

Therapy at Each Stage of COPD

I: Mild	II: Moderate	III: Severe	IV: Very Severe
<ul style="list-style-type: none"> • FEV₁/FVC < 0.70 • FEV₁ ≥ 80% predicted 	<ul style="list-style-type: none"> • FEV₁/FVC < 0.70 • 50% ≤ FEV₁ < 80% predicted 	<ul style="list-style-type: none"> • FEV₁/FVC < 0.70 • 30% ≤ FEV₁ < 50% predicted 	<ul style="list-style-type: none"> • FEV₁/FVC < 0.70 • FEV₁ < 30% predicted or FEV₁ < 50% predicted plus chronic respiratory failure
Active reduction of risk factor(s); influenza vaccination			
Add short-acting bronchodilator (when needed)			
Add regular treatment with one or more long-acting bronchodilators (when needed); add rehabilitation			
Add inhaled glucocorticosteroids if repeated exacerbations			
Add long term oxygen if chronic respiratory failure. Consider surgical treatments			

SMOKING CESSATION

Counseling at every visit

Nicotine Replacement:

- Nicotine gum-OTC,
 - Nicotine patch-Rx and OTC,
 - Nicotine lozenge-OTC,
 - Nicotine nasal spray-Rx,
 - Nicotine inhaler-Rx
- Antidepressant-Bupropion Sr
Varenicline

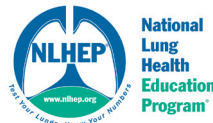
*All spirometry values (FEV₁ and FVC) are post-bronchodilator values
Source: Reprinted with permission from the Global Initiative for Chronic Obstructive Lung Disease (GOLD) www.goldcopd.org - 2006

Endorsed by: National Lung Health Education Program, COPD Foundation, Jo-Ann LeBuhn Center for Chest Disease, New York-Presbyterian Hospital.

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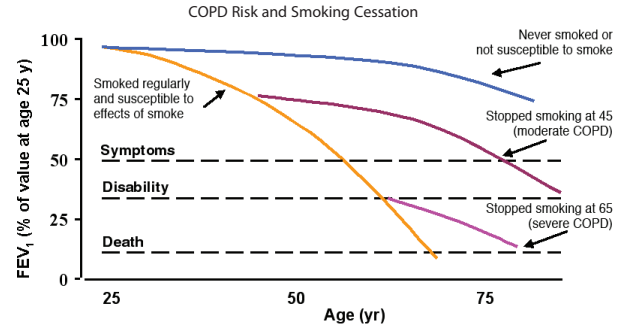
**New York-Presbyterian
Healthcare System**



THE COPD POCKET CONSULTANT

Impact of Smoking

Smoking Cessation Slows the Rate of Lung Function Loss



Modified by Dennis E. Doherty (J Respi Dis 2003;24(12):S25. from Fletcher C, Peto R. Brit Med J. 1977;1:1645-48
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Consider a COPD Diagnosis

- **Chronic Cough:**
Present intermittently or every day. Often present throughout the day; seldom only nocturnal
- **Chronic sputum production:**
Any pattern of chronic sputum production may indicate COPD
- **Age > 40**
- **Dyspnea** that is:
Progressive (worsens over time)
Persistent (present every day)
Worse on exercise
Worse during respiratory infections.
- **History of exposure to risk factors:**
Tobacco smoke
Occupational dusts and chemicals
Smoke from home cooking and heating fuel

DO SPIROMETRY to DIAGNOSE COPD

Commonly Used Formulations of Drugs for COPD

Drug	Inhaler (mcg)	Solution for Nebulizer (mg)	Oral	Vials for Injection	Duration of Action (hours)
Beta 2 Agonists - Short Acting					
Albuterol	90 (HFA-MDI)	0.63/3 ml 1.25/3 ml 2.5/3 ml	4mg (Pill)		4-6
Levalbuterol	45 (HFA-MDI)	0.31/3 ml 0.63/3 ml 1.25/3 ml			6-8
Beta 2 Agonists - Long Acting					
Formoterol	12 (DPI)				12+
Salmeterol	50 (DPI)				12+
Arformoterol		15 mcg/2ml			12+
Anticholinergics - Short-Acting					
Ipratropium Bromide	17 (HFA-MDI)	0.5/2 ml			4-6
Anticholinergics - Long-Acting					
Tiotropium	18 (DPI)				24+
Combination short-acting B2-agonists plus anticholinergic					
Albuterol / Ipratropium	90/18 (CFC-MDI)	3/0.5/3 ml			4-6
Methylxanthines					
Aminophylline				+	Variable
Theophylline (SR)			100-600 mg (Pill)		Variable, up to 24

Drug	Inhaler (mcg)	Solution for Nebulizer (mg)	Oral	Vials for Injection	Duration of Action (hours)
Inhaled Glucocorticosteroids					
Beclomethasone*	40, 80 (HFA-MDI)				12
Budesonide*	90, 180, 200 (DPI)	0.25/2 ml 0.5/2 ml			12
Fluticasone*	44-220 (HFA) 50 (DPI)				12
Mometasone*	220 (DPI)				24
Triamcinolone*	100 (MDI)				12
Combination Long Acting B2-Agonists Plus Glucocorticosteroids					
Budesonide / Formoterol*	80/4.5 and 160/4.5 (HFA)				12
Fluticasone / Salmeterol	100/50* 250/50 500/50* (DPI)				12 12 12
Fluticasone / Salmeterol*	45/21 115/21 230/21 (HFA)				12 12 12
Systemic Glucocorticosteroids: For Exacerbations					
Prednisone	10-2000 mg		5-60 mg (Pill)		
Methyl-Prednisolone			4, 8, 16 mg (Pill)	+	
Adapted from the Global Initiative for Chronic Obstructive Lung Disease (GOLD) www.goldcopd.org					
*Off-label Use					
HFA - Hydrofluoroalkane MDI - Metered Dose Inhaler DPI - Dry Powder Inhaler					