

# THE PEDIATRICIAN MOM

*Dr. Playforth* M.D.

## Assessing Vital Signs

A primer for parents



Krupa Playforth, M.D.

 [ThePediatricianMom.com](http://ThePediatricianMom.com)

 [@the pediatricianmom](https://www.instagram.com/the pediatricianmom)

# CHECKING VITALS

## BREATHING (ALL AGES)

### LOOK

- ◆ Is the child working hard to breathe or gasping? Do they seem to be in distress? (call 911)
- ◆ Are the nostrils flaring with each breath?
- ◆ Do you see *retractions*? (the skin pulling in and out at the throat or between the ribs with each breath)

### LISTEN

- ◆ Listen to your child's breathing (without a stethoscope).
- ◆ Congested breathing (stertor) sounds like snoring/a snotty child - this is what you're probably most familiar with.
- ◆ Any other sounds? A high-pitched whistling sound (wheezing), or a seal-like high pitched turbulent sound (stridor)

Age	Rate (per minute)
0 - 6 mos	33 - 57
6 - 12 mos	30 - 52
1 - 3 yrs	24 - 46
4 - 6 yrs	20 - 27
6 - 8 yrs	18 - 24
8 - 12 yrs	16 - 22
12 - 18 yrs	13 - 21

Reference ranges (PMID: 21411136)

### COUNT

- ◆ Have child seated and relaxed. Is the breathing regular or irregular?
- ◆ Count the number of breaths in 15 seconds (count how many times the chest rises)
- ◆ Multiply number x4 to get breaths per minute

### HOW TO ASSESS



1. Count the number of times the chest rises while child is sleeping (one rise + fall cycle = one breath)
2. Count for **60 seconds\*** to get breaths per minute

#### TIPS:

- Don't measure when child is crying
- Rates are slower when asleep
- Rates may be faster with fever
- For examples of some of the items on this page (eg retractions), see my website and instagram page

# CHECKING VITALS

## HEART RATES (ALL AGES)

### BABIES (UNDER 1)

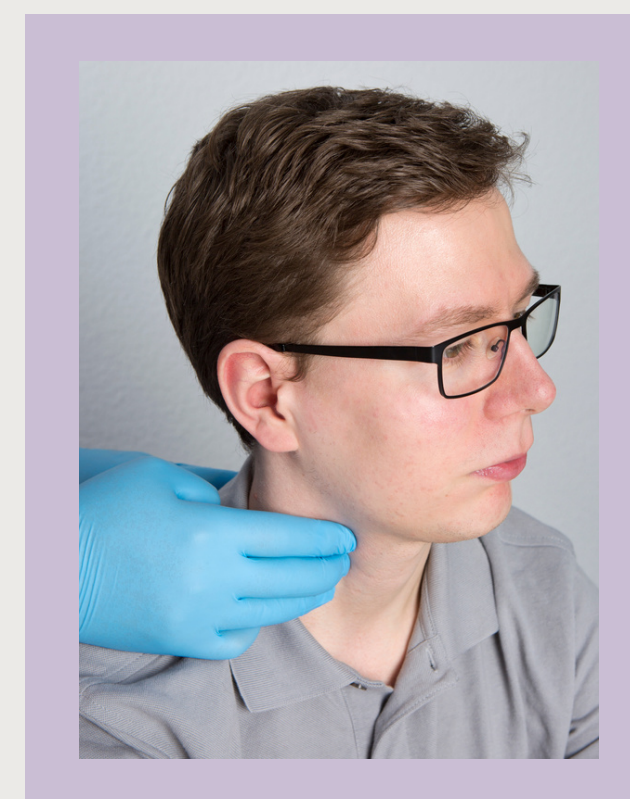


1. Lay baby down so arm is bent
2. Using two fingers (not thumb) press gently between shoulder and elbow
3. Feel for a rhythmic throbbing - thats the spot
4. Count for 15 seconds and then multiply the number by 4 to get the beats per minute

Age	Rate (per minute)
0 - 6 mos	120 - 164
6 - 12 mos	109 - 152
1 - 3 yrs	92 - 140
4 - 6 yrs	81 - 117
6 - 8 yrs	74 - 111
8 - 12 yrs	67 - 103
12 - 18 yrs	58 - 96

Reference ranges (PMID: 21411136)

### TODDLERS/KIDS



1. You can measure the *radial* (thumb side at the wrist) or *carotid* (about 2 fingers below jawline)
2. Using two fingers (not thumb) press gently on spot until you feel a rhythmic drumming/throbbing
3. Count for 15 seconds and then multiply the number by 4 to get the beats per minute

#### TIPS:

- Don't measure when child is crying
- Rates are slower when asleep
- Rates may be faster with fever

# CHECKING VITALS

## TEMPERATURE (1)

### METHODS

- Rectal** Measurement taken in bottom (gold standard; most accurate)
- Temporal** Measurement on forehead
- Tympanic** Measurement in ear
- Oral** Measurement in mouth
- Axillary** Measurement in armpit

### RED FLAGS

*\*Not a comprehensive list. Provided for educational purposes only. Not a substitute for medical advice from your child's doctor.*

- Any fever in a young child (under 3mo) or in a child with a notable underlying health issue (talk to your pediatrician if you're concerned your child is in this category)
- Stiff neck, difficulty breathing, severe pain, seizures, unusual bruising or rash
- Persistent fever for more than 3-5 days
- Change in mental status (tired, confused, inconsolably fussy)
- Still acting "sick" even if temp comes down
- Dehydration
- Overall getting worse
- Anything else tickling your spidey sense

### THINGS YOUR PED WANTS TO KNOW

- What the temp was
- How it was taken
- When it began
- How it responds to fever reducers
- Other symptoms you've noticed
- How your child looks/is acting
- Urine output/hydration status
- Any risk factors (age, chronic conditions)

#### Medication dosing info

See separate free guide on website!

### AGE BASED RECS

Age	Recommendation
0 - 3 months	Rectal
3 - 6 months	Rectal (this is best, but some people screen with forehead)
6 - 12 months	Rectal (can screen with forehead or ear)
1 - 3 years	Can screen with ear/armpit/forehead. If accuracy important, rectal.
4 years +	Oral, forehead, armpit, ear

### FAQS

#### What is a fever?

A fever is defined as a temperature above 100.4F (38C)

#### Should I add a degree to figure out the "real" temp?

No. At the end of the day, measurement accuracy matters less than you think, except in specific scenarios. Put differently: the "real" temp matters less than big picture in *most* situations.

#### What does "treat the child, not the number" mean?

This is the common phrase used by pediatricians when it comes to fevers. In some circumstances (eg infants under 2-3 months old, children with underlying health conditions eg sickle cell or cancer, etc) the specific number is very important. This is because it has the potential to change what you do: there are strict protocols for fevers in these populations.

For an otherwise healthy child, however, we approach fevers with the big picture in mind. Focus on keeping your child comfortable and hydrated and remembering that fever is the body's way of fighting an infection.

If a fever is accompanied by other red flags then we get more concerned.

#### Ibuprofen or Acetaminophen?

Ibuprofen has been shown to be *slightly* more effective but both are safe and both work. Ibuprofen **cannot** be given if under 6 months old.

# CHECKING VITALS

## TEMPERATURE (2)

For product recs, check out my website under "faves")

### RECTAL



1. Wash thermometer
2. Lubricate the thermometer and anus (KY jelly is a good option)
3. Place infant on back with knees bent upwards
4. Gently insert thermometer into anus about 0.5 inch, *stop if you encounter resistance*
5. Distract and soothe while waiting for beep
6. Wash thermometer well after use!

**In some kids, rectal temps can be dangerous. Talk to your ped if you think your child may be in this category**

### EAR (TYMPANIC)



1. Measure at least 15-30 minutes after returning from outdoors (or 15-30min after bath time)
2. Pull ear backwards gently & slightly upwards
3. Insert thermometer gently into ear canal towards ear drum
4. Wait for the beep
5. Having an ear infection, ear wax, or ear tubes should not affect the reading.

### TIPS:

- Rectal measurements most important under 3mo but can be used up to 3y
- Ear not rec for kids under 6mo.
- Oral not rec for kids under 4yo (or if too congested to keep mouth closed).
- Armpit ok for screening but generally less accurate than other methods

### FOREHEAD (TEMPORAL)



1. Place at center of forehead & slide towards top of ear (maintain contact with skin) until you reach hairline.
2. Wait for the beep.
3. Digital temporal thermometers are best. Some newer models may not need to be swept across forehead -- follow the instructions.

### MOUTH (ORAL)



1. Wait at least 15-30 minutes after drinking
2. Insert into mouth on one side. Make sure tip is under tongue
3. Have child close mouth & maintain seal, holding thermometer in place with lips/tongue (not teeth). Wait for beep.

### ARMPIT (AXILLARY)



1. Place thermometer into center of clean, dry armpit.
2. Tuck arm closely into the body and hold thermometer in place while waiting for beep