



Non-Accidental Trauma (NAT) Pathway

Presence of Concerning HISTORY for NAT

- Injury explanation is inconsistent with likely injury mechanism or developmental capabilities
- Explanation of injury is unknown or denied, changes with time or among witnesses
- Delay in seeking care, domestic violence history, premature or medically complex child
- Previous CFS involvement or previous unexplained minor (sentinel) injury
- <6 months old without explanation for irritability, respiratory distress, vomiting, altered mental status, seizures, bruises or other injury – possible abusive head trauma (AHT) eg intracranial hemorrhage (ICH)

Presence of Concerning INJURY for NAT

BRUISES

“TEN-4 FACESp”

- Bruises on Torso (chest, abdomen, buttocks, genitalia), Ears, Neck
- Above bruise in a child <4 years and ANY bruise in infant ≤4 months
- Bruises on Frenulum, Angle of jaw, Cheek, Eyelids, Sclera, Patterned bruises

BURNS/BITES

- Patterned burns
- Burns without splash marks, with sharp lines of demarcation
- Burns with suspicious areas of sparing
- Bite size not consistent with history

FRACTURES

- Ribs, especially posterior
- Classic metaphyseal lesion
- Unusual locations: scapular, sternal, vertebral fractures
- Midshaft humeral or femoral fracture in infant/toddler
- Multiple or healing fractures
- Any fracture in non-ambulatory infant without adequate history

RECOMMENDED INITIAL EVALUATION:

Laboratory testing

- If **bruises** (unless HIGHLY c/w abuse): CBC/platelets, PT/INR/PTT, vWF antigen/activity, factors VIII & IX activity levels; consider CMP, lipase if any abdominal bruising
- If **AHT / intracranial hemorrhage**: (unless witnessed abuse): CBC/platelets, PT/INR/PTT, factors VIII & IX activity levels; if neurologic compromise also send D-dimer, fibrinogen
- If **fractures**: CMP, Phos, 25-OH vitamin D, PTH; consider genetic testing
- If **altered mental status**: urine tox
- If concerns for **abdominal trauma**: CMP, UA (genitourinary trauma), lipase

Radiologic testing

- **Skeletal survey** if <2 yo with any injury, also obtain skeletal survey of any household contact <2 yo; consider in 2-3 yo, especially if developmental delays. Must repeat skeletal survey in 2 weeks!
- **Head CT** (non contrast) if <6 mo with any injury; consider if 6-12 mo especially if face/head bruising, neurologic symptoms/signs, skull fracture
- **Abdominal CT** (IV contrast) if AST or ALT >80, lipase >100, abdominal bruising, distension or pain

Consultations

- Montana Child & Family Services Centralized Intake (866-820-5437)
- Ophthalmology examination if radiologic evidence of AHT