* Differance between Huffing and coughing

Huffing	Coughing
- Forced expiration against open glottis	- Forced expiration against closed glottis
- Abdominals contract up and in against diaphragm	- Abdominals contract outwards causing ↑ intra-abdominal pressure
- Generate less intra-abdominal and intra-thoracic pressure during expiration	- Generate more intra-abdominal & intra-thoracic pressure during expiration.
- causes less strain on abdominal incisions.	- causes more strain on abdominal incisions.
- Have lower peak expiratory flow rate then coughing.	- Have higher peak expiratory flow rate then huffing.
- clears secretions from more distal airways	- clears secretions from more proximal airways.

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* Difference between obstructive and Restrictive lung disease :

obstructive lung disease	Restrictive lung disease
- Decrease in both FEV1 and FEV1/FVC ratio	- Normal FEV1/FVC ratio
- characterized by reduction in airflow.	- characterized by a reduction in lung volume.
- shortness of breath → in exhaling air	- Difficulty in taking air inside the lung
- The air will remain inside the lung after full expiration (i) COPD (ii) Asthma (iii) Bronchiectasis	- Due to stiffness inside the the lung tissue of chest wall cavity (i) Interstitial lung Dz. (ii) scoliosis. (iii) Neuromuscular cause (iv) marked obesity
- ~~M~~ low PEFR	- High PEFR
- Total lung capacity normal	- TLC ↓
- FVC normal	- FVC ↓
- lung volumes ↑ in obstructive diseases.	- lung volumes greatly ↓ in restrictive cases.

PFT in Obstructive and Restrictive diseases:

Obstructive disease	Restrictive disease
1) Spirometry	
- ↓ FEV1 - ↓ FVC - ↓ FEV1 / FVC • < 70% predicted - FEV1 use to follow severity in COPD	- ↓ FEV1 - ↓ FVC - FEV1 / FVC normal or increased
2) Flow volume loops	
- characterized by a limitation of expiratory airflow. • Eg. Asthma COPD	- characterized by diminished lung volume due to : • change in alteration in lung parenchyma [ILD] • disease of pleura, chest wall [e.g scoliosis] or neuromuscular apparatus [e.g muscular dystrophy]
- ↓ FEV1, FEF 25-75, FEV1/FVC ratio (<0.8) - ↑ or normal : TLC - "Scooped"	- ↓ TLC, FVC - Normal or ↑ : FEV1/FVC ratio - "witch's hat"

3) Lung volumes

- TLC > 120% predicted	- TLC < 80% predicted
- RV > 120% predicted	- RV < 80% predicted

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* Compare and contrast stable and unstable angina :

Stable Angina	Unstable Angina
1) Definition :	
- The seizures :	- The seizures :
• Appears in physical exertion or emotional stress;	• Have started recently
• Appear for more than one month ;	• Occur in lesser provocation or spontaneously.
• There are no significant changes in the main features of the pain.	• Are longer and stronger than those in stable angina
2) Chest Pain :	
- occurs in physical exertion or emotional stress	Occurs at rest
- lasts 2-5 min	- lasts more than 10 min.
3) Pathology :	
- Ischemia due to fixed stenosis of the arteries, supplying blood to the heart.	- Ischemia due to dynamic obstruction of the arteries, supplying blood to the heart, resulting from rupture of plaque with superimposed spasm and thrombosis.

4) Predictability :

- Predictable
- Not predictable

5) Treatment :

- The pain passes quickly after discontinuation of the physical effort or taking nitroglycerin under the tongue.
- Emergent treatment is necessary due to the rist of MI and cardiac arrest.

6) Diagnosis :

- The ECG in exercise is an important supplementary method.
- The ECG at exercise is contraindicated.
- Coronary angiography is usually not done.
- Coronary angiography is recommendable.

7) ECG :

- ECG is often normal
- The ECG frequently shows changes - ST segment depression and ischemic T-wave and without changes in QRS.