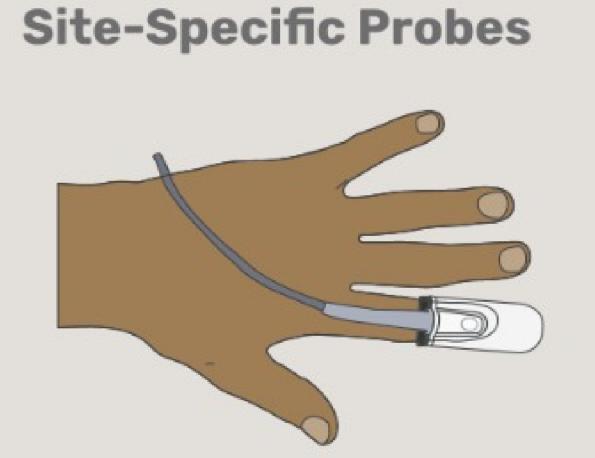
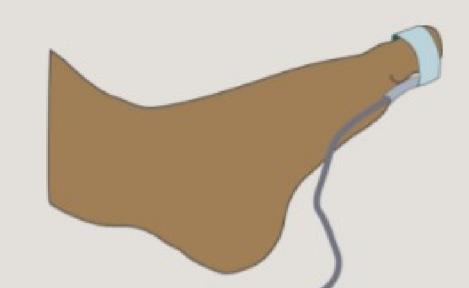
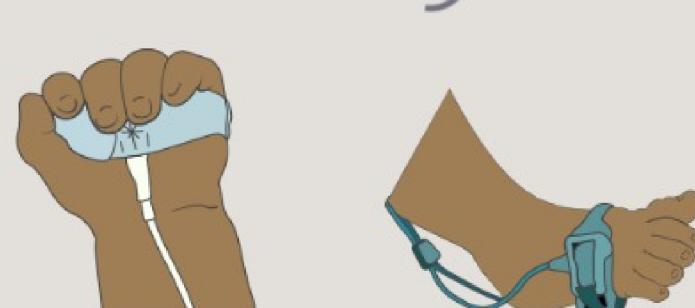


## Choosing a probe site

- Ensure probe is correct type for body measurement site (see manufacturer manual)
- Ensure probe is correct fit for person's size
- Ensure probe is placed correctly (i.e. straight and without air gaps)
- Fingers are the most common measurement site. Common alternatives include toes (children), palm/foot (neonates), ear, nose, and forehead
- Manufacturer may recommend to avoid the thumb or 5th digit; use 3rd or 4th digit as default
- Use palm or foot as default in neonates
- Avoid artificial pigment (e.g. tattoos, henna, nail polish), jewelry (e.g. rings & earrings) or long fingernails
- Choose probe site that is warmest with good pulses, capillary refill and signal strength
- Minimize probe movement by stabilizing measurement site and securing probe cable
- Try multiple probe sites if Sp02 does not match clinical condition

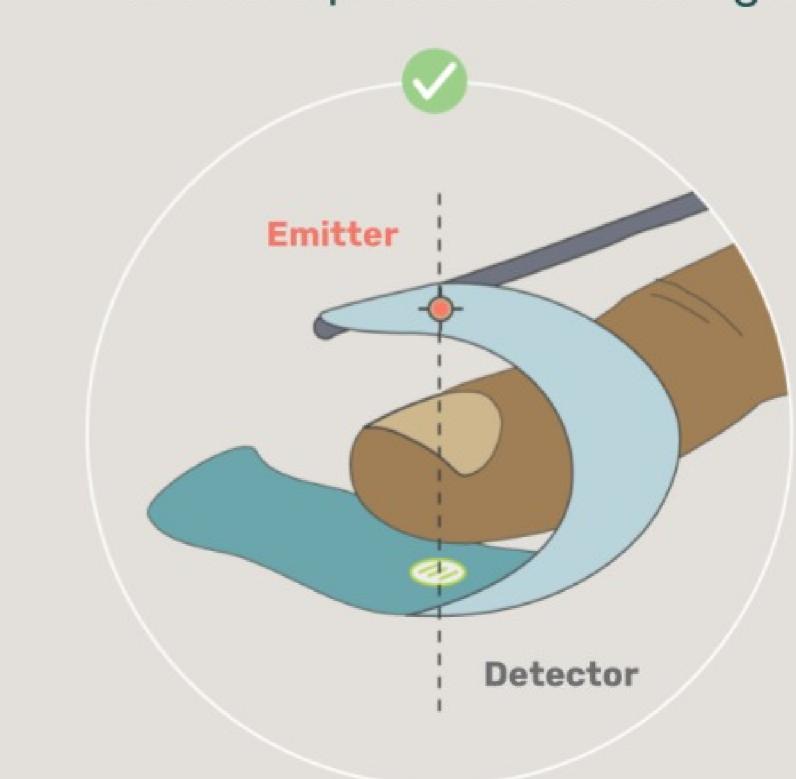


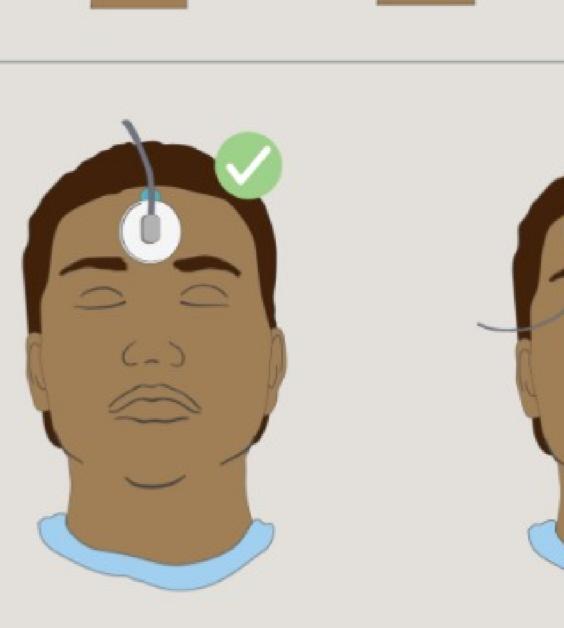






- For transmission probes place side with red light (emitter) & side with no light ('detector') directly opposite
- For <u>reflectance probes</u>, place emitter and detector on same side
- Even slightly crooked probes can be inaccurate. Ensure finger clip probes are **placed straight, in line** with the natural direction of the finger
- Never use transmission probe in reflectance orientaion
- For all probes, ensure the emitter and detector have direct skin contact with **no air gap** (see image)
- Make sure probe is not too tight







all sides of finger

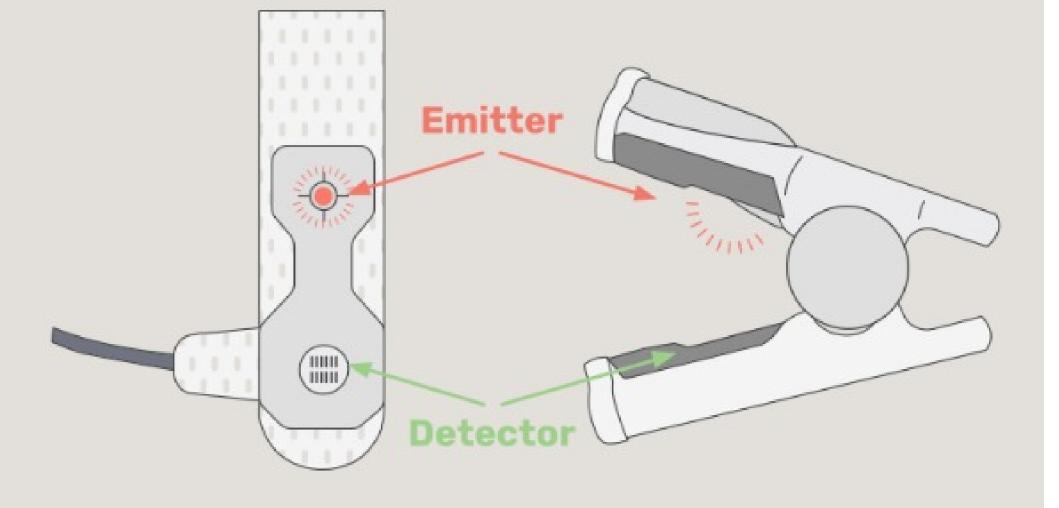


Air gap is present between finger and probe

## Probe types

## Transmission probes

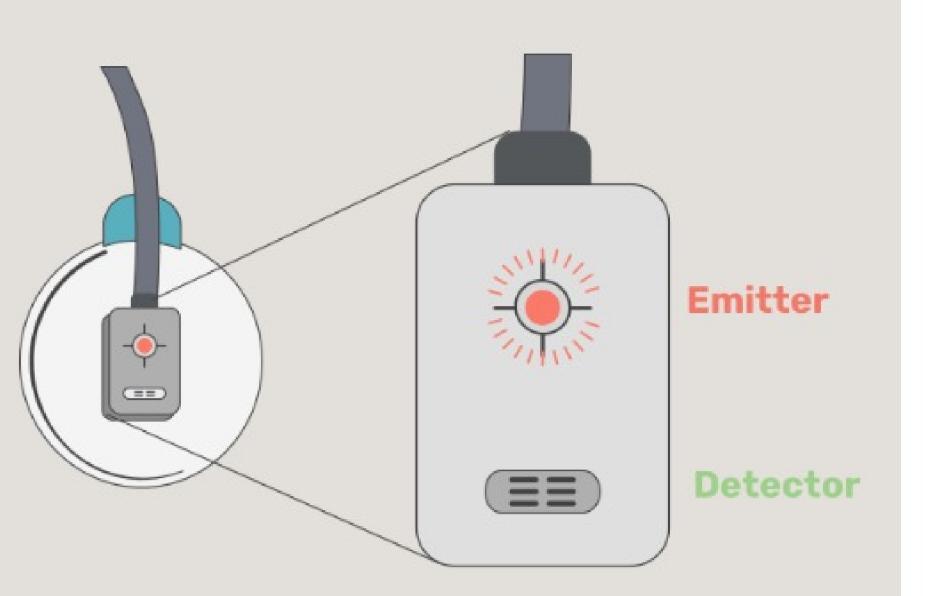
- These are clip-like or wrap-around probes commonly placed on fingers & toes
- Light 'emitter' & 'detector' must be directly opposite each other



Reusable

### Reflectance probes

- These use adhesive or bands to hold the probe on flat surfaces, commonly forehead or chest
- Light 'emitter' & 'detector' must be side-by-side on a flat surfaces
- May be unreliable in certain populations like neonates





- · Do not use a transmission probe in the orientation of a reflectance probe as the Sp02 will be unreliable
- Check probe is compatibility with monitor (i.e. multiple brands of probe may connect to the same monitor but may not produce reliable results)

# For a Reliable Sp02 Reading

- Wait for >30 seconds of Sp02 measurement with good signal quality before using Sp02
- Confirm signal quality by reviewing:
  - Display waveform: for good amplitude and rhythm that matches pulse
- Signal quality indicator: must review user manual for device-specific info
- Sp02 rate matches ECG or pulse rate
- Good signal quality does not guarantee Sp02 accuracy
- Avoid measurement on same limb as tight bracelets, rings, or blood pressure cuff
- Shield probe detector from direct, ambient light
- Minimize patient movement
- Use multiple measurement sites if Sp02 is not consistent with clinical assessment or if signal quality is poor
- Ensure <u>proper probe type and placement</u>



Review manufacturer's instructions for operation

Different devices have different recommendations

