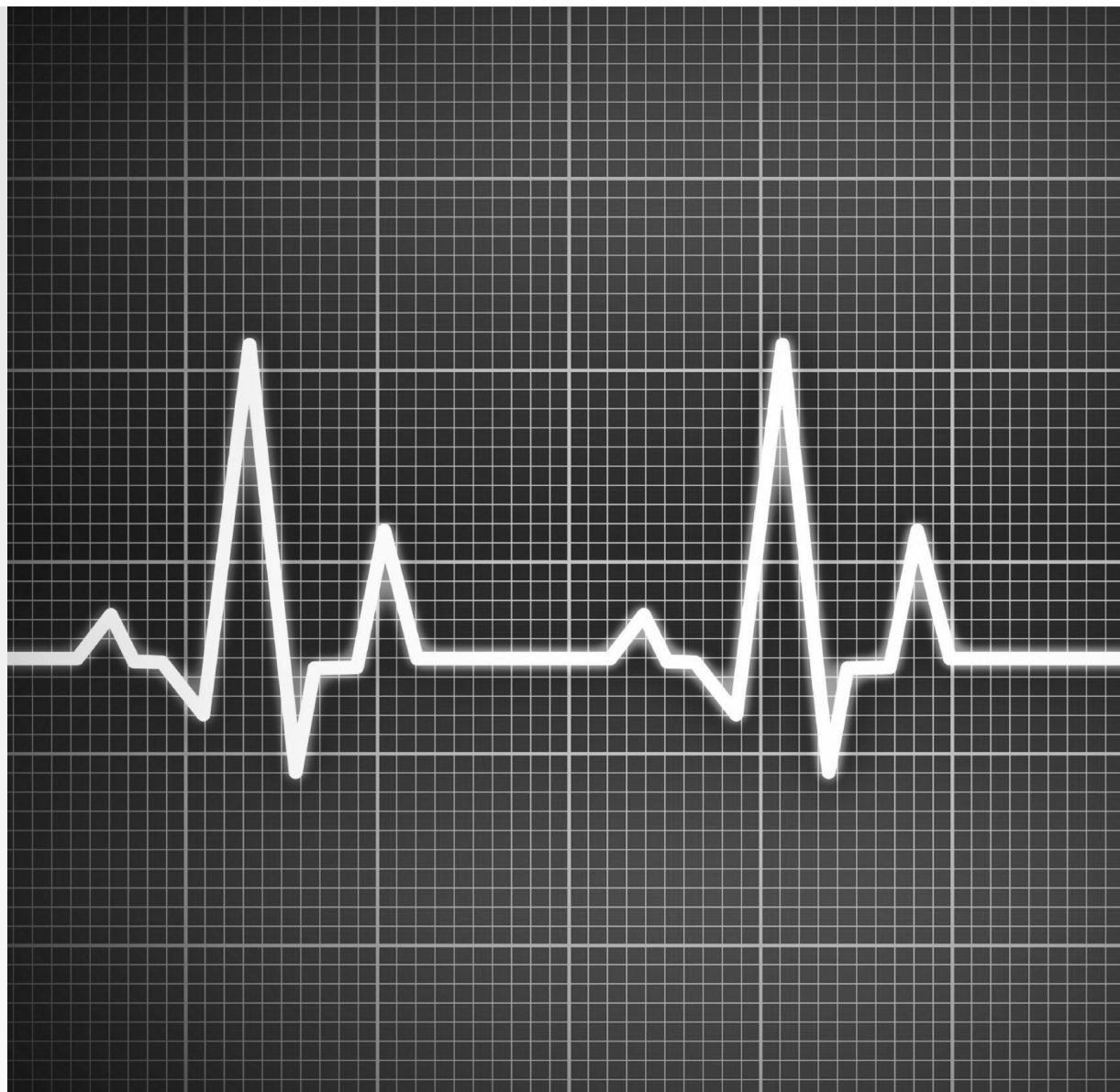


VITAL SIGNS



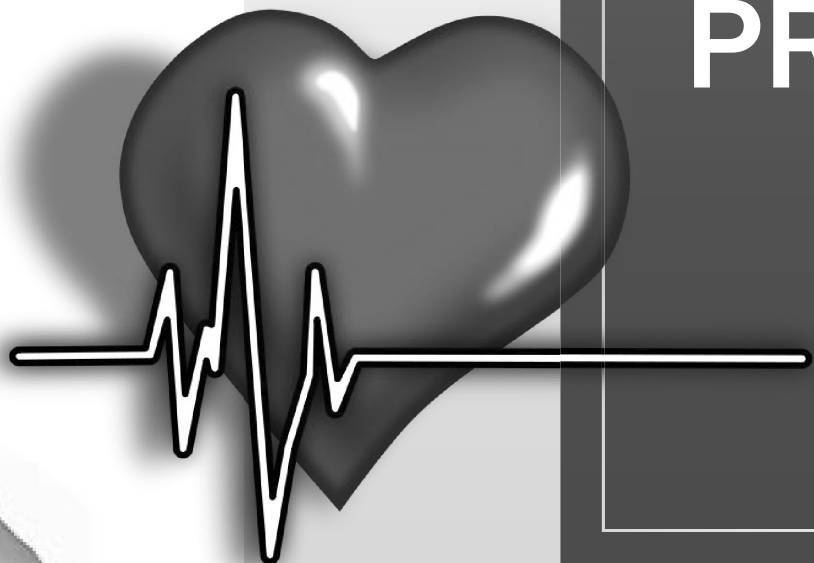
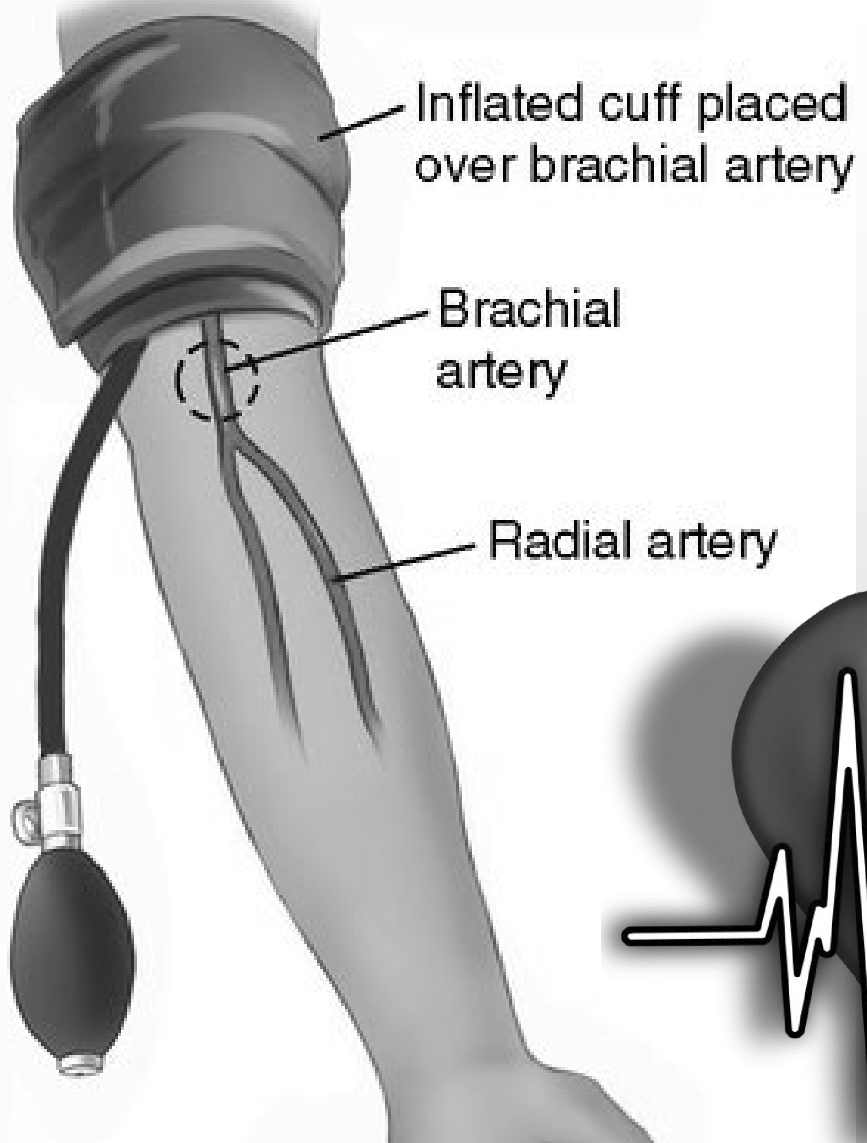
INTRODUCTION

You may need to assess vital signs on clients in your care.

- You need to know how to do this.**
- You also need to know if results are abnormal or should be reported to someone.**
- Protocols regarding vital signs should be written for each client.**

VITAL SIGNS – how many are there?

- **Blood pressure**
- **Temperature**
- **Heart rate**
- **Respiration rate**
- **Oxygen saturation (pulse oximetry)**



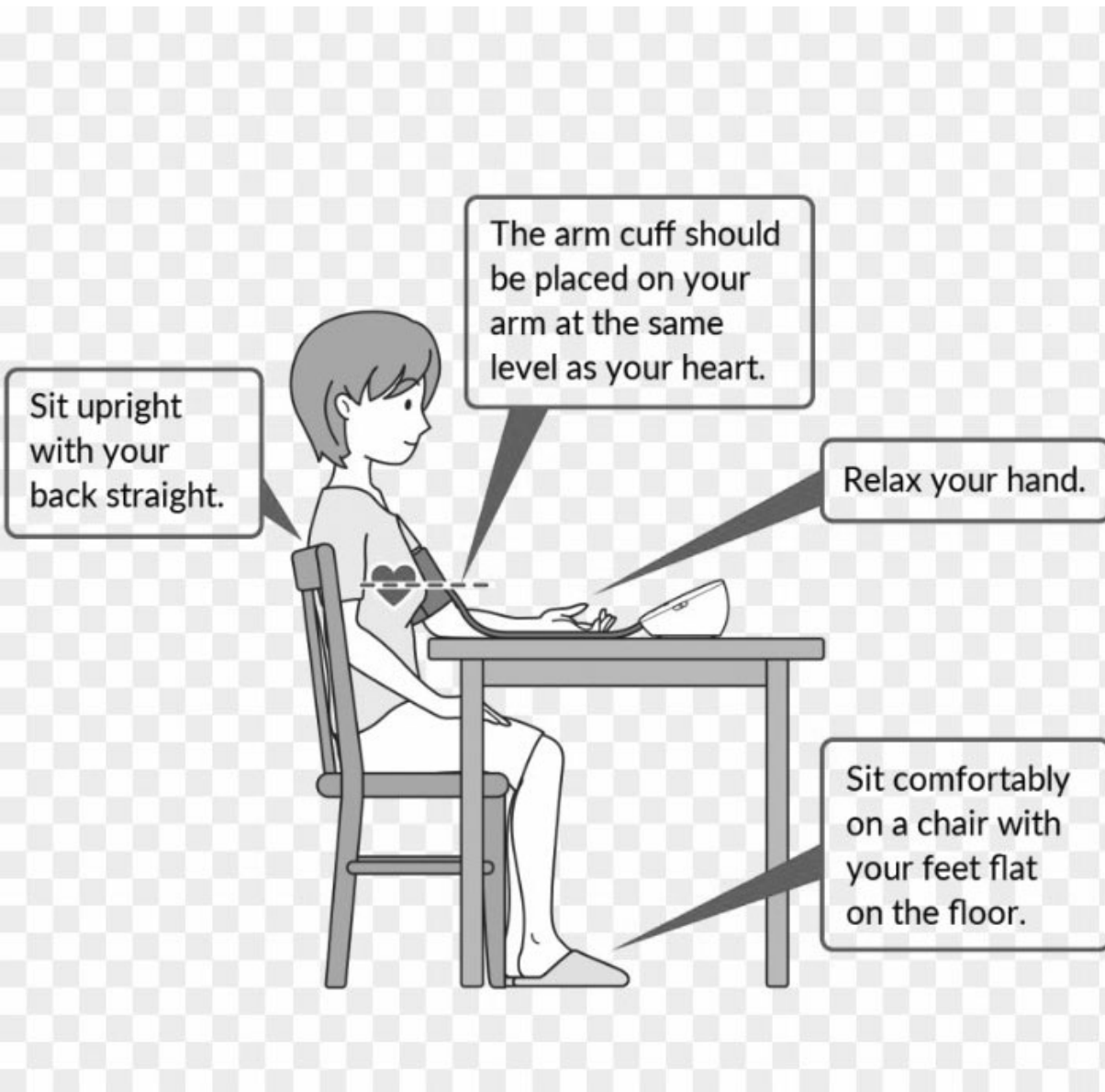
BLOOD PRESSURE

TAKING A BLOOD PRESSURE

Before taking a blood pressure, pay attention to the size and placement of the cuff, the person's position, and technique.

- **Cuff size** – if too small the systolic pressure will be high.
- **Cuff placement** – ideally above the elbow over a bare arm.
 - **May take over thin clothing but thick clothing should be removed. Do not roll up the sleeve.**
- **Body position**
 - **Crossing legs or sitting without a back support can cause higher readings.**





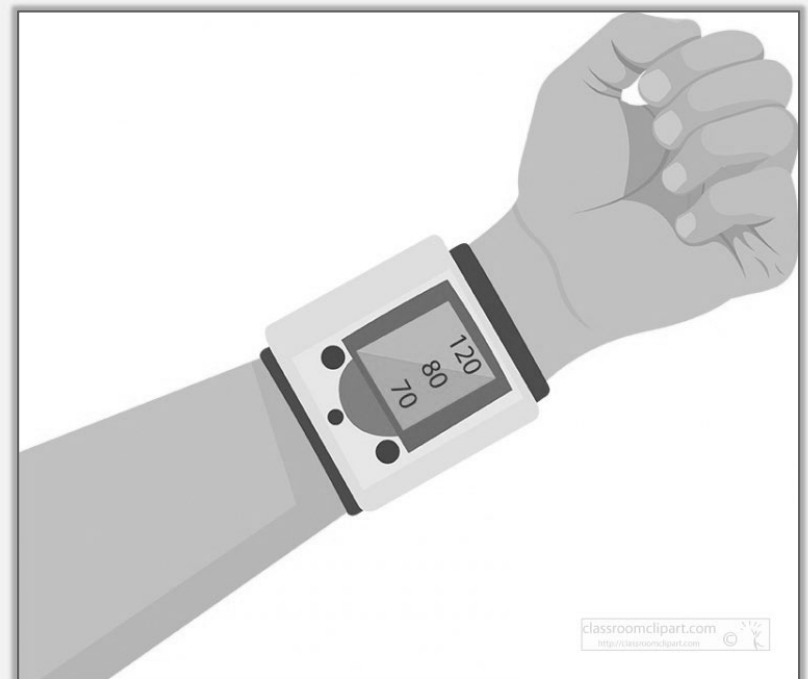
POSITIONING

BLOOD PRESSURE DEVICES

Blood pressure cuffs that take the pressure in the upper arm (over the elbow) give the most accurate results whether taken on an automated system or manually.

Wrist devices are often used on someone who is obese. Wrist readings are often falsely elevated.

Blood pressure measurements on the finger are not recommended as the results are quite inaccurate.



OVER THE ELBOW BLOOD PRESSURE DEVICE



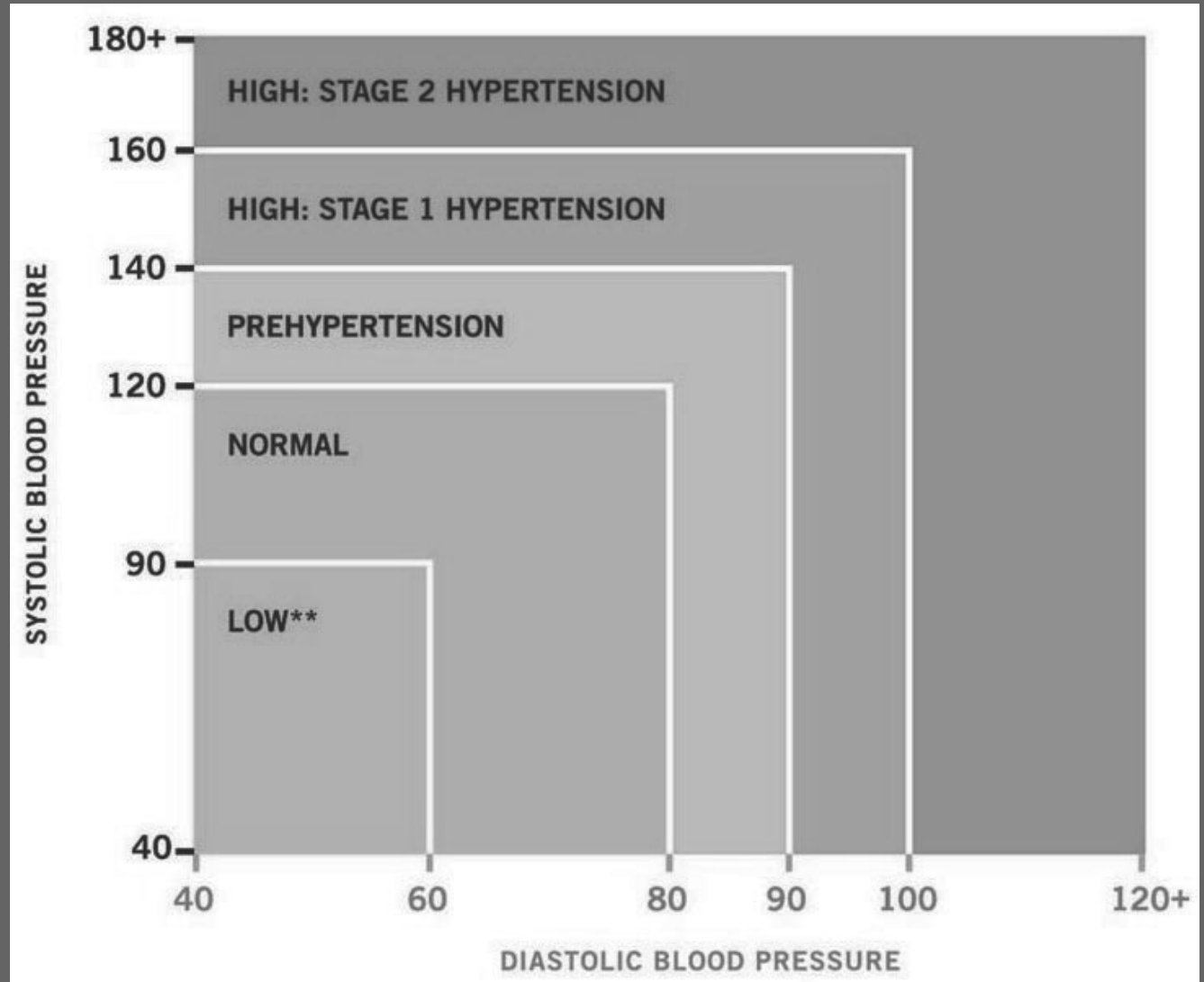
With automated blood pressure cuffs, the cuff is inflated to the correct amount and automatically gives the blood pressure reading.

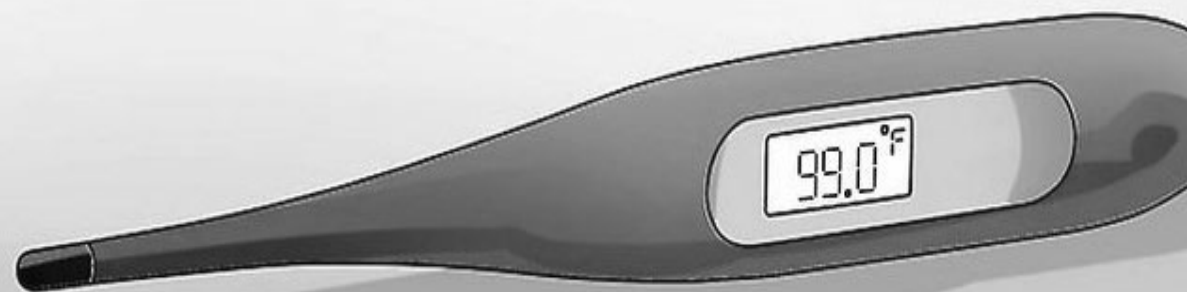
With manual blood pressure cuffs, inflate to about 180 mm Hg and then allow to deflate slowly.

- Listen for the pulse over the brachial artery using a stethoscope.**
- When the pulse is first heard, that is the systolic pressure reading.**
- As the air escapes, the sound of the pulse will disappear. The point that the sound disappears is the diastolic pressure reading.**



NORMAL AND ABNORMAL BLOOD PRESSURE READINGS





TEMPERATURE

TAKING A TEMPERATURE

- A person should not smoke, eat, or drink for at least 10 minutes before taking an oral temperature as the body temperature will be altered.
- Document which part of the body was used when taking a temperature.
 - Ear and rectal temperatures are one half to one degree F higher than oral temperatures.
 - Axillary (armpit) and forehead temperatures are usually one half to one degree F lower than oral temperatures.



NORMAL AND ABNORMAL TEMPERATURES

Normal	97 to 99 degrees Fahrenheit (°F)
Fever	Anything over 100.4 °F <ul style="list-style-type: none">• Notify medical provider if temperature is over 103°F• Notify medical provider if fever more than 3 consecutive days• Notify medical provider if fever accompanied by severe sore throat swelling, vomiting, headache, stiff neck, rash, severe cough or shortness of breath.<ul style="list-style-type: none">○ Individual protocols may differ. Follow the protocols of your agency.
Hypothermia	Temperatures below 95°F



HEART RATE (pulse)

The pulse is the number
of times the heart beats
per minute

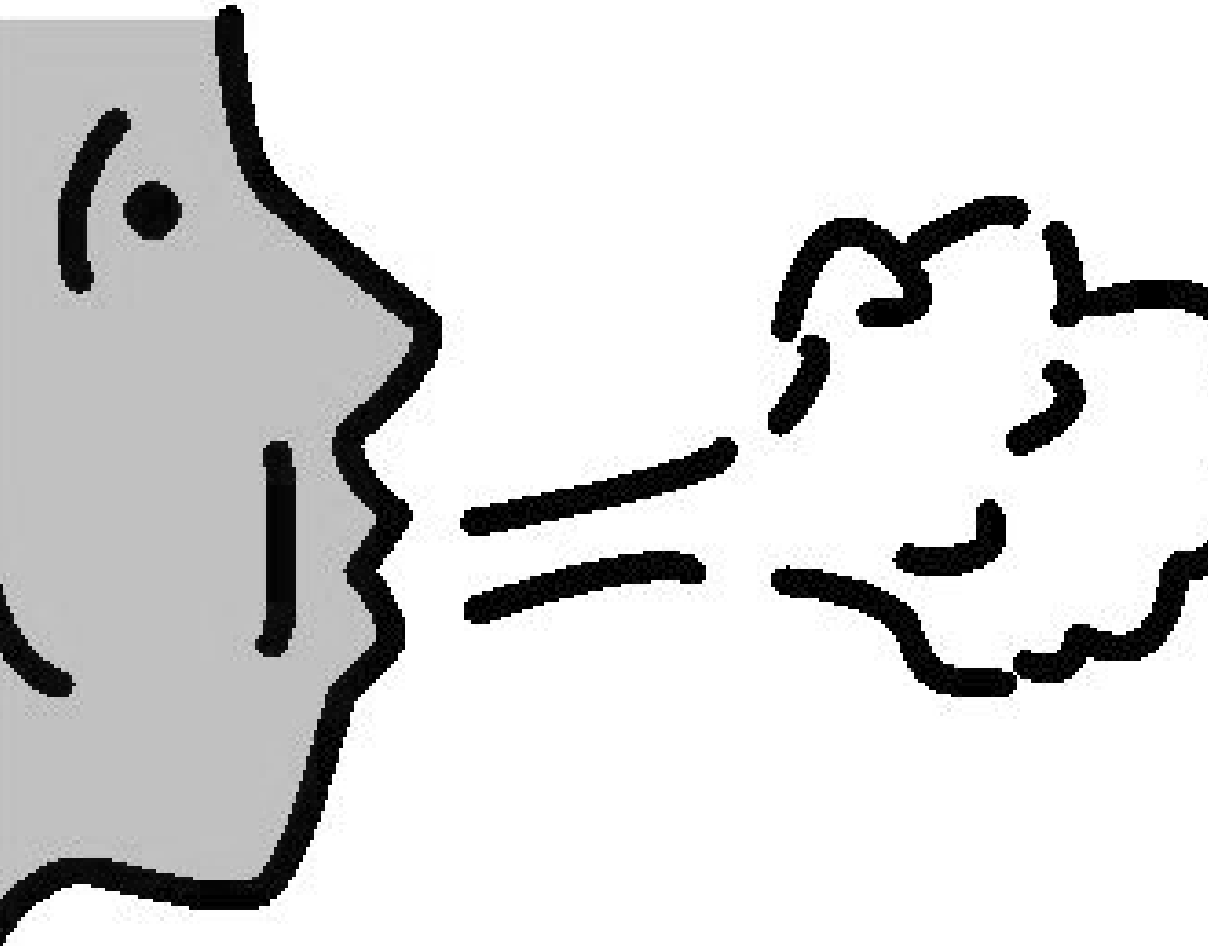
TAKING A PULSE

- Using your first and second fingertips, gently press down on the artery until you feel the pulse. Never use your thumb as you will be feeling your own pulse.
- The radial pulse is located on the thumb side of the wrist, where the wrist bends.
- Count the heartrate for 30 seconds and multiply by 2 to obtain the pulse which is always recorded as beats per minute.
- Note if the pulse is regular or irregular (rhythm).
- Record the rate and rhythm.



NORMAL AND ABNORMAL HEART RATES

Normal	60 to 90 beats per minute (BPM)
Tachycardia	Over 100 BPM <ul style="list-style-type: none">• Rate normally increases with exercise, sickness, injury, emotions.• Seek medical attention if rate is over 130 or very irregular.• Seek medical attention if accompanied by shortness of breath, lightheadedness, or chest discomfort.
Bradycardia	Abnormally low heart rate <ul style="list-style-type: none">• Heart rates are slower when sleeping.• Concerning symptoms (report):<ul style="list-style-type: none">○ Feeling lightheaded, dizzy, faint○ Weakness, fatigue, confusion• Seek immediate attention if accompanied by chest pain, trouble breathing, low blood pressure, or fainting.

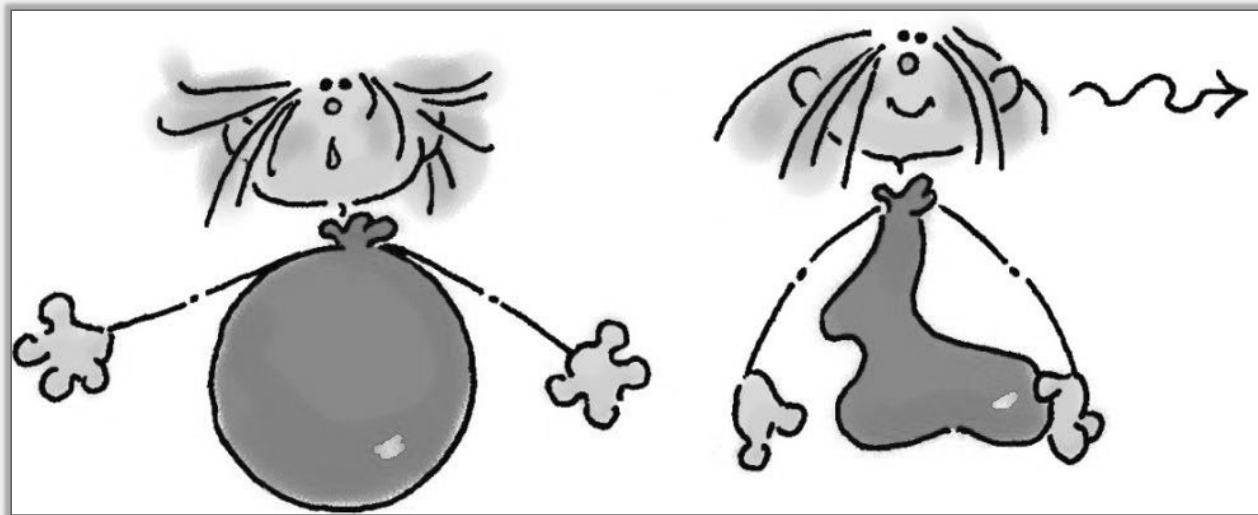


RESPIRATION RATE

Respiration rate is the number of breaths per minute.

PROCEDURE

1. Count how many times the chest rises over a minute.
2. To get an accurate reading, do this without the person knowing it is being done so they don't change their breathing rate.



NORMAL & ABNORMAL BREATHING RATES

Normal

12 TO 20 Breaths per minute

- Rate increases with fever, illness, lung disease

Respiratory distress

Seek Immediate Medical Attention if:

- Struggling to breath
- Pain with breathing
- Turning blue
- Irregular or very shallow breaths.



PULSE OXIMETRY

Pulse oximetry is a non-invasive way to monitor the amount of oxygen in the blood.

FALSE READINGS



- Low blood pressure
- Nail polish, artificial nails
- Hypothermia (vessels constrict)
- Motion (shivering, seizures, etc.)
- Dark skin color
- Dirt on hands
- Intense light (bright sunlight, fluorescent lights)



BLOOD OXYGEN LEVELS

Pulse Oximeter Reading	
95 to 100%	Normal blood oxygen levels
91 to 95%	“Concerning” blood oxygen levels - monitor
Under 90%	Low blood oxygen levels – notify medical provider
80 to 85%	Seek Medical attention <ul style="list-style-type: none">• Brain is affected at these levels and below
80% and lower	Cyanosis

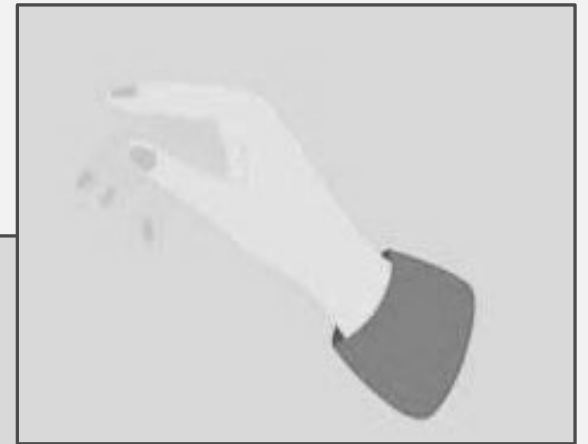
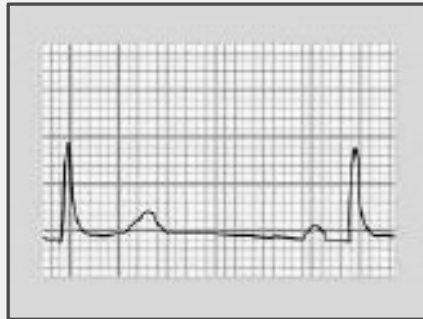
SYMPTOMS OF HYPOXIA

- Restlessness
- Headache
- Confusion
- Difficulty breathing
- Rapid heart rate
- Rapid breathing
- Anxiety



SYMPTOMS OF SEVERE HYPOXIA

- Slow heartrate
- Extreme restlessness
- Blue skin (cyanosis)



THANK YOU

JEAN JUSTAD, MD, MEDICAL DIRECTOR, DDP

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