

Interstitial lung disease (ILD) is a group of conditions that cause inflammation and scarring (fibrosis) in the lung interstitium — the tissue and space around the air sacs (alveoli). ILD can make it harder to breathe, reduce exercise tolerance and impact quality of life. With the right diagnosis, treatment and support, many people can maintain a good quality of life.

UNDERSTAND
MANAGE
BREATHE
LIVE WELL

WHAT HAPPENS IN INTERSTITIAL LUNG DISEASE?



HEALTHY LUNG



Normal lung structure

- Thin, flexible interstitium
- Healthy alveoli (air sacs)
- Easy transfer of oxygen into the blood

INFLAMMATION (INTERSTITIAL LUNG DISEASE)



Inflammation in the interstitium

- Thickening of the interstitium
- Immune cell activation
- Fluid and inflammatory cells
- Impairment of gas transfer

FIBROSIS (PULMONARY FIBROSIS)



Scarring and loss of elasticity

- Excess collagen and scar tissue
- Stiffening of the lungs
- Distorted lung architecture
- Loss of functioning air sacs
- Reduced oxygen transfer

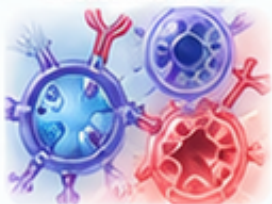
COMMON TYPES AND CAUSES

Idiopathic pulmonary fibrosis (IPF)



- Most common form
- Unknown cause
- Progressive scarring

Connective tissue disease related ILD



- Associated with conditions such as rheumatoid arthritis, scleroderma or lupus

Hypersensitivity pneumonitis



- Triggered by inhaled organic dusts (e.g. birds, moulds, farming, occupational)

Environmental and occupational ILD



Exposure to asbestos, silica, metals or chemicals

Drug-induced ILD



- Certain medications (e.g. chemotherapy, immunotherapy, amiodarone, nitrofurantoin)

COMMON SYMPTOMS



Persistent dry cough



Shortness of breath (particularly on exertion)



Fatigue and low energy



Chest tightness or discomfort

IMPACT ON LUNG FUNCTION

Normal lung



- Soft and elastic
- Normal lung volumes
- Efficient gas exchange

Fibrotic lung



- Stiff and non-compliant
- Reduced lung volumes
- Impaired oxygen transfer
- Increased work of breathing

HOW ILD IS DIAGNOSED

1 Clinical assessment



- Detailed history and examination
- Identify potential causes
- Assess severity and associated conditions

2 Lung function tests (spirometry, DLCO)



- Measure lung volumes and gas transfer
- Help assess severity and progression

3 High-resolution CT (HRCT)



- Detailed images of lung structure
- Identifies patterns of inflammation and fibrosis
- Guides diagnosis and prognosis

4 Blood tests



- Autoimmune screening
- Markers of inflammation
- Exclude other causes

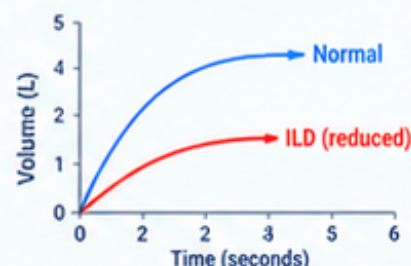
5 Additional tests (if needed)



- Bronchoscopy with lavage or biopsy
- Surgical lung biopsy (in selected cases)
- Multidisciplinary team review

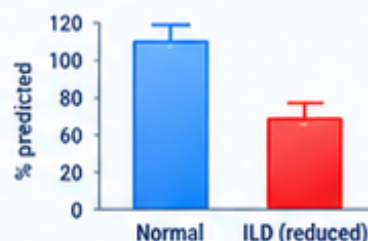
LUNG FUNCTION TESTS – WHAT DO THEY MEAN?

FVC (Forced Vital Capacity)



- Measures the total amount of air exhaled
- Often reduced in ILD due to stiff lungs
- Helps monitor disease progression

DLCO (Diffusing Capacity for Carbon Monoxide)



- Measures how well oxygen passes from the lungs into the blood
- Often reduced in ILD
- Helps assess severity and prognosis

HRCT SCAN – TYPICAL PATTERNS



Non-specific interstitial pneumonia (NSIP) – inflammation and fibrosis



Usual interstitial pneumonia (UIP) – honeycombing (typical of IPF)

- Shows characteristic patterns of fibrosis
- Helps distinguish between different types of ILD
- Guides treatment and prognosis

TREATMENT OPTIONS



Antifibrotic medications (for IPF and some progressive ILD)

- Nintedanib or pirfenidone
- Can slow disease progression
- Best started early
- Regular monitoring for side effects



Treat underlying cause (where possible)

- Immunosuppressive therapy for autoimmune ILD
- Remove environmental exposures
- Stop offending medications
- Treat infection (if present)



Symptom management

- Relieve breathlessness
- Manage cough
- Treat reflux and other associated conditions
- Oxygen therapy (if needed)



Pulmonary rehabilitation

- Supervised exercise and education
- Improve fitness and quality of life
- Breathing techniques



Lung transplantation (for selected patients)

- Considered in advanced disease
- Assessment at specialist centres

LIVING WELL WITH ILD



Stay as active as possible



Healthy diet and weight management



Vaccinations (e.g. influenza, pneumococcal, COVID-19)



Avoid smoking and lung irritants



Emotional and practical support

MONITORING AND FOLLOW-UP



- Regular review with your respiratory specialist
- Repeat lung function tests and HRCT (as needed)
- Monitor symptoms and oxygen levels
- Manage complications (e.g. pulmonary hypertension)
- Discuss advanced care planning when appropriate

