementia: words may not report pain. New guarding, shouting or withdrawal of one limb is pain until proven otherwise; explain each step, then examine it
- A sudden behavior change in dementia calls for a physical exam to look for a new problem such as pain, not an assumption that it is the disease

ARREST WITH EQUIPMENT AND DEVICES

SITUATION	DO
Arrest in a car seat	Quick pull to the ground, supine, head supported; seat compressions are too shallow; medical collapse needs no packaging first
Athlete collapse, no contact	Sudden cardiac arrest until proven otherwise; gasps are not breathing. Compress at once, over pads if needed, while the trainer cuts the jersey and opens the pads; AED on bare skin
Helmet and pads	Removed together as a unit by those who know them; face mask alone for airway access
ICD shocks, patient awake with pulse	No CPR. AED ready, ALS, transport; several shocks in a short time is an emergency
Wearable vest alarm, pulseless	Siren plus "do not touch" prompts: keep everyone clear, let it shock. Only the patient presses the buttons. CPR once no warning sounds

Compression quality and AED pad distance from an implanted device: see BLS, High-Quality CPR and Choking.

PREGNANCY AND DELIVERY

- Asthma in pregnancy: oxygen to 94–98%, aiming high (keep above 95% if possible). SpO_2 93% is treated now. Help her use her own inhaler; it is safe for the fetus
- Placenta: comes by itself, often in 5–15 minutes. Never pull the cord
- Uterine inversion: after cord traction, pain, heavy bleeding, shock, no fundus in the abdomen, red mass at the vagina. Stop traction, leave the placenta attached, high-flow oxygen, shock care, rapid transport, medical direction. No fundal massage, no peeling, no replacement

Postpartum hemorrhage and other delivery complications: see Obstetric Emergencies.

INFANTS AND CHILDREN WITH HEART DISEASE

FINDING	MEANING
Febrile infant cries harder when held or rocked, quiets when left still	Paradoxical irritability: suggests meningitis; high priority, mask per protocol, gentle handling
Supple neck, under 12 months	Does not exclude meningitis
Child BP normal, HR fast, refill slow	Compensated shock; hypotension is late and ominous
Single ventricle (Glenn), SpO_2 well below care-plan baseline, grunting, mottled	Respiratory failure: give oxygen, closest appropriate ED; the cardiac center advises by phone

SAFETY Judge a single-ventricle child against her own baseline, not 94%. Minimal oxygen applies to newborns before their first operation, not after a Glenn.

FUNCTIONAL NEEDS AND BIAS

- Functional needs: never shorten the exam or care; change how it is done. Family knows the baseline
- Spastic contractures: never straighten. Support limbs as found, pad the gaps, belts over the padding; raise the head if breathing is hard. Children with CP fracture easily
- Frequent caller: every call is new. Full assessment, vitals, 12-lead per protocol; history is noted, never a substitute
- Refusal only after a full assessment, capacity check and documented risks; unresponsive patients cannot refuse

EXAM TIP Exams: the reassuring detail (normal vitals, "she does this", "feels the same", "no pain") is usually the trap. Assess anyway.

Sources (30) are listed with links at medicbasics.com/sheets/emt-assessment-vitals-special.html. For education and exam preparation only. Not medical advice; follow current guidelines and your institution's protocols. Medic Basics is an independent study aid not affiliated with any certifying body.