Restrictive:

A lung that gives rise to a restrictive pattern is a small lung.

It is difficult to put a lot of air into them, except only at very high pressures.

As a result, patients automatically will breathe with smaller tidal volumes

Restrictive patterns Interstitial lung diseases

- Sarcoidosis
- Idiopathic fibrosis
- Pneumoconiosis (inhaled inert “dust” particles like coal or asbestos)
- Hypersensitivity pneumonitis
- Collagen Vascular (Lupus, Scleroderma)
- Drug induced (e.g. amiodarone, bleomycin)
- Non-lung causes: obesity, spine deformities (small rib cage caused by kyphosis)

Obstructive:

Think of a balloon that is dysfunctional or that doesn’t deflate

If the alveoli do not collapse down readily, they stay big and increasing resistance to airflow.

Obstructive patterns
Most common

- Asthma
- Emphysema (95+ % of the time, this term is synonymous with COPD)
- smoking (common)
- α_1-antitrypsin deficiency (very rare)
- Chronic Bronchitis (common)

Less common

- Bronchiectasis (less common)
- chronic infections of the lung
- Cystic Fibrosis (less common)
- Bronchiolitis caused by RSV