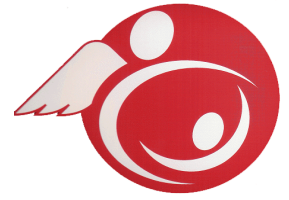




Ministry of Health of Red Sea State  
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AISPO

# Pediatric vital signs in newborn, neonate, infant & child

# **PYREXIA**

## **SYMPTOMS**

**BODY TEMPERATURE**  
**> 38°C**

# **HYPOTHERMIA**

## **SYMPTOMS**

**BODY TEMPERATURE**  
**< 35°C**

### Chills

- Sweating

### Dehydration

- Headache

### Muscle aches and pains

- A feeling of weakness

### Tachycardia

### Shiver

- Cold and pale skin

### Slurred speech

- Fast breathing

### Tiredness

- Confusion

# PULSE RATE

AGE	AWAKE, AT REST	SLEEPING	FEVER,CRY, ACTIVITY, EMOTION
<b>NEWBORN AND NEONATE</b>	100 – 180 bpm	80 – 160 bpm	Until 230 bpm
<b>1 – 3 MONTHS</b>	100 – 160 bpm	80 – 130 bpm	Until 230 bpm
<b>3 MONTHS – 2 YEARS</b>	80 – 150 bpm	70 – 120 bpm	Until 180 bpm
<b>2 – 10 YEARS</b>	70 – 120 bpm	60 – 90 bpm	Until 170 bpm
<b>&gt; 10 YEARS</b>	55 – 100 bpm	50 – 90 bpm	Until 160 bpm

# Tachycardia symptoms

## DIZZINESS

- LIGHTHEADEDNESS

## SHORTNESS OF BREATH

- CHEST PAIN

## HEART PALPITATION

# Bradycardia symptoms

## FAINTING (SYNCOPE)

- FATIGUE

## SHORTNESS OF BREATH

- CONFUSION

## EASILY TIRED DURING ACTIVITY

# BLOOD PRESSURE

SYSTOLIC PRESSURE

DYASTOLIC PRESSURE

AGE	50°	90°	95°	50°	90°	95°
NEWBORN NEONATE	70	90	95	45	55	60
1 - 11 MONTHS	80	100	110	45	55	60
1- 3 YEARS	95	105	110	65	75	80
4 – 7 YEARS	95	115	120	65	75	80
8 – 9 YEARS	105	120	125	65	75	80
10 YEARS	110	125	130	70	80	90
11 – 14 YEARS	115	130	135	70	80	85

# **BLOOD PRESSURE: few suggestions**

## **PATIENT AT REST**

Exercises, cough, crying, effort and emotions can increase the children's systolic pressure up to 40 mmHg their normal range

## **USE THE RIGHT CUFF**

A too small cuff will give falsely high measurements

A too large cuff will give falsely low measurements

## **COMPARE THE MEASUREMENT TO PERCENTILE GRAPH**

Normal pediatric vital signs for blood pressure, pulse and respirations change as the child grows from newborn to infant to child.

# **Hypotension Symptoms**

**BLURRED VISION  
CONFUSION  
FAINTING  
NAUSEA  
WEAKNESS**

Hypotension (blood pressure lower than the 50<sup>th</sup> percentile) is associated with anemia, dehydration, severe infections, aortic or mitral stenosis.

# **Hypertension Symptoms**

**HYPEREXCITABILITY  
DIZZINESS  
HEADACHE**

# PEDIATRIC RESPIRATION RATE

AGE	RATE (breath per minute)
BIRTH – 1 YEAR	30 – 55
1 – 3 YEARS	24 – 40
3 – 6 YEARS	22 – 34
6 – 12 YEARS	18 – 30
12 – 18 YEARS	12 – 16



**Signs of  
respiratory  
problems**

**Rapid or irregular breathing**

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**Flaring Nostrils**

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**Retracting**

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**Grunting**

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**Blue Color**

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**Cough**

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**If the patient has one or more of these signs...**

**CHECK SPO<sub>2</sub>, ADMINISTER O<sub>2</sub> WHEN NECESSARY,  
CALL THE DOCTOR!**

# PAIN - FLACC SCALE (UNTIL 3 YEARS)

	0	1	2
<b>Face</b>	No particular expression or smile	Occasional grimace or frown, withdrawn, disinterested	Distressed looking face, expression of fright/panic
<b>Legs</b>	Normal position or relaxed	Uneasy, restless, tense, occasional tremors	Kicking, constant tremors, jerking
<b>Activity</b>	Quiet, normal position, moves easily	Squirming, shifting back and forth, tense/guarded movements	Arched, jerking, severe, agitation, gasping, shivering
<b>Cry</b>	No cry (awake or asleep)	Moans or whimpers, constantly grunting	Crying steadily, screams or sobs
<b>Consolability</b>	Happy, relax	Reassured by occasional touching, distractible	Difficult to console or comfort, resisting care

# PAIN - WONG & BAKER SCALE

(FROM 3 TO 7 YEARS)

## Wong-Baker FACES® Pain Rating Scale



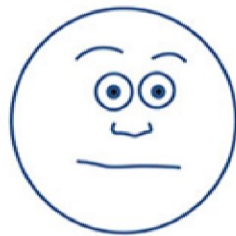
**0**

No  
Hurt



**2**

Hurts  
Little Bit



**4**

Hurts  
Little More



**6**

Hurts  
Even More



**8**

Hurts  
Whole Lot



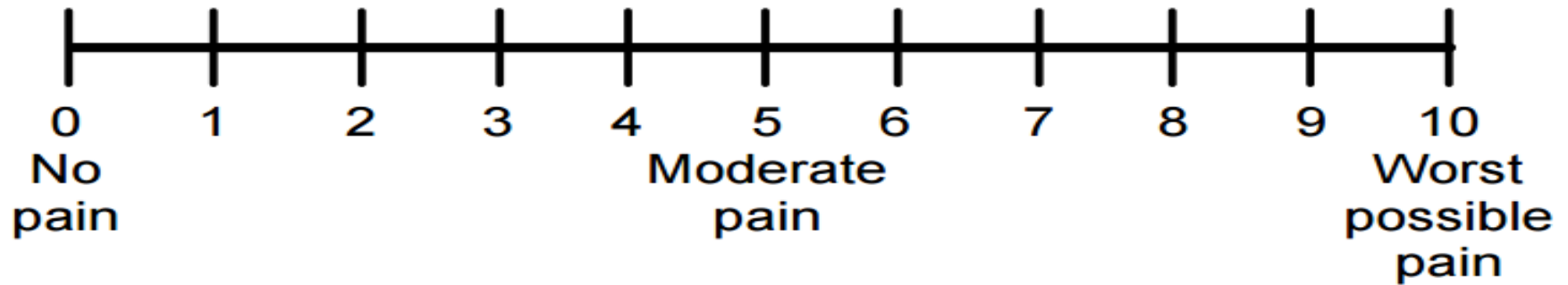
**10**

Hurts  
Worst

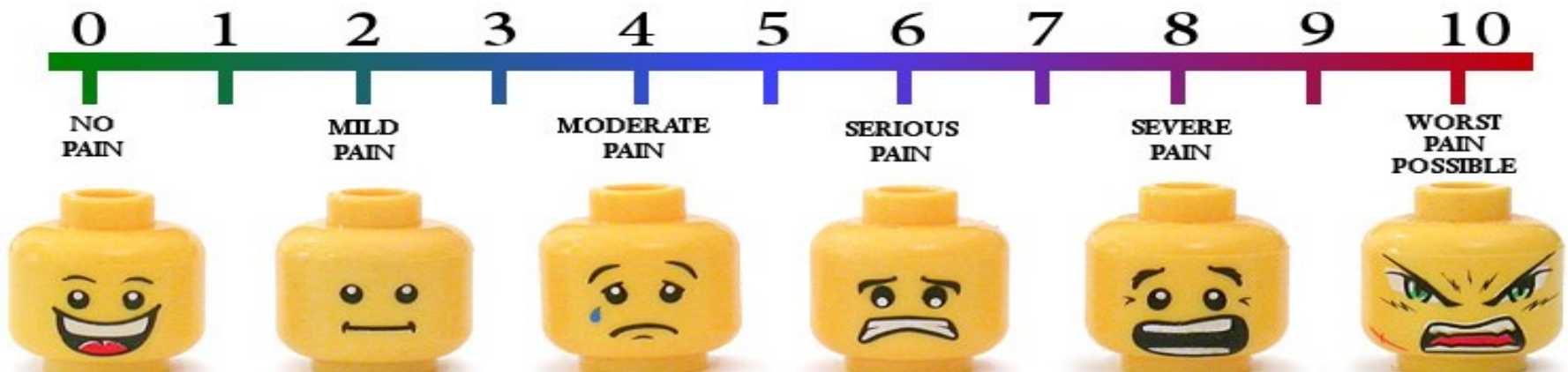
These faces are used with children who do not yet understand the meaning of numbers

# PAIN - NUMERIC RATING SCALE (NRS)

(OVER 7 YEARS)



## LEGO PAIN ASSESSMENT TOOL



# GROWTH PARAMETERS

## WEIGHT

**When:** Always at admission.

**Who:** all patients.

**How:** naked or just with jumpsuit, always on an empty stomach (before breastfeed).

*Always remove  
pamper!*

## LENGHT

**When:** Always at admission.

**Who:** all patients that can't keep the standing position.

## HEIGHT

**When:** Always at admission.

**Who:** all patients that can keep the standing position.

## HEAD CIRCUMFERENCE

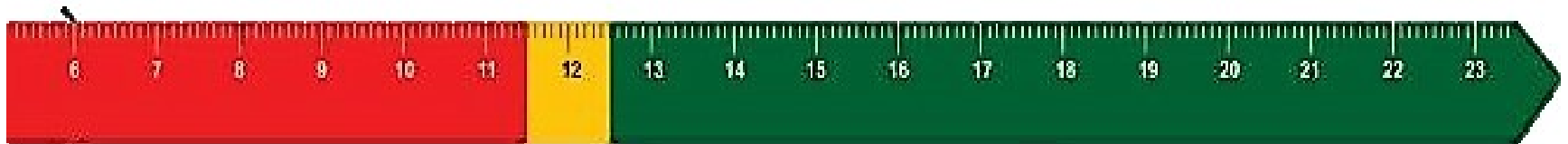
**When:** Always at admission.

**Who:** all infants under 1 year.

**How:** Wrape the tape snugly around the widest possible circumference – from the most prominent part of the forehead ( often 1-2 fingers above the eyebrow) around to the widest part of the back of the head.

# NUTRITIONAL STATUS- MUAC

Less or equal to 11,5 cm	<b>RED</b>	Severe Acute Malnutrition (SAM)
Between 11,5 and 12,5cm	<b>YELLOW</b>	At risk or Moderate Acute Malnutrition (MAM)
More or equal to 12,5 cm	<b>GREEN</b>	Well Nourished



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*In some cases ,numeric data shown on the pocket book were obtained by calculating the average of the different international references/ guidelines.*