



IDIOPATHIC PULMONARY FIBROSIS: SCIENCE & TECHNOLOGY

NEWS: Zakir Hussain's death from Idiopathic Pulmonary Fibrosis (IPF): What causes it and who is most vulnerable to it?

WHAT'S IN THE NEWS?

Idiopathic Pulmonary Fibrosis (IPF) is a chronic lung disease causing irreversible scarring and breathing issues, primarily in those over 50, while Ustad Zakir Hussain (1951–2024), legendary tabla maestro and cultural icon, revolutionized Indian classical music globally, co-founded Shakti, and earned accolades like the Padma Vibhushan.



Ustad Zakir Hussain (1951–2024)

- **Renowned Tabla Maestro:** Revolutionized tabla as a melodic and rhythmic instrument and was a cultural ambassador of India.
- **Legacy:** Son of tabla legend Ustad Alla Rakha, he upheld the Punjab gharana tradition while infusing it with creativity and innovation.
- **Early Prodigy:** Started playing tabla at age three and became a professional performer as a teenager.
- **Shakti Band Co-Founder (1973):** Collaborated with John McLaughlin to blend Indian classical music with Western jazz.
- **Film Composer:** Scored music for films like *Mr. and Mrs. Iyer* and *Manto*, and contributed to global projects like *Apocalypse Now*.



- **Awards and Honors:** Won four Grammy Awards and was conferred the Padma Vibhushan, India's second-highest civilian honor.
- **Inspiration:** Known for his humility and curiosity, he inspired musicians worldwide.

Idiopathic Pulmonary Fibrosis (IPF)

What is IPF?

- A chronic, progressive lung disease causing scarring (fibrosis) of lung tissue, leading to reduced lung function.
- Specifically affects the interstitium (tissue around alveoli), making oxygen absorption harder.
- Exact cause unknown, hence termed "idiopathic."

Why Does Scarring Happen?

- Triggered by lung injury from environmental factors (dust, smoke, infections) or autoimmune responses.
- Abnormal healing response overproduces collagen, forming excessive scar tissue.
- Factors like genetics, chronic inflammation, and environmental exposures contribute.

Symptoms:

- Shortness of breath, dry cough, fatigue, weight loss.
- Leads to complications like pulmonary hypertension, heart failure, or respiratory failure.

Who is at Risk?

- Primarily affects individuals over 50 years, more common in men.
- Risk factors: Smoking, prolonged exposure to dust/wood/metal particles, chronic GERD.

Diagnosis:

- Confirmed through high-resolution CT scans, pulmonary function tests, or lung biopsy.

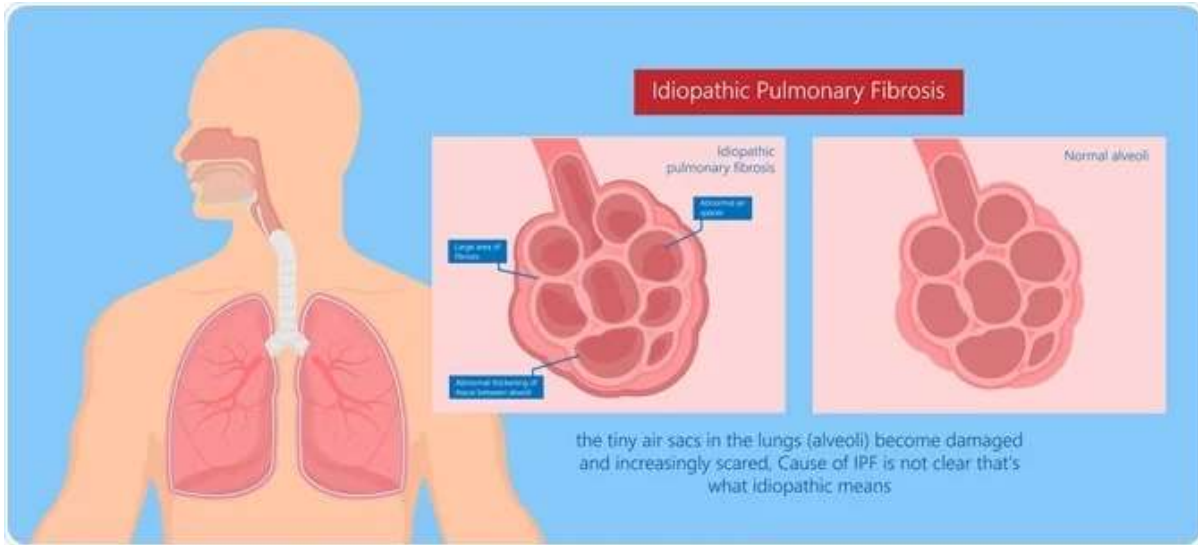
Management:

- Antifibrotic drugs (pirfenidone, nintedanib) slow progression.
- Oxygen therapy, lung exercises, and lung transplants for advanced cases.
- Early diagnosis and multidisciplinary care are crucial.



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