**Fever**

**Definition**:

* >2 months - > 38.0 (100.4F)
* Older kids > 38.5

*Pros*:

* Enhances leukocyte mobility and activity, helps T-lymphocytes and interferon
* Inhibits bacterial and viral function

*Cons*:

* Hypermetabolic state, increased insensible fluid loss, uncomfrotable

**Increased Risk Group**:

* Neonates
* Immunosuppressed kids
* Neutropenics
* Unimmunized
* Central Lines

**Questions you can ask/Things you can do:**

* How was the temperature taken? (If axillary you can ask for rectal)
* If wrapped up in lots of blankets can unswaddle and recheck
* Antipyretics
  + Reduce the child's discomfort and lower the child's temperature by 2 to 3°F (1 to 1.5°C)
  + Ibuprofen:
    - Do not given in children <6 months
    - Do not give if renal issues (bump in Creatinine)
  + Tylenol
    - Keep eye out for LFTs
    - Technically can give every 4 hours, but can’t give more than 5 times in 24 hours, so best to re-time for q6H
  + Technically no evidence behind alternating q3H, but you *can* do this
* Blood cultures
  + If patient has a central line and it is a new fever or has been >24 hours isnce the last one, we often get “triple cultures” - which means culture from the central line, as well as aerobic and anaerobic cultures

***Keep in Mind:***

* Heart rate increases 10-15 bpm/degree C
* Respiratory rate increases 3 to 5 bpm/degree C

**Hypothermia**

**Definition**: <35 Celsius

**Increased Risk Groups**

* Infants
* Burns
* CNS anomalies
* Anorexia nervosa/Malnourished children
  + a lower metabolic rate and consequently lower heat production due to limited energy reserves
  + a larger body surface area per kilogram
  + fat losses resulting in less insulation and more heat loss
* Drug overdose (ethanol, benzos, opioids, clonidine)

**Questions You can Ask/Things You Can Do**

* Put a blanket/heat pack on them
* Beware - if they are young hypothermia could be a sign of sepsis!

**Tachycardia**

**Definition**

* According to age! Follow your PEWS card

**Etiology**

* Pain
* Agitation
* Dehydration
* Fever
* Anemia/Hypovolemia
* Drugs (most commonly to think of- albuterol!, also Epi in kids who had allergic reaction)
* Arrhythmia
* Less commonly -
  + Hyperthyroidism, CNS abnormalities

**Questions You can Ask/Things You Can Do**

* Febrile - antipyretic
* Dehydration - bolus/IVF
* Pain - pain control
* Agitation/exercise - turn the lights off, soothing music, calm down
* Drugs - catch 22 with albuterol, you use it to get kids thru resp illness, but then they often get tachycardic. Sometimes you can space a child out to Q2H from continuous and they can get through it!
* If it keeps going consider EKG

**Bradycardia**

**Definition:** Follow your PEWS card!

**Etiology/Risk Groups**

* Anorexics/malnourished children (hypothermia)
* Athletic older kids
* Increased parasympathetic/vagal tone (Insertion of NG tube,
* Medications → Beta blockers, CCBs, opioids

**Questions You can Ask/Things you can Do:**

* If they wake up, do they go up? If so then it is usually fine
* Consider EKG if abnormal rhythm/not responsive

***Keep in Mind:***

* Bradycardia, HTN, irregular breathing ⇒ Cushings Triad → Increased ICP!

**Elevated Blood Pressure**

**Definition:** Follow your PEWS card!

**Etiology/Risk Groups**

* Anxiety/crying
* Drugs- think steroids most often, also stimulants
* Children with: Lupus, HSP, Renal abnormalities

**Questions you can ask/Things you can Do:**

* Please take a manual on the arm (leg and automatic can be off)
* Is the child crying or lying quietly?
* Use the Peds BP app- utilizes children’s height and age in order to find the 95%ile of BP
* Evaluate - does child have HA, change in mental status, vomiting??

***Keep in Mind:***

* Bradycardia, HTN, irregular breathing ⇒ Cushings Triad → Increased ICP!

**Low Blood Pressure**

**Definition:** Follow your PEWS card!

**Etiology/Risk Groups**

* Beware of sepsis! Low BP is a late sign in kids
* Anemia
* Dehydrated
* Anaphylaxis

**Low Oxygen Saturations**

**Definition**: Oxygen dissociation curve says 92%!

**Etiology**: Ventilation vs perfusion

* Hypoventilation (drugs, poor muscle strength)
* Cardiology (mixing)

**Questions You can Ask/Things You can Do:**

* Go to bedside- adjust the sat monitor, make sure that it is a good wave
* Apply oxygen
* Reposition child