Breath Sounds

Before auscultating:
   Listen to what patient tells you
   Watch pt. breathe
   May not need stethoscope to hear abnormal sounds

With stethoscope listen to air passing through:
   Trachea → Bronchi → Bronchioles → Alveoli

NEED TO KNOW NORMAL!!

To obtain:
   1. Quiet room
   2. Stethoscope - diaphragm
   3. Entire Cycle (at least)
   4. Patient sitting
   5. Patient breathe slowly through open mouth

Where: Must be from side to side-condition may only be present on one side, compare
   Anterior: Top
              Middle
              Bottom
   Laterally: Mid axillary
              6th-8th rib area
   Posterior: Top
              Middle
              Bottom
Vesicular breath sounds = Alveolar breath sounds

When listening to breath sounds note:
- pitch
- duration
- intensity

In addition, If hear abnormal sounds:
Describe
- What: Loud, Quiet/soft, Coarse/fine, Hi/low pitch
- When: Early/late inspiration, Early/late expiration
- Where: Bases, Throughout, ½ way up etc

Alveolar/vesicular breath sounds:
- Low pitch
- Inspiration longer and more intense than expiration
- Inspiration higher pitch than expiration
- No pause between inspiration/expiration
- “Soft” “Breezy”

Breath sounds may be more harsh in children and people with thin chest walls & more distant (or diminished) in muscular and obese
Abnormal Breath Sounds (Adventitious)

DISCONTINUOUS/ NONCONTINUOUS SOUND

Crackles/ Rales

- typically with inspiration, produced by collapsed alveoli popping open against fluid within them or surrounding them

  OR

- air passing through moisture in alveoli

Causes:
- Pneumonia
- Pulmonary edema/ CHF
- Toxic inhalation
- Blood
- Poor cough/sigh-atelectasis
- Post OR-bedridden

Hear:
- Crackling (cellophane, rubbing hairs, velcro, rice krispies)
- Moist sounding
- Heard TYPICALLY during inspiration

May be gravity related
CONTINUOUS SOUNDS

Rhonchi
Produced by air passing through fluid/secretions in larger airways - bronchioles, bronchi, trachea.
The patient almost always has a hx of mucous production.

Causes:
- Pneumonia
- Bronchitis
- Pulmonary Edema
- COPD
  (similar to crackles)

Hear:
- Course rattles/rumbling
- Low pitched
- Hoarse moan-deep snore
- Heard TYPICALLY during expiration

May clear with coughing
May be gravity related

Wheeze
Produced when air is forced through narrowed passageways-bronchi, bronchioles.
Narrowing due to edema/swelling, mucous, foreign body, bronchospasm

Causes:
- Asthma
- Bronchiolitis
- Anaphylaxis
- Bronchitis (acute or chronic)
- COPD
- Foreign body
- PE

Hear:
- High pitched
- “Wheezy”
- Musical Whistling
- TYPICALLY on expiration
- Often don't need stethoscope

Best heard-intrascapular, second intercostals-anterior, angle of Louis

Can't be cleared by coughing
**Stridor**
Produced with upper airway obstruction

Causes:
- Croup
- Foreign body—partial airway obstruction
- Laryngospasm
- Laryngeal edema

Hear:
- Harsh
- Seal bark
- High-pitched
- Snoring
- Crowing
- On inspiration—more pronounced

Generally don’t need stethoscope

**Nothing**
Causes:
- Apnea
- Pneumothorax
- Total airway obstruction
- Hemothorax
- Pneumonectomy
- Lung consolidation

Pleural Friction Rub
Whispered Pectoriloquy
Egophony