

THE CHRONIC DISEASE PREVENTION AND MANAGEMENT TACKLE BOX

# COPD MANAGEMENT

CHRONIC DISEASE NETWORK AND ACCESS PROGRAM (CD-NAP)

**RISK FACTORS**  
**CLASSIFICATION OF SEVERITY**  
**REFERRAL**  
**MANAGEMENT OF COPD**  
**ACUTE EXACERBATION OF COPD**  
**SELF-MANAGEMENT PLAN OF ACTION**  
**NUTRITION MANAGEMENT**  
**ALGORITHMS OF CARE**



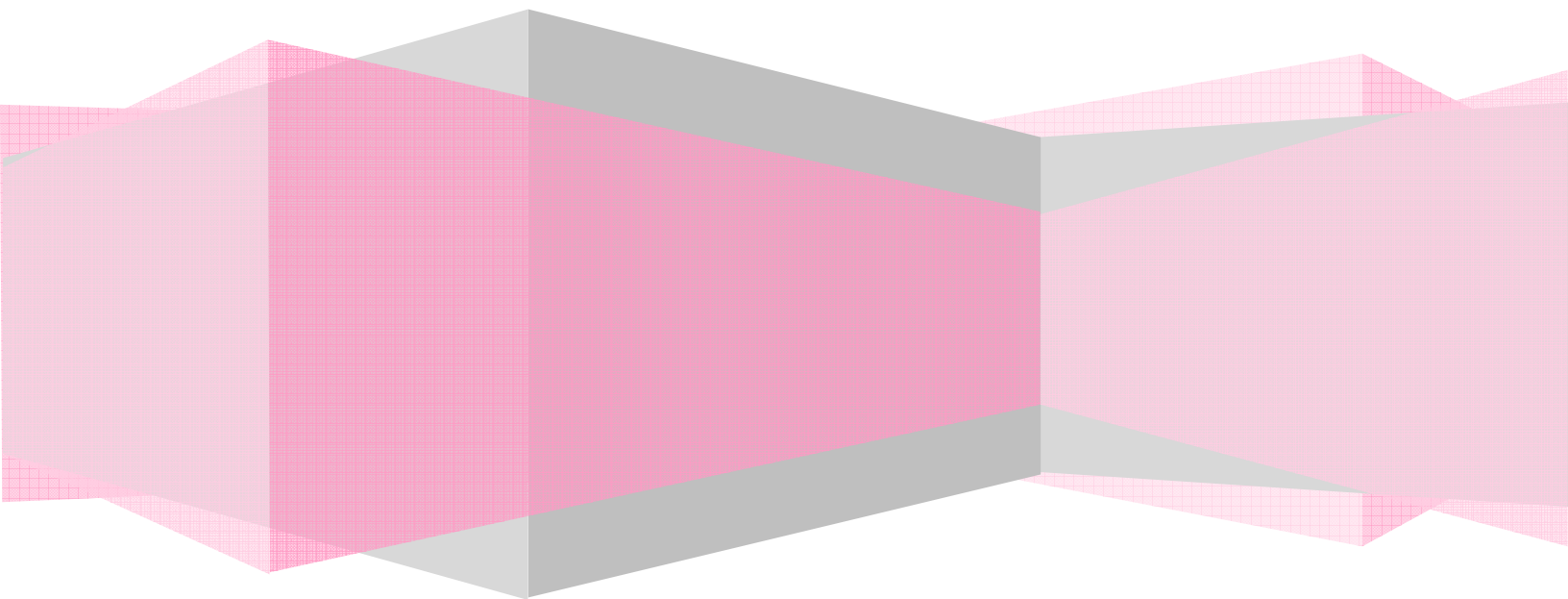
Chronic Disease Network and Access Program 2009

# Management of COPD

## Guide for Health Professionals

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These materials are available for download on the CD NAP website

[www.ehealth-north.sk.ca](http://www.ehealth-north.sk.ca)

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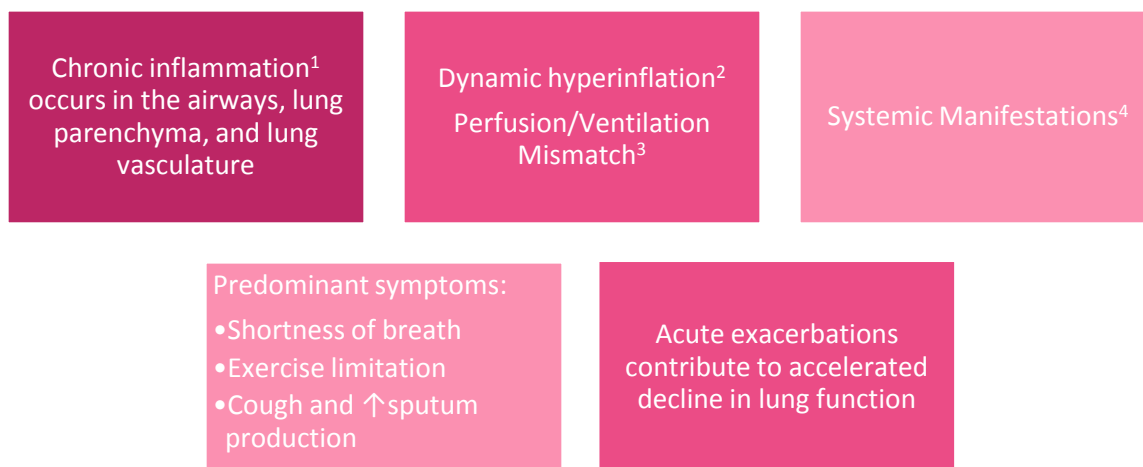
It is recommended that prescribers evaluate their patients' individual circumstances and conditions before any diagnosis or treatment is made or procedure followed that may be based on suggestions by the authors of this resource. Prescribers should consult product monographs before prescribing any of the medications mentioned or discussed in this resource.

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## COPD – Definition

- Chronic Obstructive Pulmonary Disease
- “COPD is a respiratory disorder **largely caused by smoking** characterized by progressive, partly reversible **airflow obstruction; systemic manifestations; and increasing frequency and severity of exacerbations**”.



1. Exposure to a noxious substance (ie tobacco smoke) initiates an inflammatory response that involves neutrophils, macrophages, T-cells, and inflammatory mediators. These mediators damage lung structure and sustain inflammation which persists long after the noxious substance has been removed. Chronic inflammation causes hypertrophy and hyperplasia of the mucous glands; remodelling of the airways and smooth muscle contraction which restrict airflow; and destruction of bronchioles and the capillary bed.
2. Dynamic hyperinflation means the lungs cannot completely empty (to residual volume) on exhalation. Air becomes trapped in the lungs
3. There are areas of the lungs that are well perfused but not well ventilated and vice versa. The lungs no longer efficiently oxygenate the blood, resulting in hypoxemia. Serious consequences include pulmonary hypertension and right heart failure.
4. Include: skeletal muscle dysfunction, malnutrition, osteoporosis, metabolic disorders, pulmonary hypertension, arrhythmias, heart failure, ischemic heart disease, glaucoma and cataracts, depression, anxiety and panic disorders.

## COPD-Diagnosis

- Post-bronchodilator  $FEV_1/FVC < 0.70^1$  indicates airflow obstruction. Spirometry is necessary to establish the diagnosis of COPD<sup>2</sup>

### However...

- Most patients are not diagnosed until the disease is well advanced (symptoms may not be recognised until 40-50% of lung function is lost<sup>3</sup>).
- Spirometry should be targeted at persons at risk for COPD to establish earlier diagnosis and initiation of treatment.

### Patient History should include:

1. Tobacco use (current and past)
2. Assessment of breathlessness using MRC scale
3. Assessment of complications of COPD (ankle edema, weight loss, etc)
4. Identify comorbidities (anxiety, depression, osteoporosis, glaucoma, CVD, etc)
5. Current treatment

### Patient Clinical Assessment (to help establish diagnosis, severity of COPD and to rule out other pathology):

- physical exam
- pulmonary function tests (including lung volumes and diffusing capacity)
- exercise tests (for advanced COPD in preparation for Pulmonary Rehab Program enrolment)
- ABG if  $FEV_1 < 40\%$  and oximetry  $< 92\%$ ;
- venous blood test for anemia, polycythemia;
- BMI;
- strength and endurance testing for skeletal muscle function;
- radiology;
- echocardiography to assess pulmonary hypertension;
- sputum cytology and C&S

1.  $FEV_1/FVC$  is a ratio of the volume of air blown out forcibly in 1 second compared to the total volume that could be blown out. If the patient can only blow out 70%, there is an obstruction. Normal predicted values for  $FVC_1/FVC$  are typically based on populations of matched age, gender and height. Predicted values are derived from Caucasian populations; predicted values in First Nation populations have not been derived.
2. Differential diagnosis: CV conditions, pulmonary embolus, deconditioning, obesity, anemia, interstitial lung disease, other lung pathology.
3. Patients may be unaware of the disease, not able to recognise worsening of symptoms, and develop strategies to cope with increasing symptoms. For example, patients may believe that increasing dyspnea is a normal factor of aging, so do not seek medical attention until functional ability is severely impaired.

## Screening for COPD

- **Current/past smokers  $\geq$  40 years old who answer yes to any of the following:**

Do you cough regularly?	
Do you cough up phlegm regularly?	
Do simple chores make you short of breath?	
Do you wheeze at night or with exertion?	
Do you get more colds that last longer than other's?	

- Spirometry is recommended.
- Note that an acute exacerbation is a common initial clinical presentation of COPD. Spirometry should be considered for current/past smokers who present with a RTI (once acute symptoms subside).

## **Risk Factors for COPD**

### **Environmental factors:**

- Tobacco smoke (active and passive exposure)
- Occupational agents (ex asbestos, coal, gold, silica dust, wood smoke, fibreglass dust, solvent fumes)
- Air pollution (outdoor: smog, ozone, fuel combustion exhaust, volatile compounds; indoor: cooking and heating fumes)

### **Host factors:**

- AAT deficiency (genetic disorder in which there are low levels of alpha-1 antitripsyn in the lung and blood; consider if COPD presents in a young adult, especially with a family history of AAT deficiency)
- Childhood viral infections
- Bronchial hyper-responsiveness or asthma
- Lung growth
- Other genetic factors (other proteolytic enzymes and antiproteases may be involved)

### **Other potential factors:**

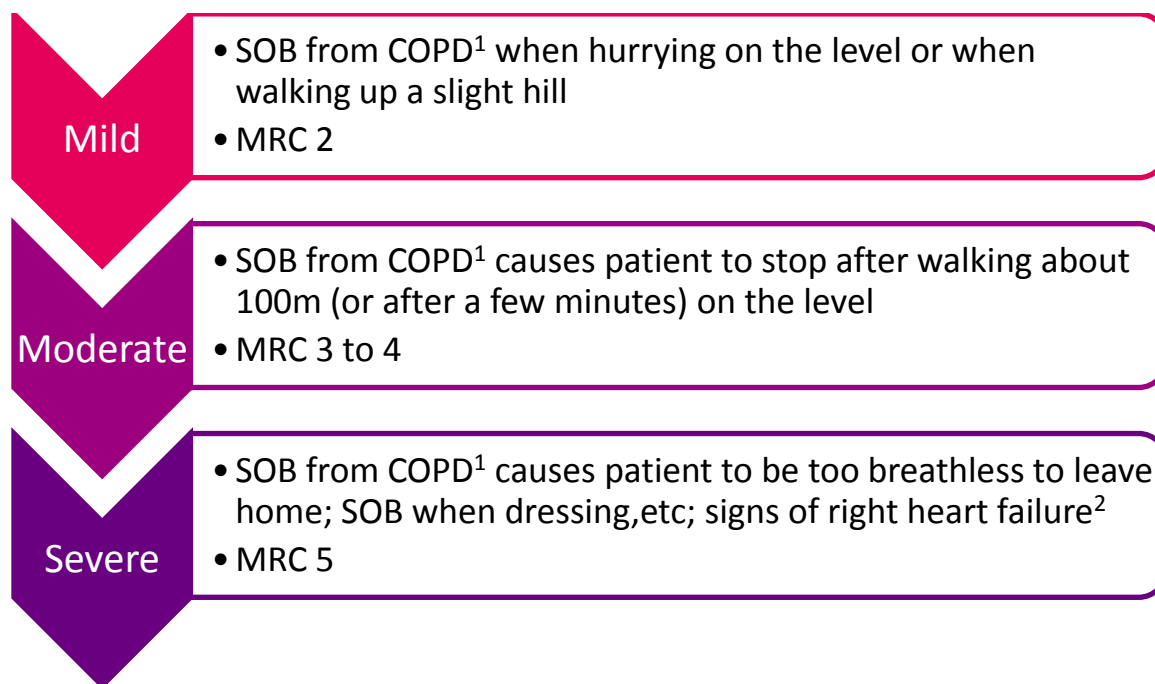
- Sex/gender (women seem predisposed to the effects of smoking and the environment)
- Socioeconomic factors
- Alcohol use (excessive alcohol intake is an independent risk factor for COPD)



## Classification of COPD Severity

- Once a diagnosis of COPD has been established with spirometry, severity can be classified by *Symptoms and Disability* or by *spirometry*.

### Canadian Thoracic Society Classification of Severity by *Symptoms and Disability*:



1. Symptoms may not accurately reflect COPD disease severity if other non-COPD conditions are present that also cause SOB (ex cardiac dysfunction, anemia, muscle weakness, metabolic disorders). Care should be taken to classify severity of COPD in patients with comorbid diseases or other possible causes of SOB.
2. Or presence of chronic respiratory failure.

### Canadian Thoracic Society Classification of COPD Severity by *Impairment of Lung Function*

**MILD:** FEV<sub>1</sub> ≥ 80% predicted; FEV<sub>1</sub>/FVC <0.7

**MODERATE:** FEV<sub>1</sub> 50% to <80% predicted; FEV<sub>1</sub>/FVC <0.7

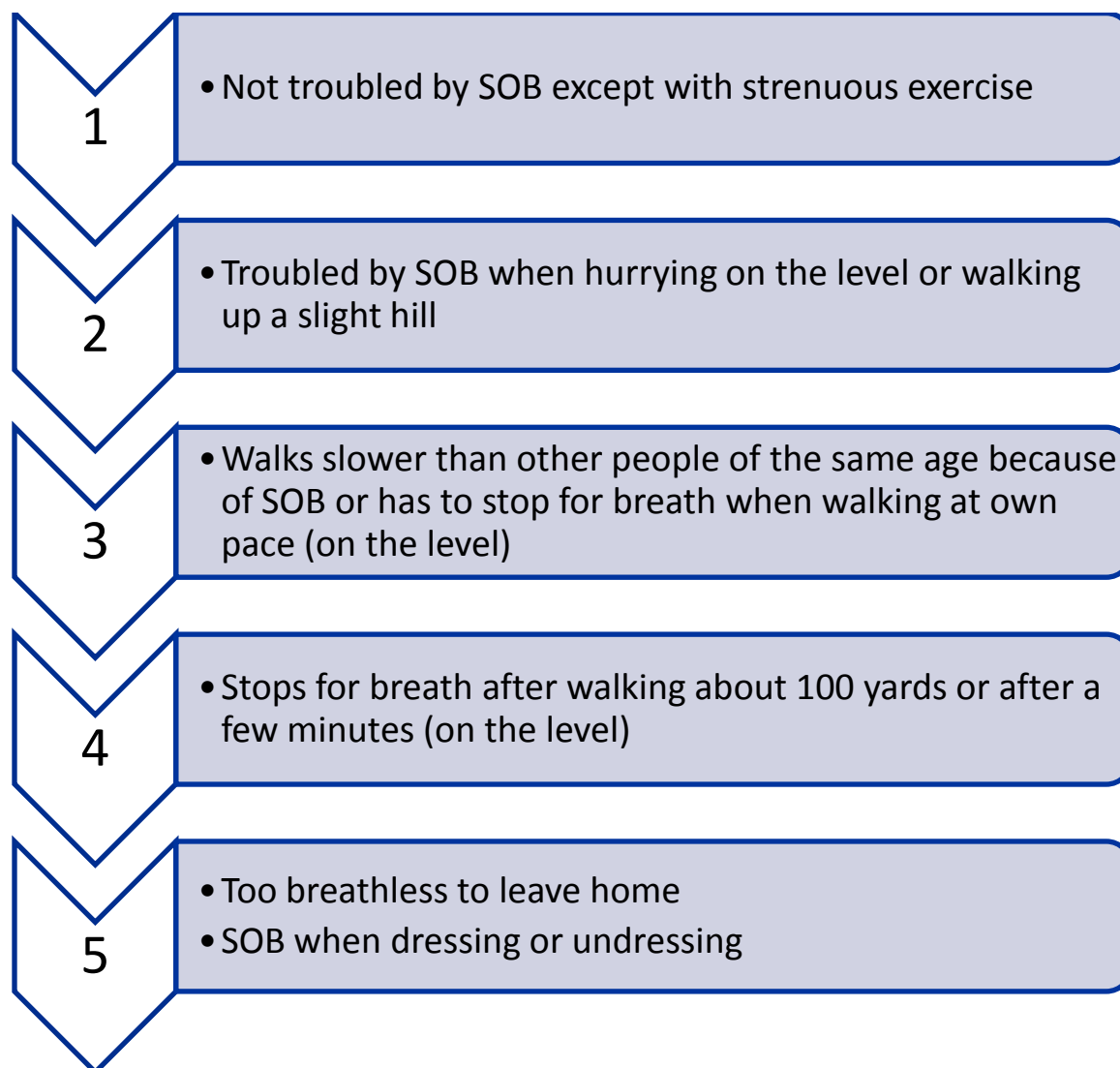
**SEVERE:** FEV<sub>1</sub> 30% to <50% predicted; FEV<sub>1</sub>/FVC <0.7

**VERY SEVERE:** FEV<sub>1</sub> <30% predicted; FEV<sub>1</sub>/FVC <0.7

\*FEV<sub>1</sub> = Forced Expiratory Volume in 1 second = volume of air forcibly exhaled in 1 second, compared to cohorts of the same age, height, weight, and gender.

## Classification of COPD Severity cont`

### MRC<sup>1</sup> Dyspnea Scale:



### BODE Index (Assess Risk of Death)

- Body Mass Index** (↓BMI = ↑risk of death)
- Airflow Obstruction** (↑obstruction = ↑risk of death)
- Dyspnea** (↑dyspnea = ↑risk of death)
- Exercise Tolerance** (↓exercise tolerance = ↑risk of death)

## When to Refer to a Specialist

- Diagnostic uncertainty
- Symptoms disproportionate to degree of airflow obstruction<sup>1</sup>
- Accelerated decline in lung function<sup>2</sup>
- Possible alpha<sub>1</sub>-antitrypsin deficiency<sup>3</sup>
- Symptom onset at young age
- Severe or recurrent acute exacerbations
- Failure to respond to treatment

1. IE Patient complains of more severe symptoms or disability than spirometry results would suggest.
2. Lung function normally declines at a rate of about 15-20mL per year starting at 40-50 years of age. In smokers the rate of decline is up to 80mL/year
3. AAT deficiency is a genetic disorder involving low levels of the enzyme alpha<sub>1</sub>-antitrypsin in the lungs and blood. This enzyme is a protease inhibitor which protects tissue from destructive enzymes such as elastase produced during the inflammatory process. A deficiency in AAT results in uninhibited tissue breakdown from inflammation.

## Management of COPD

### Goals:

- Prevent disease progression (by smoking cessation)
- Alleviate symptoms
- Improve exercise tolerance
- Prevent and treat exacerbations
- Improve overall health status
- Reduce mortality

### Components:

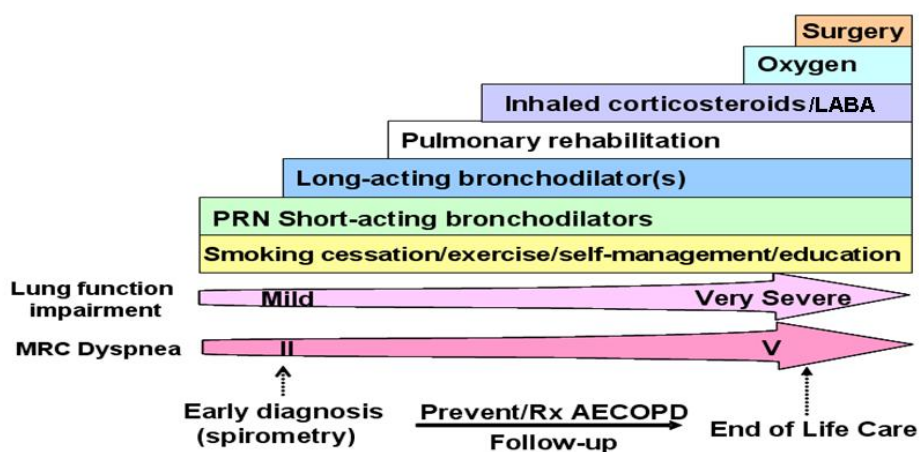
- Smoking cessation
- Education and Self Management Skills
- Pharmacologic agents
- Exercise and Pulmonary Rehab
- Vaccinations (including annual flu shot and pneumonia shot every 5 years)
- Comprehensive case management for advanced disease



Canadian Respiratory  
Guidelines



## Comprehensive Management of COPD

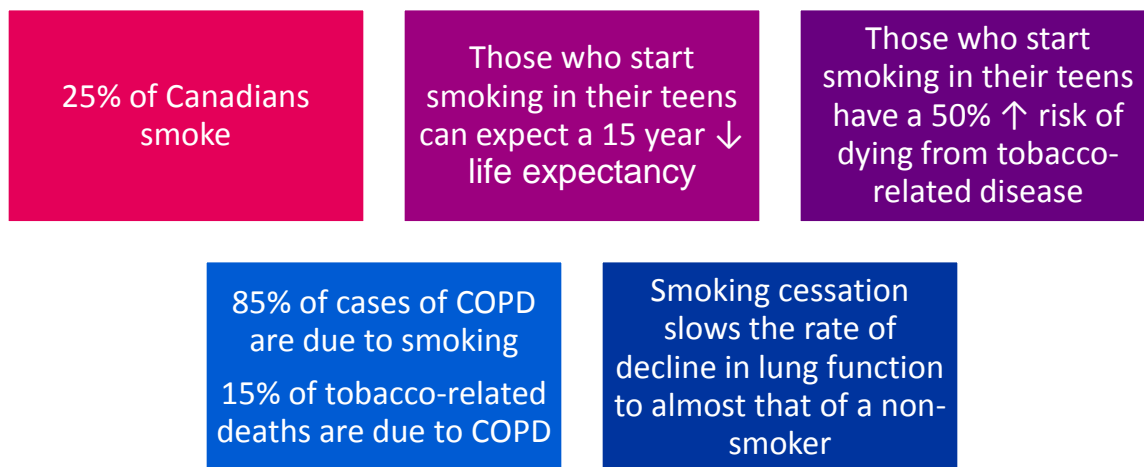


*Can Respir J* 2008;15(Suppl A):1A-8A.

CANADIAN THORACIC SOCIETY  
SOCIÉTÉ CANADIENNE DE THORACOLOGIE

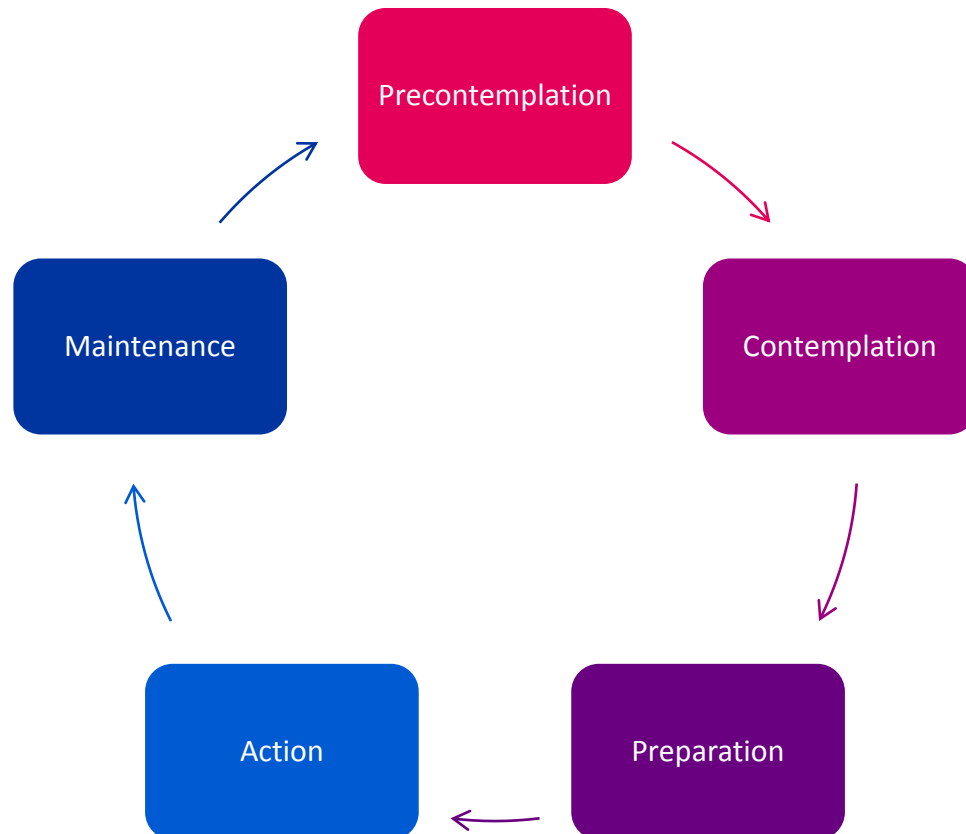
## Smoking Cessation

- ...is the single most effective intervention to reduce the risk of developing COPD slow its progression...



## Smoking Cessation cont'

- A combination of counselling (individual or group) and pharmacologic agents increases success
- Assess Stage of Change (ie readiness to quit) and offer support to help patient progress through each level (including possible relapse) to maintenance stage.



## Smoking Cessation – Pharmacologic Agents

Medication	Dose	Use	Duration
<i>Nicotine Gum</i> <sup>1</sup>			
Nicorette	2mg <sup>2</sup> Maximum 24pieces/day	1 piece/hour or prn	Up to 12 weeks <sup>3</sup>
Nicorette Plus	4mg <sup>4</sup> Maximum 24pieces/day	1piece/hour or prn	Up to 12 weeks <sup>3</sup>
Thrive <sup>2,3,4</sup>	As per Nicorette Gum		
<i>Nicotine Lozenge</i> <sup>5</sup>			
Thrive	1, 2mg <sup>6</sup> Maximum 30mg/day	1 lozenge q1-2h 1 lozenge q2-4h	6 weeks 3 weeks
Nicorette		1 lozenge q4-8h	3 weeks
<i>Nicotine Patch</i> <sup>7</sup>			
Nicoderm	21mg/24h <sup>8</sup> 14mg/24h 7mg/24h	1 patch/24 hours <sup>9</sup> 1 patch/24 hours <sup>9</sup> 1 patch/24hours <sup>9</sup>	4 weeks 2 weeks 2weeks
<i>Nicotine Inhaler</i> <sup>10</sup>			
	10mg/cartridge 6-12 cartridges/day	Puff on cartridge x 20min or prn	Use for up to 12 weeks initially, then taper over 6-12 weeks
<i>Bupropion</i> <sup>11</sup>			
Zyban	150mg AM x 3days then 150mg BID <sup>12</sup>	Stop smoking between day 8 and 14	7 to 12 weeks <sup>13</sup>
<i>Varenicline</i> <sup>14</sup>			
Champix	0.5mg AM x 3days then 0.5mg BID x 4 days, then 1mg BID <sup>15</sup>	Stop smoking after 7 days	12 weeks <sup>16</sup>

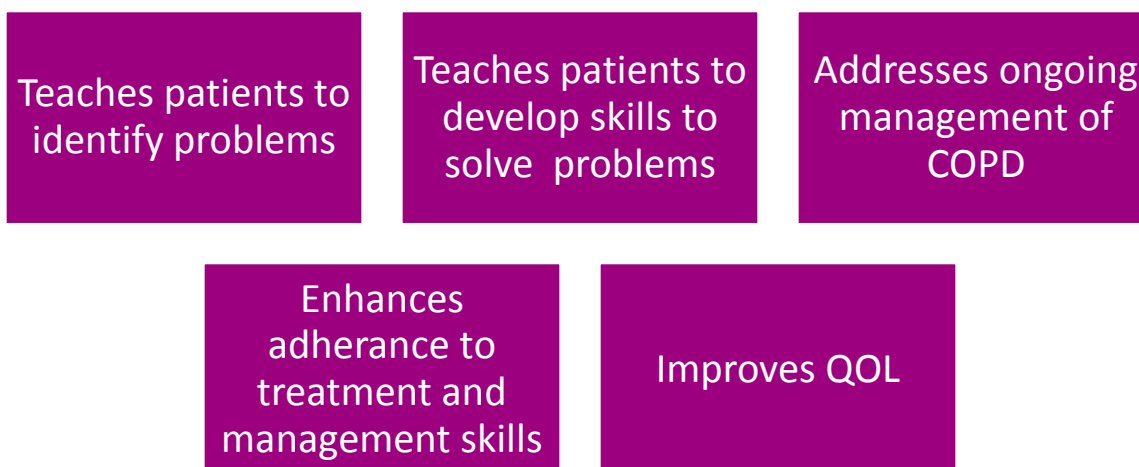
Source: CTS recommendations for management of COPD -2007 update

## Smoking Cessation – Pharmacologic Agents cont'

1. Do not chew as per non-medicated gum; chew 2 or 3 times, then park gum between gingival and cheek for 30-60 seconds. Repeat for 30 minutes. Do not eat or drink 15 minutes before or after using gum.  
Side Effects: burning, jaw pain, hiccups  
Contraindications: recent MI; unstable angina; severe cardiac arrhythmia; recent stroke; pregnancy and breastfeeding (? Yet many experts believe use of NRT is safer than smoking in pregnancy); <18 years of age; dental problems; TMJ; **\*be aware of potential harm to children and pets if not properly disposed of**  
Drug Interactions: coffee, acidic beverages ↓absorption (separate use by ≥15 minutes)
2. If <25 cigarettes (1pack) is smoked per day
3. Or longer if required. Taper by at least 1 piece every 4 to 7 days.
4. If ≥25 cigarettes (1pack) is smoked per day.
5. Suck lozenge until strong taste, then park in cheek. Repeat as long as required or until lozenge is gone (about 30 minutes).  
Side Effects: sore gums, teeth, or throat; hiccups; heartburn  
Contraindications: As per nicotine gum. **\*be aware of potential harm to children and pets if not properly disposed of\***  
Drug Interactions: As per nicotine gum.
6. Strength to use depends on interval to first craving upon awakening: <30minutes, use 4mg; > 30minutes, use 2mg.
7. Place patch on relatively hairless area between neck and waist. Apply patch to different place each day. See package insert for tips to maximize adhesion.  
Side Effects: Local skin irritation; vivid dreams  
Contraindications: *not* contraindicated in CVD; with caution post MI or stroke (though safer than smoking?); pregnancy and breastfeeding; <18 years of age **\*ensure proper disposal of used patches\***  
Drug Interactions: smoking ↑ side effects
8. Heavy smokers may need 2 patches to start. Start with lower dose if < 10 cigarettes/day. Tapering and duration should be individualized.
9. May remove patch at night if vivid dreams are troublesome, however craving for nicotine in the morning may be quite strong. Using nicotine inhaler, lozenge, or gum first thing in the morning may be helpful
10. Ten puffs = 1 puff from cigarette. Do not eat or drink 15 minutes before or after using inhaler.  
Side Effects: throat irritation; cough; rhinitis; dyspepsia  
Contraindications: as per nicotine gum
11. Can be used with NRT, but monitor BP. Decreases weight gain.  
Side Effects: insomnia, dry mouth, tremors, skin rashes, serious allergic reaction  
Contraindications: current seizure disorder; current/past diagnosis of bulimia or anorexia nervosa; concurrent use of other agents containing bupropion; recent/current withdrawal from alcohol, benzodiazepines or other sedatives; current/use within 14 days of MAOI; use with caution in situations that may reduce seizure threshold (history of head trauma, prior seizure disorder, CNS tumor, excessive alcohol use, stimulant/opioid addiction, diabetes)  
Drug Interactions:
12. ↓ dose in renal or hepatic impairment (not recommended)  
Ensure at least 8 hours between doses. Do not give second dose close to bedtime to avoid insomnia. If insomnia persists, reduce dose to 150mg AM
13. Consider longer treatment for smokers who suffer significant mood swings or who continue to experience strong cravings after discontinuing bupropion.
14. Safety in children <18 unknown.  
Side Effects: nausea, abnormal dreams, constipation, vomiting, flatulence, dry mouth  
Contraindications: severe renal impairment; pregnancy and breastfeeding;  
Drug Interactions: cimetidine; possible ↑adverse effects with NRT; ? safety with bupropion
15. 0.5mg BID if CrCl < 30mL/min. Use ↓dose in elderly or those suffering intolerable side effects.
16. Those who are still not smoking after 12 weeks of varenicline use may continue for another 12 weeks.



## Education and Self-management Skills<sup>1</sup>



### Outcomes of Education and Self-Management:

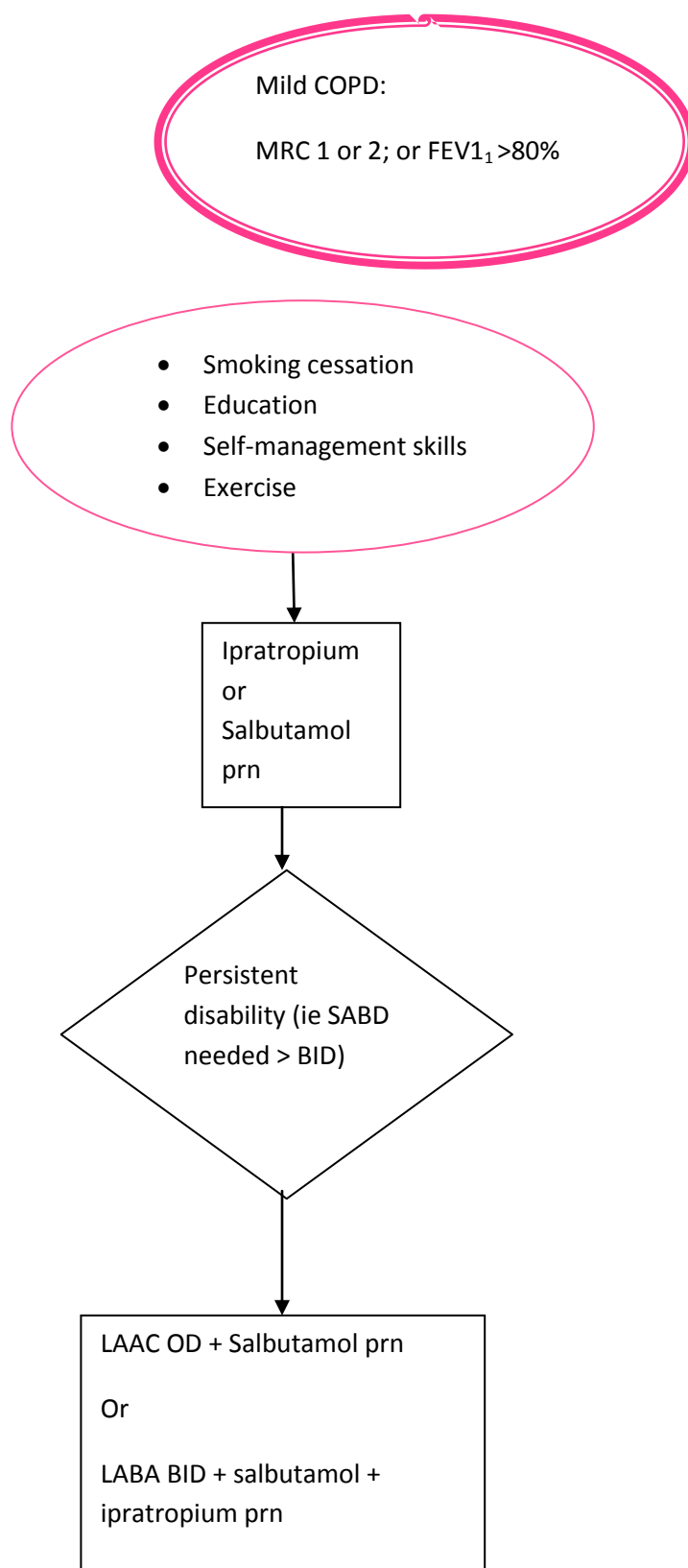
- ↑ QOL
- ↑ Patient satisfaction
- ↓ Health Care expenses
- ↓ Exacerbations and better management of them when they occur

### Components:

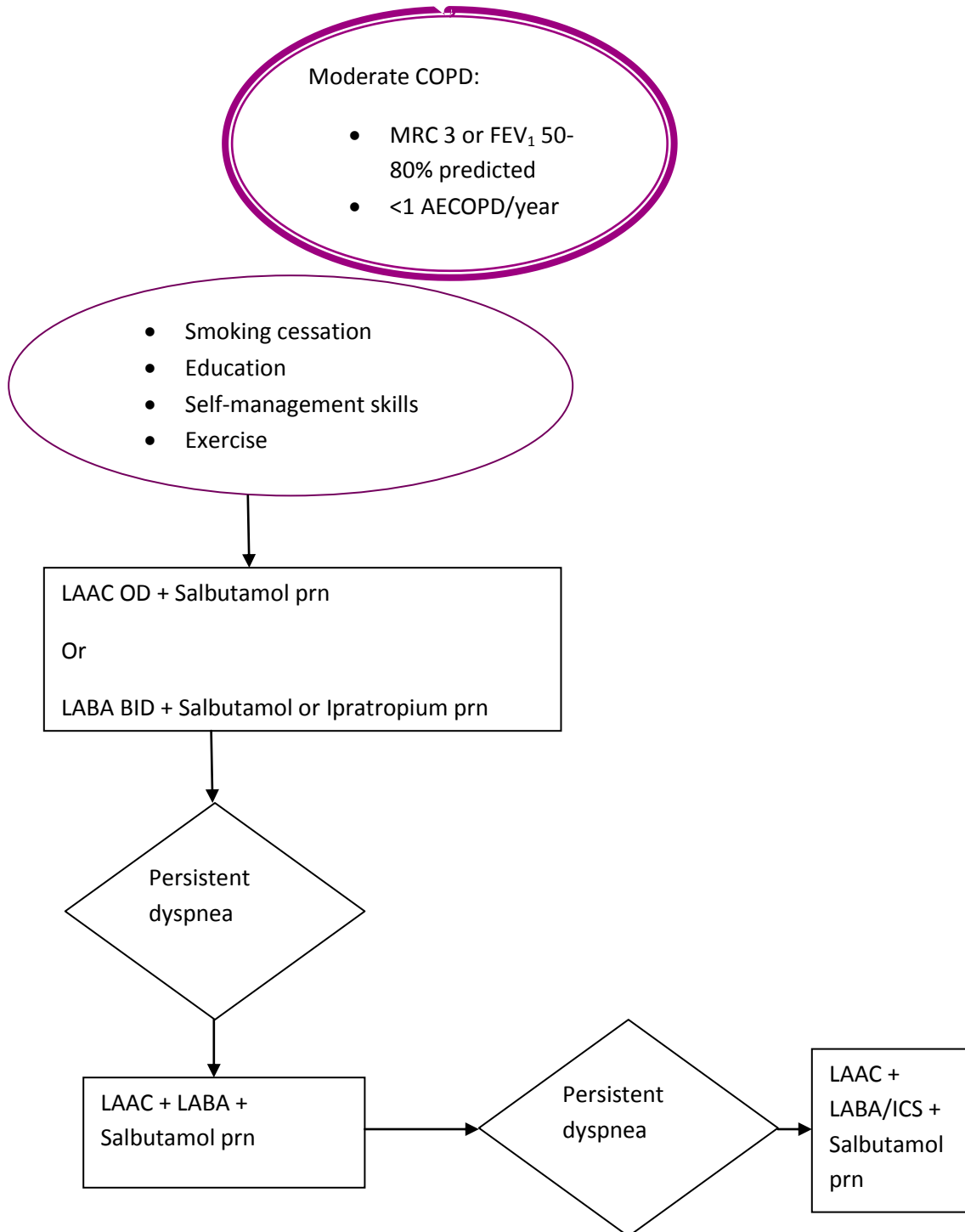
- Smoking cessation
- Proper use of medications and oxygen
- Pulmonary Rehab (where available) and exercise
- Management of acute breathlessness and exacerbations
- Reducing and dealing with fatigue
- Addressing nutrition issues
- Addressing psychosocial issues
- Improving sleep
- Addressing sexuality issues
- Planning for leisure and travel
- End-of-life planning

1. Refer to 'COPD Toolkit' for more information and resources. To obtain a COPD Toolkit, contact the Lung Association of Saskatchewan ([info@sk.lung.ca](mailto:info@sk.lung.ca)) or CDNAP.

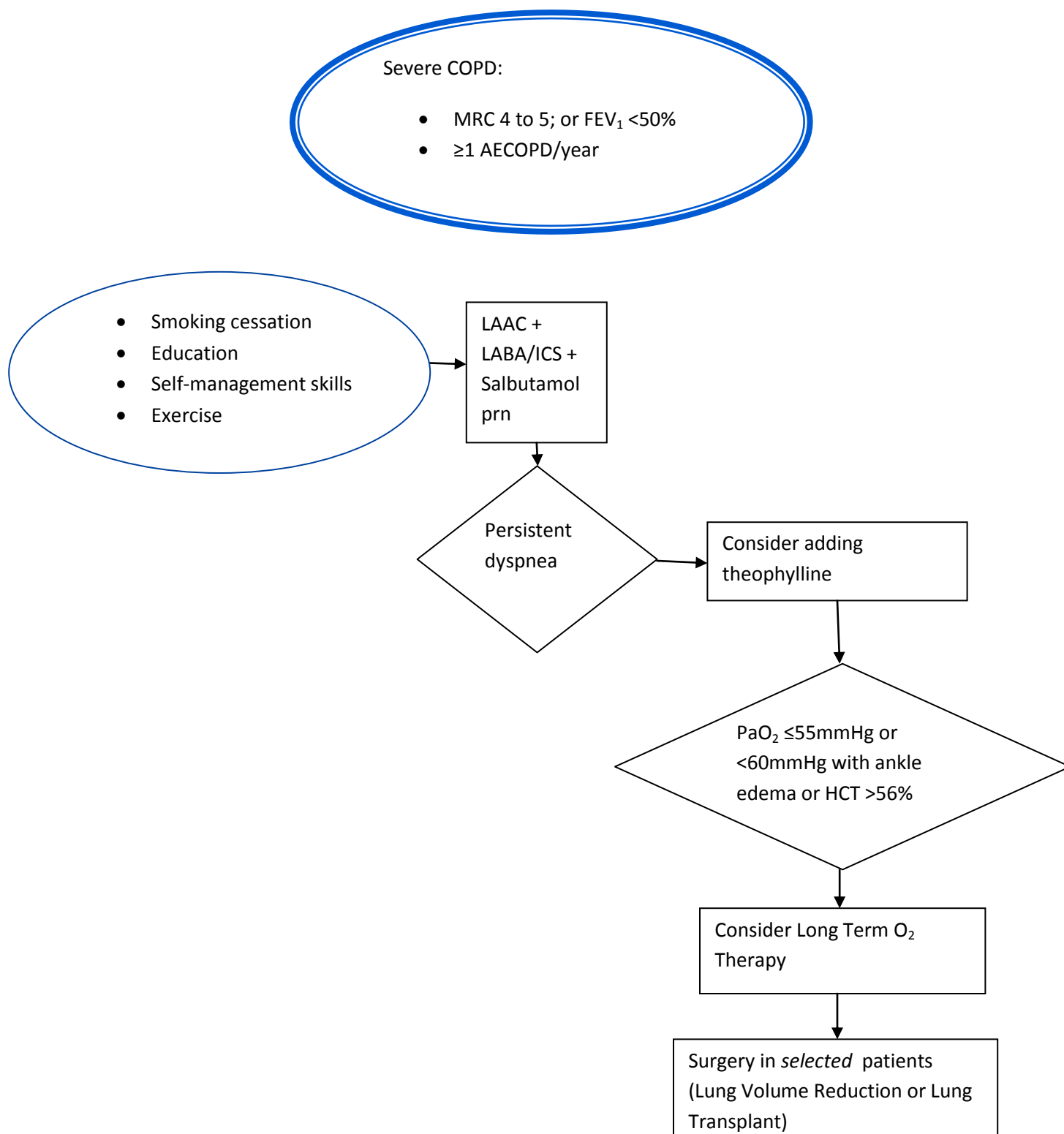
## Pharmacologic Management of COPD



## Pharmacologic Management of COPD cont'



## Pharmacologic Management of COPD cont'



## Pharmacologic Management of COPD: Inhaled Medications

Drug	Trade Name	Dose
<i>Short-acting Beta Agonist<sup>1</sup></i>		
Salbutamol	Ventolin	100mcgMDI; 1.25, 2.5, or 5.0 mg nebs ii puffs or 1 neb (2.5-5.0 mg) PRN
Terbutaline	Bricanyl	500mcg PDI PRN
<i>Short-acting Anticholinergic<sup>2</sup></i>		
Ipratropium	Atrovent	20mcg MDI; 250, 500mcg nebs ii puffs QID (or PRN) or 1 neb QID
<i>SABA/SAAC</i>		
Ipratropium/Salbutamol	Combivent	500mg/2.5mg neb QID
<i>Long-acting Anticholinergic<sup>3</sup></i>		
Tiotropium	Spiriva	18mcg HH OD
<i>Long-acting Beta Agonist</i>		
Salmeterol <sup>4</sup>	Serevent	50mcg PDI BID
Formoterol <sup>5</sup>	Foradil Oxeze	12mcg PDI 6mcg, 12mcg PDI BID
<i>Inhaled Corticosteroid<sup>6,7</sup></i>		
Beclomethasone	QVAR	50mcg, 100mcg MDI i-ii puffs BID
Budesonide	Pulmicort	100, 200, or 400mcg PDI 0.25, 0.50, 1.0 mg nebs BID
Ciclesonide	Alvesco	100, 200, or 400mcg MDI OD or BID
Fluticasone	Flovent	50, 125, or 250mcg MDI 100, 250, or 500mcg PDI
<i>LABA/ICS</i>		
Salmeterol/Fluticasone	Advair <sup>4,7</sup>	25mcg/125, 25mcg/250mcg MDI i-ii BID 50mcg/100mcg, 50mcg/250mcg, 50mcg/500mcg PDI BID
Formoterol/Budesonide	Symbicort <sup>5,7</sup>	6mcg/200mcg, 12mcg/200mcg PDI i-iv inh BID

## Pharmacologic Management of COPD

### Inhaled Medications cont'

1. Onset 5-15minutes; Peak 60-90 minutes; Duration 3-6 hours  
Side Effects: tremor; ↑ HR (especially nebulised); nervousness; ↑QT; headache; ↓K<sup>+</sup>; ↑insulin secretion; hyperglycemia
2. Onset 5-15minutes (usually later than SABA); Peak 60-120minutes; Duration 4-8 hours  
Side Effects: Dry mouth; blurred vision if contact with eyes (ie close eyes while using); tremors or palpitations; urinary retention (especially elderly men); glaucoma (use with caution)
3. Side Effects: as per short-acting anticholinergics
4. Slower onset, so cannot be used for rescue.  
Side Effects: as per short-acting beta agonists
5. Fast onset so provide temporary relief of symptoms  
Side Effects as per short-acting beta agonists
6. Note that single-entitiy Inhaled corticosteroids are not recommended for treatment of COPD. They should be used only in combination with a LABA
7. Side Effects: oral thrush, reversible voice changes (use spacer and rinse mouth after using); weight gain (salt and water retention), osteoporosis, cataracts, skin thinning with easy bruising at high doses

Drug	Trade Name	Device	Description
Salbutamol	Ventolin	MDI	blue
Salbutamol	Ventolin	Diskus	blue
Salbutamol	Ventolin	Nebules	
Terbutaline	Bricanyl	Turbohaler (PDI)	White/blue dial
Ipratropium	Atrovent	MDI	Clear- green cap
Ipratropium	Atrovent	nebules	
Ipratropium/Salbutamol	Combivent	nebules	
Tiotropium	Spiriva	HandiHaler	grey
Salmeterol	Serevent	Diskus	green
Formoterol	Oxeze	Turbohaler	White-green dial
Beclomethasone	Qvar	MDI	Cream or Brown
Budesonide	Pulmicort	Turbohaler	White-brown dial
Budesonide	Pulmicort	Nebules	
Ciclesonide	Alvesco	MDI	Beige or Orange
Fluticasone	Flovent	MDI	Cream or Orange
Fluticasone	Flovent	Diskus	Orange
Salmeterol/Fluticasone	Advair	MDI	Purple
Salmeterol/Fluticasone	Advair	Diskus	Purple
Budesonide/Formoterol	Symbicort	Turbohaler	White-red dial

## Pharmacologic Management of COPD

### Inhalation Devices

Choose device that best suits needs and abilities of the patient

Refer to package insert for proper use of device

Assess inhaler technique at each COPD-related visit

Recommend valved spacer with MDI to increase lung deposition

#### MDI – Metered Dose Inhaler

- Requires coordination of inhalation with pressing canister for proper lung deposition
- Requires some strength to press canister: may not be useful in the elderly or those with arthritis
- Recommend valved spacer to increase lung deposition

#### PDI – Powder Dose Inhaler (Diskus, Turbohaler)

- Must be kept dry
- Breath-actuated

#### HH – HandiHaler

- Capsule inserted into device, then pierced prior to inhalation; ie medication is not within the device but dispensed separately.

#### Nebules

- Nebulizer requires electricity; very expensive without added benefit
- Generally not recommended in the outpatient setting; significant medication enters the room air and can affect the eyes.

## Pharmacologic Management of COPD

### Oral Agents

Drug	Trade Name	Dosing
<i>Theophyllines</i> <sup>1</sup>		
Aminophylline	Phyllocontin	350mg BID
Oxtriphylline	Choledyl <sup>2</sup>	300mg TID
Theophylline	Uniphyll; Theodur	400-600mg/day <sup>3</sup>
<i>Corticosteroids</i> <sup>4</sup>		
Dexamethasone	Decadron	7.5mg/day x 10-14 days
Prednisone		0.6mg/kg/day x 10-14 days <sup>5</sup>
Methylprednisolone	Medrol	0.5mg/kg/day x 10-14 days

- Efficacy is related to serum concentration, so must be taken regularly to be effective. Therapeutic window is narrow, so dose must be adjusted to serum concentration. To avoid toxicity, keep level at low recommended or subtherapeutic range. Do not initiate during AECOPD. These offer modest improvements in pulmonary function, symptoms, and exercise tolerance, but may be useful in some patients. Typical starting dose may be Theo-Dur 200mg BID or Uniphyll 400mg HS.

Side Effects: nausea, vomiting, diarrhea, insomnia, ↑HR, headaches, irritability, nervousness, heartburn; toxicity: arrhythmias, seizures, coma, death

Drug Interactions: many potential including ↑theophylline levels with amiodarone, cimetidine, ciprofloxacin, clarithromycin, erythromycin, fluvoxamine, isoniazid, propranolol, mexelitine, verapamil; ↓theophylline levels with alcohol, carbamazepine, phenobarbital, phenytoin, rifampin, tobacco smoking
- Available in oral tablets and elixir.
- Dose interval depends on preparation used (ex for SR give 300mg BID). Take with food
- Chronic use of oral corticosteroids should be avoided in COPD patients because of their limited benefits and potential side effects. Short-term use of oral corticosteroids does have demonstrated efficacy in AECOPD.**

Side Effects (from short term use): glucose intolerance; ↑ appetite; weight gain; mood changes; ↑BP; fluid retention; insomnia; vivid dreams; stomach upset; ↓K<sup>+</sup>

Drug Interactions: oral diabetic agents (↑BG); NSAIDs (↑risk of GI ulcer); diuretics (↓K<sup>+</sup>)

**Do not abruptly discontinue oral corticosteroid after long-term use (>14 days).** Withdrawal symptoms such as fatigue, weakness, fever, joint pain, ↓BP, or cardiovascular collapse may occur. A suggested tapering schedule for prednisone (or equivalent dose of alternative agent) is ↓dose by 2.5 to 5 mg every 3 days. The dose may be temporarily increased, then tapered again slowly if disease flares during tapering.
- Maximum 50mg/day.



## Pulmonary Rehab Program

- Should be offered early in disease (MRC 2-3)

### Components:

- Exercise training
- Psychosocial support (for social isolation, depression)
- Nutrition counselling
- Occupational therapy and energy conservation strategies

### Benefits:

- ↓ SOB
- ↑ exercise endurance
- ↑QOL
- ↓ leg discomfort
- ↓ fatigue
- Reduced resource utilization due to AECOPD
- Trend toward ↓ mortality compared to standard care

### Exercise Training:

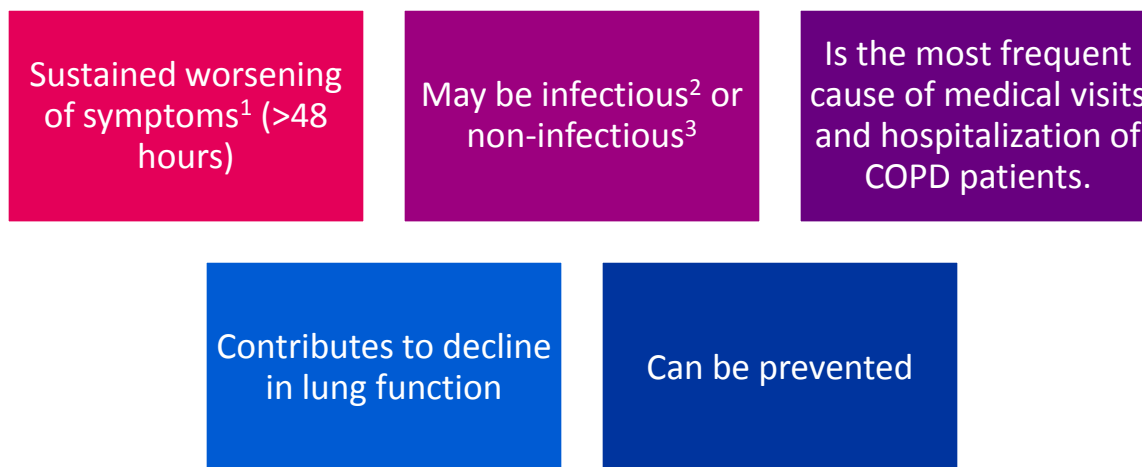
**“All COPD patients should be encouraged to maintain an active lifestyle...EXERCISE IS MEDICINE!!”**

**Goal:** ↓ disability, resulting in improved function for self-care, as well as productive and recreational activities

Type of Exercise *	Benefit	Duration/Frequency
Aerobic Training	↑endurance, endurance, ↓SOB, ↑QOL	30 minutes x 3-5 days/week
Strength Training	Develop and maintain muscle strength and mass; ↑exercise capacity, ↓SOB, ↑QOL	5-15minutes x 2-3 days/week
Flexibility Training	Improve/maintain joint range of motion; maintain independence in ADLs; best posture for breathing	5-15 minutes x 2-3 days/week

\*As physical limitations and comorbidities allow. Note that strength training and flexibility training alone are not beneficial for COPD, but are useful when combined with aerobic training.

## Acute Exacerbation of COPD



1. IE dyspnea, cough, or sputum production. Results in increased use of current medications or use of additional medications.
2. 50% are infectious; many are viral. Most likely pathogens: *Haemophilus influenzae*; *Moraxella catarrhalis*; *Streptococcus pneumoniae*; *Klebsiella spp*; other Gram-negative spp.
3. Non-infectious causes: environmental exposure (smoke, dust, etc)
  - : emotions (laughing, crying)
  - : stressful event, anxiety
  - : non-compliance with medications
  - : other pulmonary causes that are non-infectious
  - : GERD, CHF, and other non-pulmonary causes

## Acute Exacerbations of COPD

### Assessment:

- Based on symptoms (cough, dyspnea, sputum volume and color)
- History and physical exam
- ABG, pulse oximetry
- CXR
- Sputum culture (if another exacerbation occurs within a few months of a previous infectious exacerbation)
- Note that spirometry is not useful because FEV<sub>1</sub> is always declined and patient may be too breathless to perform the test.

### Goals of Treatment:

- Return to baseline symptoms, lung function, and QOL
- ↓ morbidity and mortality
- ↓ risk of relapse

### Prevention:

- Smoking cessation
- Influenza vaccine yearly
- Pneumonia vaccine every 5 years
- ICS/LABA if >1 AECOPD/year or FEV<sub>1</sub> <60% predicted
- Tiotropium +/- LABA if FEV<sub>1</sub> <60%
- Implement self-management skills (nutrition, exercise, sleep)
- Use Self-Management Plan

## Management of Non-Infectious ACOPD

Use breathing techniques and try to relax

Position body to make breathing easier

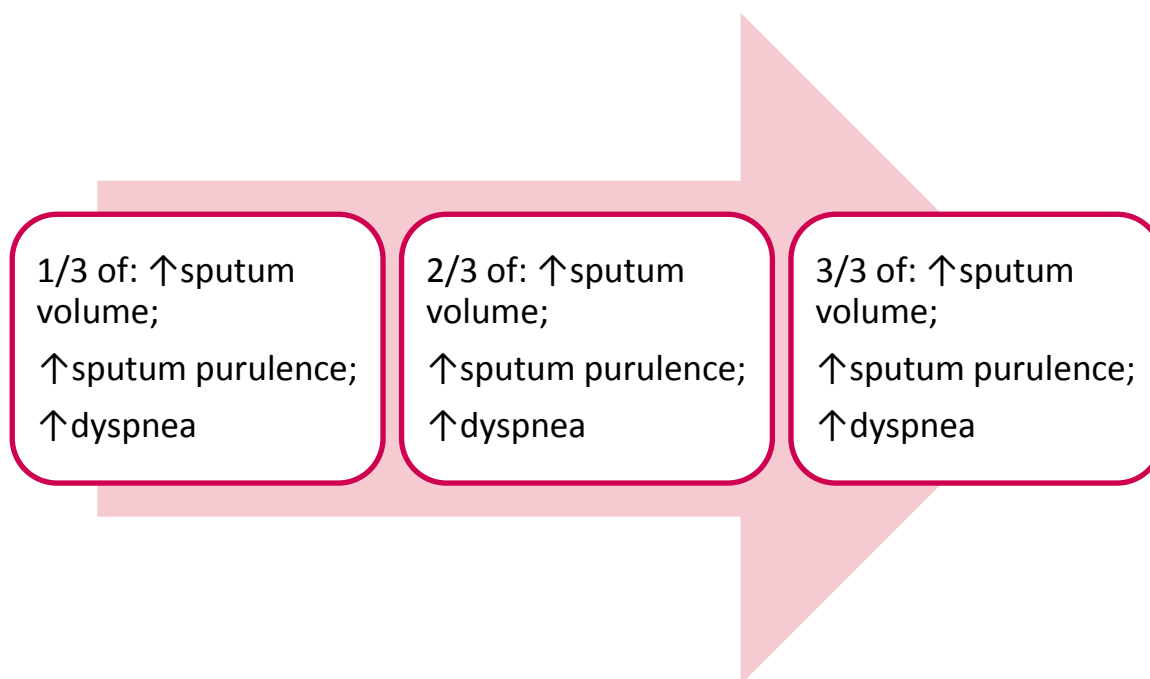
Use short-acting bronchodilator as prescribed<sup>1</sup>

Avoid exposure to inciting triggers<sup>2</sup>

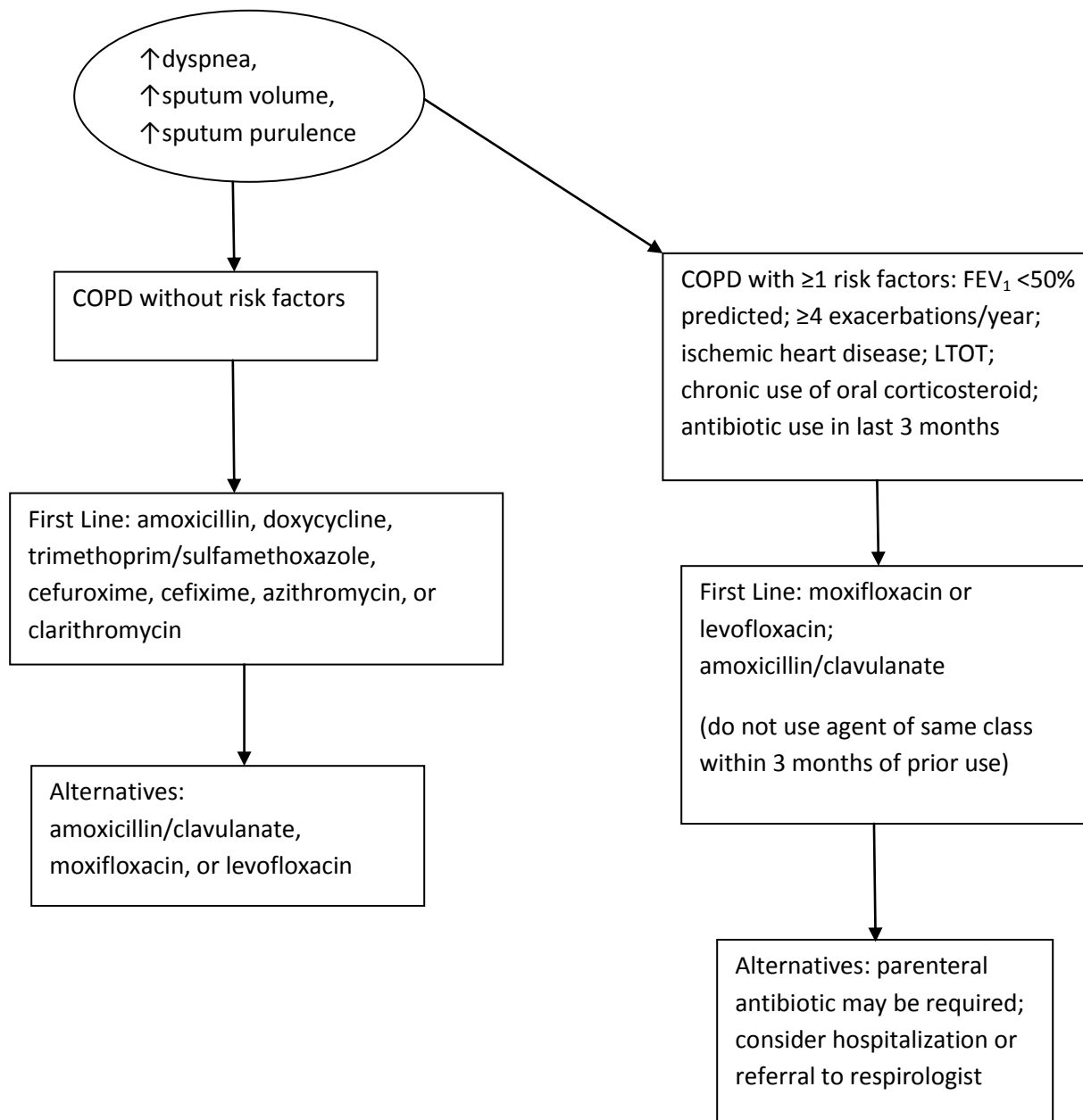
1. Ex ii puffs of Salbutamol. For environmental causes, may repeat in 20 to 45 minutes if needed.
2. Pollutants, sudden temperature change, wind, heavy exercise.

## Management of Infectious AECOPD

### Usefulness of Antibiotic:



## Management of Infectious AECOPD



## Management of Infectious AECOPD cont'

Drug	Trade Name	Dosing
<i>Penicillins</i> <sup>1,3,11</sup>		
Amoxicillin		500mg TID x 7-10 days
Amoxicillin/Clavulanate <sup>2</sup>	Clavulin	500mg TID or 850mg BID X 7-10 days
<i>Tetracyclines</i>		
Doxycycline <sup>4,11</sup>	Vibra-tabs	100mg BID x 1 day then 100mg OD X 7-10 days
<i>Sulfonamides</i> <sup>3,5,11</sup>		
Trimethoprim/ Sulfamethoxazole	Bactrim 400mg/80mg; Bactrim DS 800/160mg	i DS BID or ii regular BID x 7-10 days
<i>Cephalosporins</i> <sup>1,11</sup>		
Cefuroxime	Ceftin	500mg BID x 7-10 days <sup>6</sup>
Cefixime	Suprax <sup>3</sup>	400mg OD x 10-14 days
<i>Extended-spectrum Macrolides</i>		
Azithromycin <sup>7</sup>	Zithromax	500mg OD x 1 day then 250mg OD X 4 days
Clarithromycin <sup>3,8,11</sup>	Biaxin	500mg BID x 7-14 days or 100mg XL OD x 7-14 days
<i>Quinolones</i> <sup>9,11</sup>		
Moxifloxacin	Avelox	400mg OD x 5 days
Levofloxacin <sup>3,10</sup>	Levaquin	500mg OD x 7 days

## Management of Infectious AECOPD cont`

1. Side Effects: rash, anaphylaxis (rare); diarrhea, nausea, vomiting, anorexia, abdominal discomfort  
Drug Interactions: ↓efficacy of oral contraceptives
2. Side Effects as per amoxicillin, but increased epigastric distress
3. ↓dose in renal impairment
4. Side Effects: GI upset, photosensitivity  
Drug Interactions: ↓absorption with iron or antacids (separate dose by 2 hours); ↓doxycycline level with alcohol, phenobarb, phenytoin, rifampin, carbamazepine; possible ↓efficacy of oral contraceptives
5. Drink plenty of water while taking this medication.  
Side Effects: nausea, rash, SJS (rare)  
Drug Interactions: ↑effect of warfarin (monitor INR); ↑ phenytoin level
6. Take with food.
7. Side Effects: GI upset  
Drug Interactions: ↑digoxin level  
Contraindications: coadministration with pimozone
8. Side Effects: GI upset, bitter taste  
Drug Interactions: many potential including: ↓level with rifampin; ↑warfarin effect; ↑ levels of some benzodiazepines, buspirone, carbamazepine, cyclosporine, digoxin, ergots, statins, theophylline, disopyramide  
Contraindications: coadministration with pimozone
9. Side Effects: usually well-tolerated; headache, dizziness may occur; tendon rupture (rare)  
Drug Interactions: ↓absorption with antacids, sucralfate, iron, calcium, magnesium (separate dose by 2 hours); ↑level of theophylline, cyclosporine; avoid in patients on Class IA or III antiarrhythmics  
Contraindications: predisposition to prolonged QT interval; predisposition to seizures; pregnancy; children <18 years
10. May ↑warfarin effect
11. Some evidence suggests that shorter duration (5 to 7 days) may be adequate in the absence of complicating factors such as bronchiectasis.



## Self-management Plan of Action

- Is a written tool developed by the physician or respirologist that helps the patient identify early changes in symptoms and determine what action is to be taken to prevent and manage AECOPD.
- Includes: use of pharmacologic agents and non-pharmacologic measures to be taken when patient is feeling well;  
use of SABD for exacerbations; preventing, avoiding, or controlling environmental factors that cause exacerbations;  
how to identify and manage respiratory infection;  
takes into consideration comorbid conditions in the diagnosis and treatment of COPD.

## Self-management Plan of Action

**Patient Name:**

### I Feel Well

My Symptoms: I sleep well and my appetite is good. I am able to do my exercises.

My Actions: I avoid things that make my symptoms worse. I plan each day in advance. I take my medications as prescribed. I eat healthy food. I do my exercises on a regular basis.

### I Feel Worse (Environment/Stress)

My Symptoms: I am more short of breath than usual. I may cough, wheeze, or have sputum.

My Actions: I use my breathing techniques and try to relax. I avoid what made my symptoms worse. I take \_\_\_ puffs of \_\_\_ and repeat in 20 to 45 minutes 2 or 3 times if I need to.

If my symptoms do not improve or get worse, I call my doctor (Tel: \_\_\_\_\_)

### I Feel Worse (Respiratory Infection)

My Symptoms: I am more short of breath than usual. I have more sputum than usual. The sputum is green or yellow.

My Actions: I call my doctor (Tel: \_\_\_\_\_). I use my rescue inhaler (\_\_\_\_\_) more often as recommended by my doctor. I take my antibiotic and anti-inflammatory as prescribed by my doctor.

If my symptoms do not improve or get worse, I go to the hospital or medical clinic.

### I Feel Much Worse or I Am In Danger

My symptoms are worse or my symptoms have not improved after 48 hours of treatment.

My Actions: I see my doctor or go to the hospital or medical clinic.

**If I am extremely short of breath, agitated, confused and/or drowsy or I have chest pain, I call 911 and get emergency medical treatment.**

## Abbreviations

AAT – Alpha-1 Antitripsyn

ABG – Arterial Blood Gases

AECOPD – Acute Exacerbation of COPD

BMI – Body Mass Index

BP – Blood Pressure

CNS – Central Nervous System

COPD – Chronic Obstructive Pulmonary Disease

CrCl – Creatinine Clearance

CVD – Cardiovascular Disease

FEV<sub>1</sub> – Forced Expiratory Volume in 1 Second

FVC – Forced Vital Capacity

GERD – Gastro-esophageal Reflux Disease

HH – HandiHaler

ICS – Inhaled Corticosteroid

inh – inhalations

INR – International Normalized Ratio

K<sup>+</sup> - potassium

LAAC – Long-acting Anticholinergic

LABA – Long-acting Beta-Agonist

LTOT – Long Term Oxygen Therapy

MAOI – Monoamine Oxidase Inhibitor

MAOI – Mono-amine Oxidase Inhibitor

MDI – Metered Dose Inhaler

MI – Myocardial Infarction

## Abbreviations cont'

MRC – Medical Research Council

nebs – nebulas

NRT – Nicotine Replacement Therapy

PDI – Power Dose Inhaler

QOL – Quality of Life

RTI – Respiratory Tract Infection

SAAC – Short-acting Anticholinergic

SABA – Short-acting Beta-agonist

SJS – Stevens-Johnson Syndrome

SOB – Shortness of Breath

TMJ – Temporomandibular Jaw Syndrome

TMJ – Temporomandibular Joint Syndrome

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# COPD SCREENING

NAME: \_\_\_\_\_ DOB: \_\_\_\_\_ AGE \_\_\_\_\_ (M) (F)

MEDICATIONS \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

ALLERGIES: \_\_\_\_\_

PMHX \_\_\_\_\_

\_\_\_\_\_

Yearly Immunization for influenza (Y) (N) Pneumococcal Q5yrs (Y) (N)

1. Do you cough regularly? (Y) (N)

2. Do you cough up phlegm regularly? (Y) (N)

3. Do even simple chores make you short of breath? (Y) (N)

4. Do you wheeze when you exert yourself, or at night? (Y) (N)

5. Do you get frequent colds that persist longer than those of other people you know? (Y) (N)

SMOKER (Y) (N) (PAST) EXPOSURE TO 2nd HANDSMOKE (Y) (N)

HOW LONG? \_\_\_\_\_ # CIGS/DAY \_\_\_\_\_ # of PACK YEARS \_\_\_\_\_

SMOKING CESSATION OFFERED? \_\_\_ Counseling to stop  
\_\_\_ Pharmacologic Intervention  
\_\_\_ Program Referral  
\_\_\_ Pt. Declined

DIAGNOSED WITH COPD? (Y) (N)

# of exacerbations in last year \_\_\_\_\_ # of hospitalizations \_\_\_\_\_

VITAL SIGNS: BP \_\_\_\_\_ P \_\_\_\_\_ R \_\_\_\_\_ O2SAT \_\_\_\_\_ WT. \_\_\_\_\_ HT. \_\_\_\_\_

**MRC DYSPNEA SCALE**

- 1. Normal- Not troubled by breathlessness except with strenuous exercise.
- 2. Troubled by shortness of breath when hurrying on the level or walking up a slight hill.
- 3. Walks slower than people of the same age on the level because of breathlessness or has to stop for breath when walking at own pace on the level.
- 4. Stops for breath after walking about 100 yards (90M) or after a few minutes on the level.
- 5. Too breathless to leave the house or breathless when dressing or undressing.

**MRC SCORE:** \_\_\_\_\_

**SPIROMETRY TESTING**

PARAMETER	MEASURED	% PREDICTED
FEV1		
FVC		
FEV1/FVC		

**POST BRONCHODILATOR- <0.7 CONFIRMS COPD**

**DIAGNOSIS** \_\_\_\_\_

**COPD MILD**\_\_\_\_ **MODERATE**\_\_\_\_ **SEVERE**\_\_\_\_\_

**MEDICATION ORDERS:**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**INHALER/SPACER TECHNIQUE REVIEWED? (Y) (N)**

**REFFERAL** \_\_\_\_\_

**HANDOUTS GIVEN TO PATIENT**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

# COPD (CHRONIC OBSTRUCTIVE PULMONARY DISEASE)

## FLOW SHEET/ ENCOUNTER FORM



<b>CO-MORBID CONDITIONS AND OTHER FACTORS</b>		♦ PATIENT NAME		
<input type="checkbox"/> ANXIETY	<input type="checkbox"/> DEPRESSION	♦ HEALTH # (OR OTHER UNIQUE PATIENT ID)	♦ GENDER <input type="checkbox"/> Undifferentiated <input type="checkbox"/> Male <input type="checkbox"/> Female	
<input type="checkbox"/> ATRIAL FIBRILLATION	<input type="checkbox"/> ISCHEMIC HEART DISEASE	♦ PHONE (INCLUDE AREA CODE)	♦ BIRTHDATE (DD-MMM-YYYY)	
<input type="checkbox"/> CACHEXIA AND MALNUTRITION	<input type="checkbox"/> OSTEOPOROSIS	CHART NUMBER	CITY	POSTAL CODE
<input type="checkbox"/> CANCER	<input type="checkbox"/> OTHER RHYTHM PROBLEMS	♦ PROVIDER NAME		
<input type="checkbox"/> CATARACTS	<input type="checkbox"/> HYPERTENSION	PROVIDER ID #		
<input type="checkbox"/> CONGESTIVE HEART FAILURE	<input type="checkbox"/> METABOLIC DISORDERS			
<input type="checkbox"/> GLAUCOMA	<input type="checkbox"/> SKELETAL MUSCLE DYSFUNCTION			

DIAGNOSTIC/ CLINICAL DATA, BY DATE		MOST RECENT DATA			NEW DATA <span style="float: right;">√ = RECALL</span>
REVIEW <span style="float: right;">♦ = MANDATORY FIELDS</span>					DATE OF VISIT:
	♦ REASON FOR TODAY'S VISIT				<input type="checkbox"/> SCHEDULED <input type="checkbox"/> URGENT
DIAGNOSIS	♦ SPIROMETRY - FEV1/FVC post-bronchodilator < 0.7 confirms COPD FEV <sub>1</sub>				<input type="checkbox"/> YES <input type="checkbox"/> NO DATE FEV <sub>1</sub> (_____) % PREDICTED
	MRC DYSPNEA SCALE				ENTER VALUE (1-5): ____
EXACERBATIONS	♦ WRITTEN ACTION PLAN				<input type="checkbox"/> DEVELOPED/REVIEWED
	♦ # OF EXACERBATION(S) IN LAST YEAR AND DATE OF LAST (partial date allowed e.g. 2008, 2008/01)				# ____ DATE OF LAST:
	MEDICATIONS SINCE LAST VISIT				ANTIBIOTICS <input type="checkbox"/> YES <input type="checkbox"/> NO PREDNISONE <input type="checkbox"/> YES <input type="checkbox"/> NO
	♦ COPD URGENT CARE SINCE LAST VISIT				#ER VISITS: ____ #HOSPITAL ADMISSIONS: ____ #WALK INS: ____
LIFESTYLE	CURRENT SMOKER				<input type="checkbox"/> CURRENT <input type="checkbox"/> 2 <sup>nd</sup> Hand <input type="checkbox"/> PAST <input type="checkbox"/> NEVER
	EX-SMOKER QUIT DATE (partial date allowed e.g. 2008, 2008/01)				DATE
	♦ IF CURRENT SMOKER, WAS CESSATION OFFERED? (check all that apply)				<input type="checkbox"/> COUNSELLING TO STOP <input type="checkbox"/> PHARMACOLOGIC INTERVENTION <input type="checkbox"/> PROGRAM REFERRAL <input type="checkbox"/> PD
	PHYSICAL ACTIVITY GOALS				<input type="checkbox"/> DEVELOPED/REVIEWED <input type="checkbox"/> NO <input type="checkbox"/> TNS
	TARGET BODY MASS INDEX (BMI) Target 19 – 25 Height: Enter weight (LBS or KG)				____ <input type="checkbox"/> LBS <input type="checkbox"/> KG
VACCINES	♦ ANNUAL INFLUENZA VACCINE				<input type="checkbox"/> COMPLETED <input type="checkbox"/> CI <input type="checkbox"/> PD DATE
	PNEUMOCOCCAL VACCINE				<input type="checkbox"/> COMPLETED <input type="checkbox"/> CI <input type="checkbox"/> PD DATE
THERAPY	♦ CURRENT MEDICATION (check all that apply)				<input type="checkbox"/> SABD (e.g. Atrovent, Bricanyl, Ventolin) <input type="checkbox"/> LAAC (e.g. Spiriva) <input type="checkbox"/> LABA (e.g. Oxeze, Serevent) <input type="checkbox"/> ICS/LABA (e.g. Advair, Symbicort) <input type="checkbox"/> THEOPHYLLINE (e.g. Uniphyll) OTHER MEDS:
	INHALER/SPACER TECHNIQUE REVIEWED?				<input type="checkbox"/> YES <input type="checkbox"/> NO
	O <sub>2</sub> SATURATION COMPLETED				SaO <sub>2</sub> : ____ %
	BLOOD GASES				<input type="checkbox"/> YES <input type="checkbox"/> NO PaO <sub>2</sub> : ____ mmHg PaCO <sub>2</sub> : ____ mmHg
	OXYGEN THERAPY				<input type="checkbox"/> CONTINUOUS <input type="checkbox"/> EXERCISE <input type="checkbox"/> NOCTURNAL <input type="checkbox"/> EXER. AND NOCT. <input type="checkbox"/> NONE
REFERRALS	♦ PULMONARY REHABILITATION REFERRAL?				<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> NP
	OTHER REFERRALS (check all that apply)				<input type="checkbox"/> COPD PROGRAM <input type="checkbox"/> NP <input type="checkbox"/> RESP. SPECIALIST <input type="checkbox"/> NP <input type="checkbox"/> CERT. RESP. EDUCATOR <input type="checkbox"/> NP <input type="checkbox"/> SAIL O <sub>2</sub> TESTER <input type="checkbox"/> NP <input type="checkbox"/> DIETITIAN <input type="checkbox"/> NP OTHER REFERRALS:
	END OF LIFE ISSUES DISCUSSED				<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> PD

CI – contraindicated PD – patient declined NP – no program available TNS – tried or not suitable



**COPD (CHRONIC OBSTRUCTIVE PULMONARY DISEASE)  
FLOW SHEET/ ENCOUNTER FORM**



♦ PATIENT NAME			
♦ HEALTH # (OR OTHER UNIQUE PATIENT ID)		♦ GENDER <input type="checkbox"/> Undifferentiated <input type="checkbox"/> Male <input type="checkbox"/> Female	
♦ PHONE (INCLUDE AREA CODE)		♦ BIRTHDATE (DD-MMM-YYYY)	
CHART NUMBER	CITY	POSTAL CODE	
♦ PROVIDER NAME		PROVIDER ID #	

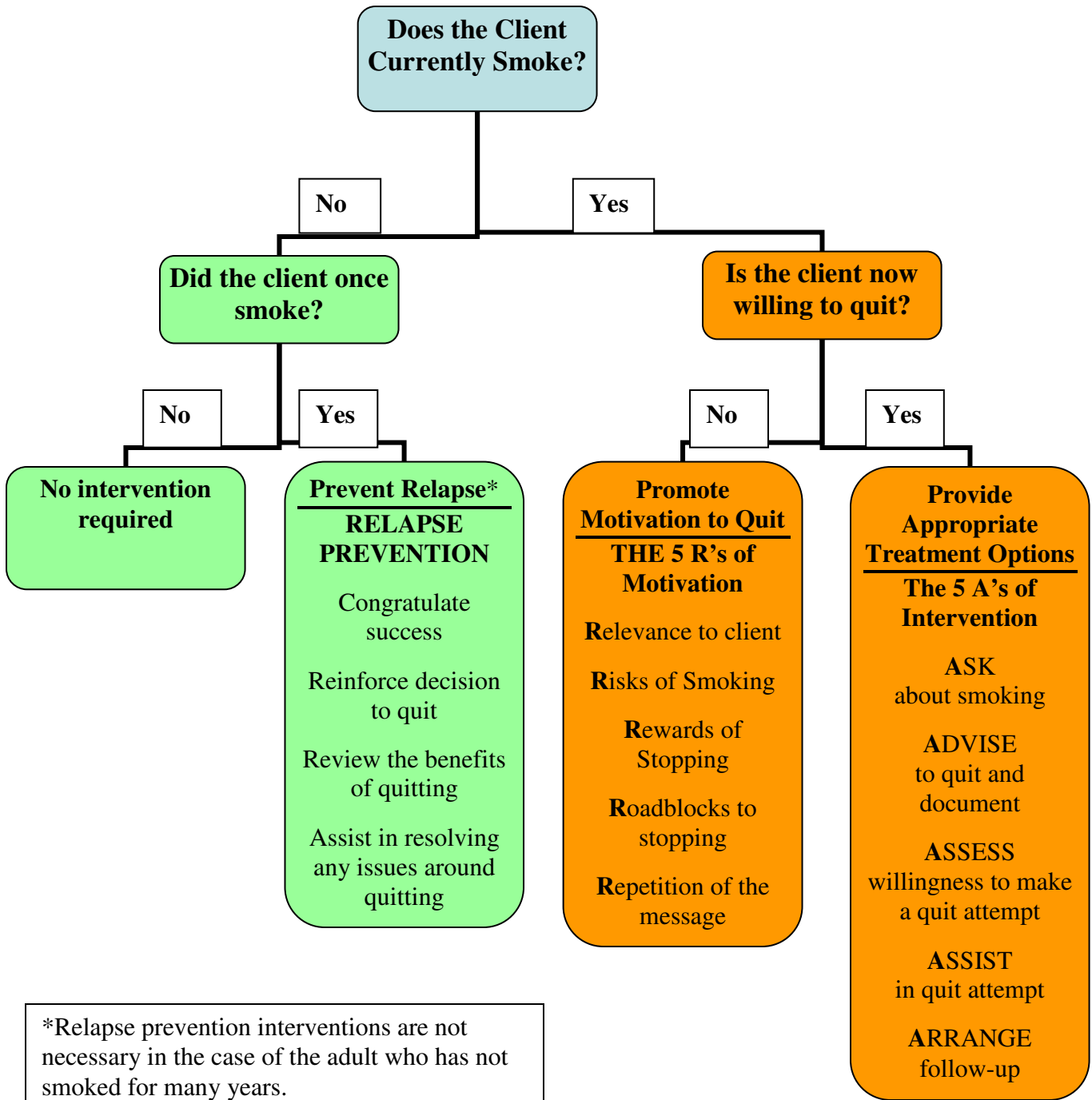
**COMMENTS**

**Date:**

**Date:**

**Date:**

# Smoking Cessation Treatment Algorithm



\*Relapse prevention interventions are not necessary in the case of the adult who has not smoked for many years.

## **The 5 A's of Intervention**

### **Ask- 1 minute**

Ask the client to describe their smoking status.

- A. I never smoked or smoked LESS THAN 100 cigarettes
- B. I stopped smoking more than 2 weeks ago but less than 1 year ago.
- C. I stopped smoking more than 1 year ago.
- D. I smoke regularly/not thinking of quitting in the next 30 days.

**If B or C, reinforce their decision to quit, congratulate and encourage.**

**If D, document smoking status on their chart. Begin steps below...**

### **ADVISE – 1 minute**

Provide clear, strong advice to quit with personalized messages about the impact of smoking on health, urge every tobacco user to quit.

### **ASSESS – 1 minute**

Assess the willingness to make a quit attempt within 30 days.

- Client is willing to make a quit attempt in the next 14-30 days.
- Client is not willing to make a quit attempt (review 5 R's below)

### **ASSIST – 3 minutes**

Recommend the use of approved pharmacotherapy.

Refer to community cessation services or internet when appropriate.

### **AND/OR**

Help the client develop a quit plan.

Provide problem-solving methods and skills for cessation.

Provide social support as a part of the treatment.

Help client obtain extra treatment/social support for quitting in the smoker's environment.

Recommend the use of approved pharmacotherapy.

Provide self-help smoking cessation materials.

### **ARRANGE- 1 minute+**

Assess smoking status every visit, reinforce/encourage cessation.

## **The 5 R's of Motivation**

### **RELEVANCE - 1 minute**

Ask client about how quitting may be personally relevant.

\*Longer and better quality of life  
healthier

\*People you live with will be

\*Decrease chance of heart attack, stroke or cancer

\*Extra money (\$\$)

\*If pregnant, improves chance of healthy baby

### **RISKS – 1 minute**

Ask the client about their perception of short-term, long-term and environmental risks of continued use.

\*Acute (breathing, asthma, pregnancy)

\*Long-term (heart, lungs, overall health)

### **REWARDS – 1 minute**

Ask the client about perceived benefits/rewards for quitting tobacco use.

\*Health (self & others)

\*Food taste

\*Sense of smell

\*Feel better

\*Example to others

\*Additional years of life

### **ROAD BLOCKS – 3 minutes+**

Ask client about perceived roadblocks to quitting.

\*Withdrawal symptoms

\*Fear of Failure

\*Weight gain

\*Lack of Support

\*Depression

\*Enjoyment of tobacco

### **REPITITION – 1 minute+**

Respectfully repeat 5 R's during each visit, providing motivation and information. Refer

client to **SMOKERS' HELPLINE** websites [www.smokershelpline.ca](http://www.smokershelpline.ca) or


[www.gosmokefree.gc.ca](http://www.gosmokefree.gc.ca). Or call **1 (877) 513-5333** as appropriate.

## PATIENT HEALTH QUESTIONNAIRE (PHQ-9)

NAME: \_\_\_\_\_

DATE: \_\_\_\_\_

Over the last two weeks, how often have you been bothered by any of the following problems?

	Not at all	Several days	More than half the day	Nearly every day
1. Little interest in doing things	0	1	2	3
2. Feeling down, depressed or hopeless	0	1	2	3
 If you checked <i>“more than half the days”</i> or <i>“nearly every day”</i> for at least <b><u>ONE</u></b> of the above questions please complete the following questions.				
3. Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself – or that you are a failure or have let yourself or your family down	0	1	2	3
7. Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed. Or the opposite- being so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3
9. Thoughts that you would be better off dead, or hurting yourself in some way.	0	1	2	3

Add columns

	+		+	
--	---	--	---	--

Total

--

10. If you checked off *any* problems how difficult have these problems made it for you to do your work, take care of things at home or get along with people?

Not difficult at all \_\_\_\_\_

Somewhat difficult \_\_\_\_\_

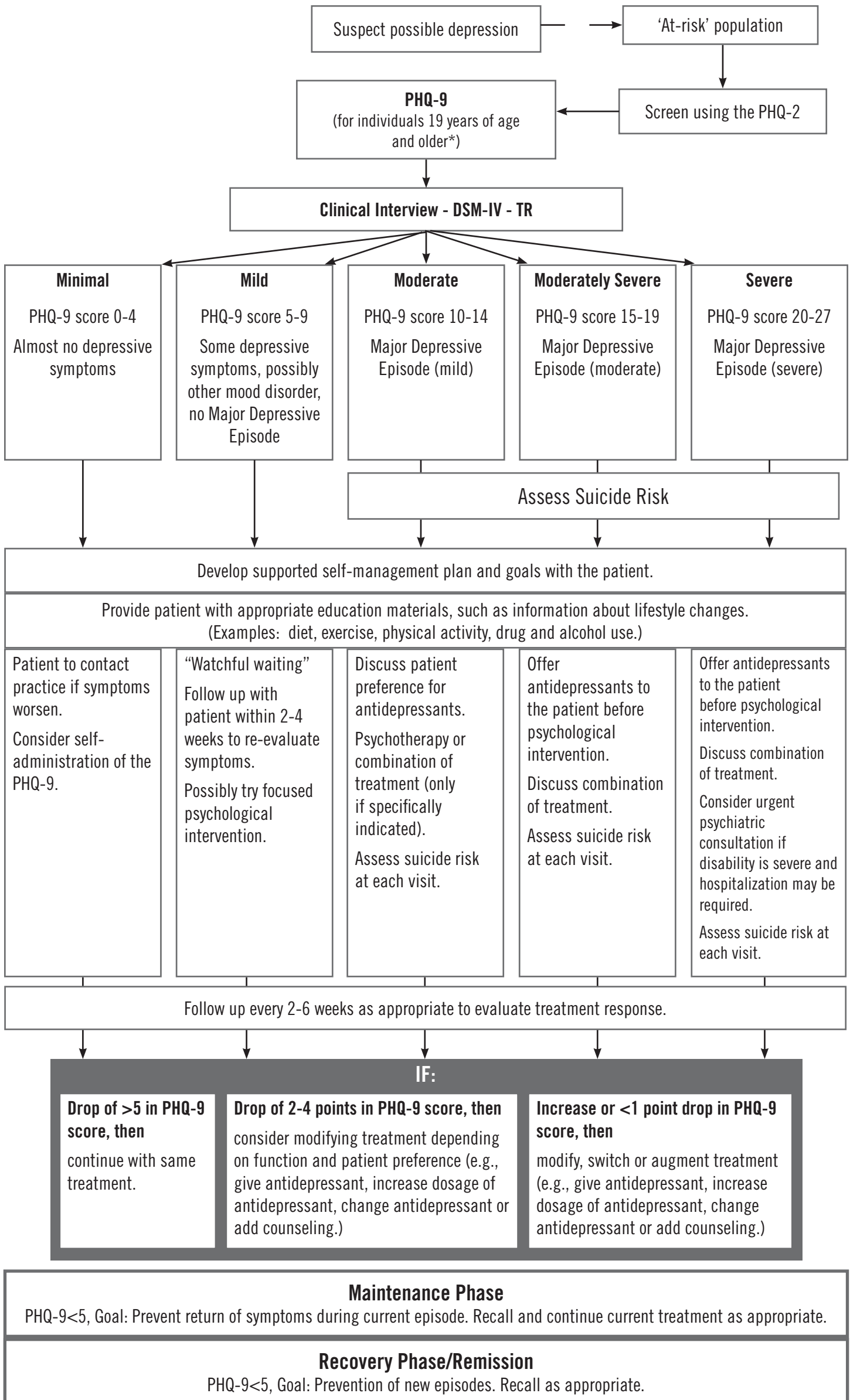
Very Difficult \_\_\_\_\_

Extremely difficult \_\_\_\_\_

PHQ-9 is adapted from PRIME MD TODAY, developed by Drs Robert L. Spitzer, Janet B.W. Williams, Kurt Kroenke, and colleagues, with an educational grant from Pfizer Inc. For research information, contact Dr. Spitzer at [ris8@columbia.edu](mailto:ris8@columbia.edu). Use of the PHQ-9 may only be made in accordance with the terms of use available at <http://www.pfizer.com>. Copyright © 1999 Pfizer Inc. All rights reserved. PRIME MD TODAY is a trademark of Pfizer Inc.



# Depression Care Algorithm



*This guideline is designed to assist collaborative primary care treatment teams in enhanced depression management. This guideline is not intended to replace a clinician's judgment or establish a protocol for all patients with a particular condition.*

# Depression

## FLOW SHEET/ ENCOUNTER FORM



<b>CO-MORBID CONDITIONS AND OTHER FACTORS</b>		♦ PATIENT NAME	
<input type="checkbox"/> *ALCOHOL OVERUSE	<input type="checkbox"/> *SUBSTANCE ABUSE	♦ HEALTH # (OR OTHER UNIQUE PATIENT ID)	♦ GENDER <input type="checkbox"/> Undifferentiated <input type="checkbox"/> Male <input type="checkbox"/> Female
<input type="checkbox"/> ANXIETY	<input type="checkbox"/> *OTHER PSYCHIATRIC	♦ PHONE (INCLUDE AREA CODE)	♦ BIRTHDATE (DD-MMM-YYYY)
<input type="checkbox"/> *BIPOLAR		CHART NUMBER	CITY
<input type="checkbox"/> PAST SUICIDE ATTEMPT			POSTAL CODE
<input type="checkbox"/> PRESENCE OF CHRONIC PHYSICAL CONDITION		♦ PROVIDER NAME	PROVIDER ID #
		* If these conditions or factors are checked off, treat this patient for these conditions or factors prior to beginning treatment for depression.	

DIAGNOSTIC/ CLINICAL DATA, BY DATE REVIEW		MOST RECENT DATA			NEW DATA <span style="float: right;">√ = RECALL</span>
♦ = MANDATORY FIELDS					DATE OF VISIT:
RELAPSE	♦ DEPRESSION URGENT CARE SINCE LAST VISIT (Enter number of visits or admissions)				#ER VISITS: _____ #HOSPITAL ADMISSIONS: _____ # WALK INS: _____
	RISK FACTORS FOR RELAPSE (check all that apply)				CHANGES IN: <input type="checkbox"/> MOOD <input type="checkbox"/> ENERGY <input type="checkbox"/> SLEEP <input type="checkbox"/> WORK <input type="checkbox"/> ENJOYMENT OF ACTIVITIES <input type="checkbox"/> INVOLVEMENT IN FAMILY ACTIVITIES <input type="checkbox"/> SIDE EFFECTS FROM MEDICATION
PHQ-9 ©	♦ RECOVERY PHASE (improving: PHQ-9 is the same or lower in the last month; not improving: PHQ-9 increased by ≥ 2 in last month; maintenance: at target score and in ongoing treatment or support; recovery: PHQ-9 < 5)				<input type="checkbox"/> IMPROVING <input type="checkbox"/> NOT IMPROVING <input type="checkbox"/> MAINTENANCE <input type="checkbox"/> RECOVERY
	♦ SCORE FROM QUESTION 1-9				ENTER SCORE Q1-9: _____
	♦ RESULT FROM QUESTION 10				<input type="checkbox"/> NOT DIFFICULT <input type="checkbox"/> SOMEWHAT DIFFICULT <input type="checkbox"/> VERY DIFFICULT <input type="checkbox"/> EXTREMELY DIFFICULT
	REMISSION				<input type="checkbox"/> IN REMISSION (PHQ-9 © Q1 < 5)
SUICIDE RISK	ASSESSED (If positive, document management plan and refer to mental health specialist)				<input type="checkbox"/> POSITIVE SUICIDAL IDEATION <input type="checkbox"/> NEGATIVE SUICIDAL IDEATION
	MANAGEMENT PLAN (DOCUMENTED)				<input type="checkbox"/> DOCUMENTED/REVIEWED
MEDS	ANTIDEPRESSANT MEDICATION				<input type="checkbox"/> YES <input type="checkbox"/> TNS <input type="checkbox"/> NO: <input type="checkbox"/> CI <input type="checkbox"/> PD <input type="checkbox"/> OTHER: _____
	ANTIDEPRESSANT MEDICATION REVIEWED				<input type="checkbox"/> ADJUSTED <input type="checkbox"/> REVIEWED DATE: _____
REFERRALS	MENTAL HEALTH SERVICES REFERRAL				<input type="checkbox"/> REFERRAL MADE ON WAIT LIST <input type="checkbox"/> TREATMENT ONGOING <input type="checkbox"/> TREATMENT COMPLETED <input type="checkbox"/> NP <input type="checkbox"/> PD <input type="checkbox"/> OTHER _____
	PSYCHIATRY REFERRAL				<input type="checkbox"/> REFERRAL MADE ON WAIT LIST <input type="checkbox"/> TREATMENT ONGOING <input type="checkbox"/> TREATMENT COMPLETED <input type="checkbox"/> NP <input type="checkbox"/> PD <input type="checkbox"/> OTHER _____
	PRIVATE PRACTICE PSYCHOLOGIST/SOCIAL WORKER				<input type="checkbox"/> REFERRAL MADE ON WAIT LIST <input type="checkbox"/> TREATMENT ONGOING <input type="checkbox"/> TREATMENT COMPLETED <input type="checkbox"/> NP <input type="checkbox"/> PD <input type="checkbox"/> OTHER _____
	COMMUNITY SERVICE/OTHER PROGRAM REFERRAL				<input type="checkbox"/> REFERRAL MADE ON WAIT LIST <input type="checkbox"/> TREATMENT ONGOING <input type="checkbox"/> TREATMENT COMPLETED <input type="checkbox"/> NP <input type="checkbox"/> PD <input type="checkbox"/> OTHER _____
GOALS AND FOLLOW-UP	EDUCATION – COMMUNITY RESOURCES AND SUPPORT (check all that apply)				REVIEWED: <input type="checkbox"/> WITH PATIENT <input type="checkbox"/> WITH FAMILY/SUPPORT NETWORK
	SELF-MANAGEMENT GOALS				<input type="checkbox"/> SET/REVIEWED
	♦ NEXT FOLLOW-UP VISIT (enter one)				_____ <input type="checkbox"/> DAYS _____ <input type="checkbox"/> WEEKS _____ <input type="checkbox"/> MONTHS _____ <input type="checkbox"/> NO FOLLOW-UP PLANNED
	IF NO FOLLOW-UP PLANNED, INDICATE REASON				REASON: _____

PD – patient declined NP – no program available CI – contraindicated TNS – tried or not suitable

# Depression

FLOW SHEET/ ENCOUNTER FORM



♦ PATIENT NAME		
♦ HEALTH # (OR OTHER UNIQUE PATIENT ID)	♦ GENDER <input type="checkbox"/> Undifferentiated <input type="checkbox"/> Male <input type="checkbox"/> Female	
♦ PHONE (INCLUDE AREA CODE)	♦ BIRTHDATE (DD-MMM-YYYY)	
CHART NUMBER	CITY	POSTAL CODE
♦ PROVIDER NAME		PROVIDER ID #

## COMMENTS

**Date:**

**Date:**

**Date:**

Chronic Disease Network and Access Program 2009

# Nutritional Management of COPD

**Guide for Health Professionals**

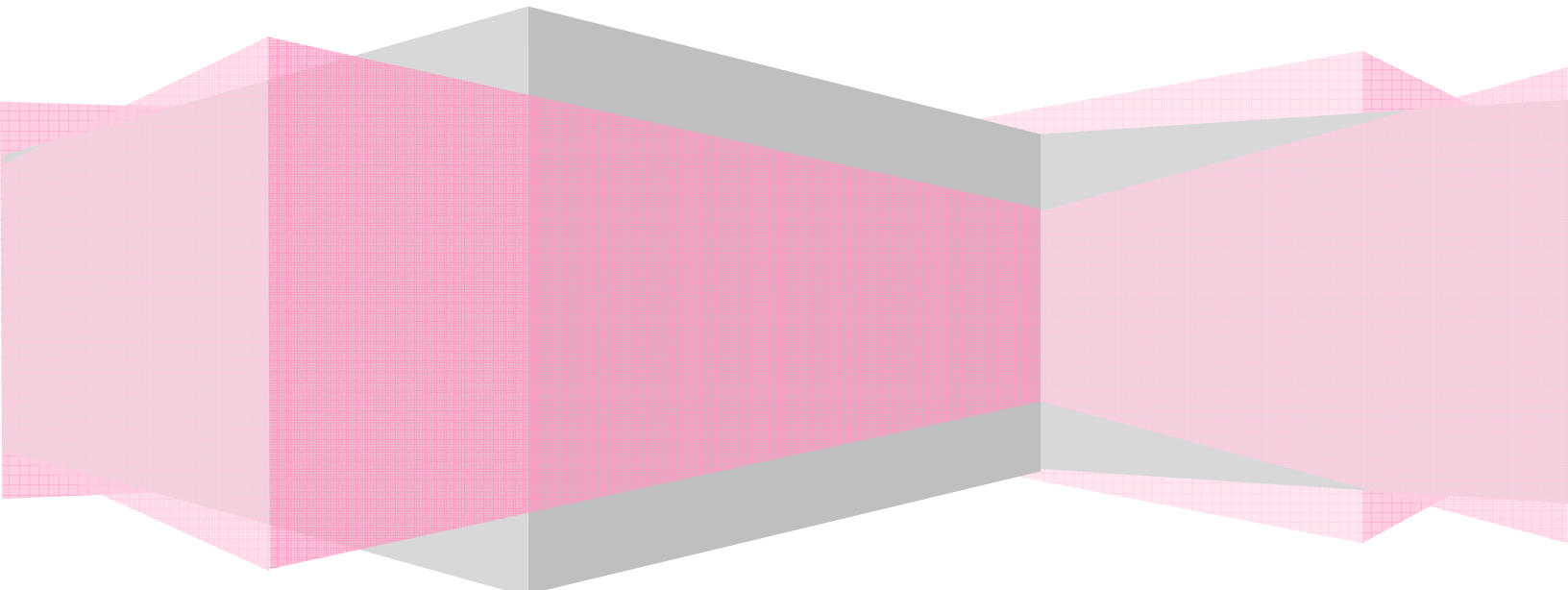
**Tanya Cockburn RD**

**Jetta Johnson RD**

**Reviewed by:**

**Rochelle Anthony RD**

**CDM Dietitian, Saskatoon Health Region**



These materials are available for download on the CD NAP website

[www.ehealth-north.sk.ca](http://www.ehealth-north.sk.ca)



## 1.1 Nutritional Management of Chronic Obstructive Pulmonary Disease (COPD)

### Nutritional Goals

- To prevent or reverse malnutrition
- To improve or maintain respiratory function

### Malnutrition and COPD

- People with COPD expend more energy for breathing. A person with COPD can expend up to 50% more energy on breathing than healthy individuals.
- As COPD progresses symptoms such as shortness of breath, taste alterations due to dry mouth, fatigue, early feelings of fullness, etc. can contribute to decreased food intake. A prolonged decrease in food intake can lead to significant weight loss and malnutrition.

## 1.2 Recommendations for Specific Nutrition Concerns and Solutions

Complications	Why it effects food intake	What to do
Shortness of breath or swallowing air	<ul style="list-style-type: none"> <li>• Increases fatigue during a meal, which shortens the time spent eating and can decrease the amount of food consumed</li> <li>• Can result in gastric distension, discomfort and decreased food intake</li> </ul>	<ul style="list-style-type: none"> <li>• Provide 5 - 6 smaller meals per day. This will keep the stomach from filling up too much, which gives the lungs room to expand.</li> <li>• Select foods that are easy to chew</li> <li>• Eat slowly, take smaller bites, and breathe deeply while chewing</li> <li>• Clear airways of mucus at least 1 hour before eating</li> <li>• Encourage client to rest and use bronchodilators before meals</li> <li>• Try drinking liquids at the end of the meal. Drinking before or during the meal may increase feelings of fullness or bloating.</li> <li>• Eat while sitting up to make it easier for lung expansion</li> <li>• Use pursed lip breathing</li> </ul>

Bloating or gas	<ul style="list-style-type: none"> <li>• People may experience more bloating or gas when they have COPD</li> </ul>	<ul style="list-style-type: none"> <li>• Avoid overeating; eat smaller meals</li> <li>• Avoid foods that cause bloating or gas (may vary depending on the person) such as broccoli, cabbage, beans, cauliflower, radishes, onions, peas, corn, turnips and fried, greasy or heavily spiced foods</li> <li>• Eat slowly, chew food well and avoid gulping</li> <li>• Avoid drinking while eating to avoid swallowing air</li> <li>• Limit intake of carbonated beverages</li> </ul>
Thick mucus	<ul style="list-style-type: none"> <li>• Alters taste sensations</li> </ul>	<ul style="list-style-type: none"> <li>• Drink 6 - 8 glasses of non-caffeinated fluid to keep mucus thin and easy to cough up</li> <li>• Milk and dairy products do not produce more mucus but can coat mucus already present. Try drinking half a cup of 100% orange juice after having dairy products to help thin mucus.</li> </ul>
Dental Problems	<ul style="list-style-type: none"> <li>• Can cause mouth pain and make it more difficult to eat</li> </ul>	<ul style="list-style-type: none"> <li>• Alterations should be made in food textures/consistency to aid in chewing and swallowing</li> <li>• For example, try fish instead of pork chops or cooked vegetables instead of raw vegetables</li> </ul>
Fatigue	<ul style="list-style-type: none"> <li>• People may feel too tired to eat or lack the energy needed for eating</li> <li>• This causes some people to shorten the length of time spent eating</li> </ul>	<ul style="list-style-type: none"> <li>• Rest before meals</li> <li>• Eat smaller more frequent meals</li> <li>• Eat your largest meal when you have the most energy</li> <li>• Make easy to prepare meals and make extra to freeze, if possible, for times of increased fatigue</li> <li>• Use oven or microwave cooking rather than stovetop. Some people may find it tiring to stand at the stovetop.</li> <li>• Ask family to help with meal preparation</li> <li>• Make appropriate referrals to home care or meals on wheels, if available</li> </ul>

Reliance on oxygen	<ul style="list-style-type: none"> <li>• Food intake may be limited when reliant on oxygen</li> </ul>	<ul style="list-style-type: none"> <li>• Use oxygen while eating if needed or use oxygen when finished eating</li> </ul>
Constipation	<ul style="list-style-type: none"> <li>• People may experience more constipation when they have COPD</li> </ul>	<ul style="list-style-type: none"> <li>• Make sure client has adequate fluid intake (6 - 8 cups per day)</li> <li>• Increase dietary fibre (such as whole grains, beans, vegetables and fruits, bran cereals, whole grain pasta and rice)</li> <li>• Recommended to aim for 25 – 35 grams of fibre per day (Refer to handout “<i>Foods with Fibre</i>”)</li> <li>• Exercise as tolerated</li> </ul>

Refer to handouts “*Nutrition Tips for COPD*” and “*Common Complications and Solutions in COPD*”

## 2. 1 Nutrient Recommendations

### 2.2 Energy

- When a person has COPD more energy is needed in order to breathe
  - The muscles used in breathing may require 10 times more calories than those of a person without COPD
  - Consuming more energy than your body requires is not recommended as it puts additional stress on the lung and heart functions. When a person consumes excess energy, the body produces more carbon dioxide, which causes increased respiration rate. In past research it was thought that an excess intake of carbohydrates led to increased carbon dioxide production. Current literature proposes that excess consumption of energy is more significant in the production of increased carbon dioxide than intake of carbohydrates.
  - A client who is malnourished may require a high energy and protein diet
  - A client who is overweight may require an energy restricted diet to help them lose weight to help improve respiration
  - A client who has had significant weight loss such as a weight loss of 5% of their body weight in the previous month or 10% of their body weight in the previous 6 months can be provided with the *“High Energy and Protein Diet”* handout
- % weight change =  $\frac{\text{usual body weight} - \text{actual body weight}}{\text{usual body weight}} \times 100$

If the client is overweight:

- Reduce portion sizes. Continue to consume 2 - 3 servings of Meat and Alternatives per day.
- Limit high fat and high sugar foods such as hotdogs, french fries, bologna, juice, pop, chips, candy, chocolate, etc.
- Eat high fibre foods to help you feel full such as fruits, vegetables, whole wheat bread, brown rice, oatmeal, cereals, etc.
- Increase activity as advised by your doctor

Refer to the handout *“Tips for Weight Loss”*

### 2.3 Protein

- Intake needs to be adequate to prevent muscle breakdown and maintain lung strength. Eating Well with Canada's Food Guide recommends 2 servings of Meat and Alternatives per day for women and 3 servings for men.
- A client who is malnourished will require additional protein
- A client needing to lose weight may benefit from limiting their portion sizes of meat, chicken and fish
- Excess protein should be avoided in those with chronic kidney disease as it can decrease kidney function

### 2.4 Fluid

- Adequate fluid is needed to hydrate the body and help keep mucus thin and easy to cough up
- It is recommended to consume approximately 6 - 8 cups of non-caffeinated fluid per day. This can include water, milk, 100% juice, tea, soup, etc.
- Some people with COPD who also have congestive heart failure might need to limit their fluid intake. Fluid requirements should be discussed with the client's doctor.

### 2.5 Sodium (salt)

- Eating too much sodium can cause your body to retain fluid making breathing more difficult
- The recommended intake is 2300 mg or less of sodium per day (or 1 teaspoon of salt). This includes sodium added during cooking, at the table and what is added to foods products.

Tips to decrease sodium intake:

- Limit processed foods such as bacon, deli meats, bologna, canned soups, instant noodles, sauces, fast foods, condiments, etc.
- Remove salt shaker from table
- Use herbs or no-salt spices like pepper, onion powder, garlic powder, oregano, basil, etc.
- Avoid adding salt to food when cooking
- Read food labels and avoid foods with more than 300 mg of sodium per serving
- Salt substitutes may not be for everyone. The client should check with their doctor before using salt substitute such as half-salt.

Refer to handout "*Tips to Reduce Salt Intake*"

### 3.1 Osteoporosis

- People with COPD are at an increased risk of osteoporosis if they have used corticosteroids long-term
- Calcium and vitamin D supplementation is recommended as bone loss is significant after the initiation of starting steroid treatment. It is recommended that the client take 1200 mg of calcium and 1000 IU of vitamin D.
- The client should be encouraged to eat calcium and vitamin D rich foods and exercise if possible

Refer to handout "*Calcium and Vitamin D Rich Foods*"

## **4.1 When to Refer to a Dietitian**

- A client who has had significant weight loss such as a weight loss of 5% of their body weight in the previous month or 10% of their body weight in the previous 6 months
- An overweight/obese client who requires nutritional education to achieve weight loss
- A client who has several coexisting health problems in addition to COPD, such as renal failure, heart disease, diabetes, etc.

## 5.1 References

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## 6.1 Resources

2010 – 1. These materials were developed by the Clinical Subcommittee of the Chronic Disease Network and Access Program of the Prince Albert Grand Council and its partners and funded by the Aboriginal Health Transition Fund.

# Nutrition Tips for COPD

COPD = Chronic Obstructive Pulmonary Disease

## GENERAL TIPS:

A healthy diet helps to keep your lungs and body strong and it may help prevent illness

1. Eat food from all 4 food groups:

- Vegetables and Fruit
- Grain Products
- Milk and Alternatives
- Meat and Alternatives



2. Avoid foods that have little nutritional value such as chips, pop, candy, cookies, bacon, hotdogs, french fries, etc.

3. Eat small, frequent meals and snacks (5 - 6 meals/snacks)

4. Eat your main meal when you have the most energy

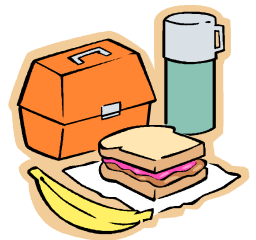
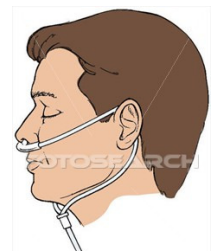
5. Drink beverages after meals, so you do not fill up on liquids

6. Limit salt intake (too much salt can cause you to retain fluid making it harder to breathe):

- Use herbs or no-salt spices like pepper, onion powder, basil, etc.
- Avoid adding salt to food when cooking and at the table
- When reading labels avoid foods with more than 300 mg of sodium (salt)



7. Use your oxygen while eating and after meals (helps to digest food)

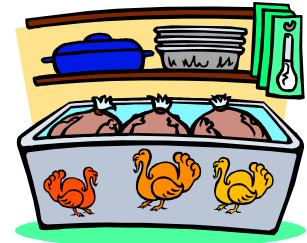


# Nutrition Tips for COPD

COPD = Chronic Obstructive Pulmonary Disease

## TIPS TO SAVE TIME AND ENERGY:

- Make easy to prepare one-dish meals; make extra and freeze for later
- Use the oven or microwave if you find stove-top cooking tiring
- Plan and prepare ahead as much as possible
- Ask for help from family and friends



## HEALTHY SNACKS:

- Crackers and cheese or peanut butter – (try “baked” crackers)
- Rice crackers
- Pretzels, plain popcorn
- Homemade Muffins
- Baked Bannock
- Yogurt
- Milk puddings
- Fruit smoothies – blend together milk, yogurt and fruit!
- Fruit – fresh, or canned – serve with a dip made from yogurt
- Vegetables and dip – try a low fat salad dressing
- Half a sandwich



## FLUIDS:

- Enough fluid is needed to hydrate the body
- Fluid helps keep mucus thin and easy to cough up
- Try to drink 6 - 8 cups of non-caffeinated fluids such as water, milk, 100% juice, de-caffeinated tea, soup, etc.
- Alcohol can interact with medications, might slow your breathing and make it difficult to cough up mucus
- Talk to your doctor before drinking alcohol







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# Common Complications & Solutions in COPD

COPD = Chronic Obstructive Pulmonary Disease

Complications	What to do
<p data-bbox="215 537 565 617"><b>Shortness of breath or swallowing air</b></p> 	<ul data-bbox="613 537 1442 1119" style="list-style-type: none"> <li>• Eat 5 - 6 smaller meals per day. This keeps the stomach from filling up too much and gives the lungs room to expand.</li> <li>• Choose foods that are easy to chew</li> <li>• Eat slowly, take smaller bites, and breathe deeply while chewing</li> <li>• Clear airways of mucus at least 1 hour before eating</li> <li>• Rest and use bronchodilators before meals</li> <li>• Try drinking liquids at the end of the meal. Drinking before or during the meal may cause feelings of fullness or bloating.</li> <li>• Eat while sitting up to make it easier to breathe</li> <li>• If you use oxygen, wear it while eating</li> </ul>
<p data-bbox="215 1173 451 1205"><b>Bloating or gas</b></p>  	<ul data-bbox="613 1173 1442 1570" style="list-style-type: none"> <li>• Avoid overeating</li> <li>• Avoid foods that cause gas or bloating such as broccoli, cabbage, beans, cauliflower, radishes, onions, beans, peas, corn, turnips. This may vary depending on the person. Avoid fried, greasy or heavily spiced foods.</li> <li>• Eat slowly, chew food well and avoid gulping</li> <li>• Avoid drinking while eating to avoid gas swallowing</li> <li>• Limit intake of pop</li> </ul>
<p data-bbox="215 1625 412 1656"><b>Thick mucus</b></p> 	<ul data-bbox="613 1625 1419 1881" style="list-style-type: none"> <li>• Drink 6 - 8 glasses of non-caffeinated beverages to keep mucus thin and easy to cough up</li> <li>• Milk and dairy do not produce more mucus, but can coat mucus already present. Try drinking half a cup of 100% orange juice after having dairy to help thin mucus.</li> </ul>

# Common Complications & Solutions in COPD

COPD = Chronic Obstructive Pulmonary Disease

Complications	What to do
<p><b>Dental Problems</b></p> 	<ul style="list-style-type: none"> <li>• If you are having problems chewing or swallowing you may need a soft or a pureed (mashed) diet</li> </ul>
<p><b>Fatigue (tired)</b></p> 	<ul style="list-style-type: none"> <li>• Rest before meals</li> <li>• Eat smaller more frequent meals</li> <li>• Make easy to prepare meals and make extra to freeze, if possible, for times when you feel tired</li> <li>• Use the oven or microwave to cook rather than stovetop</li> <li>• Ask family to help with meal preparation</li> </ul>
<p><b>Reliance on oxygen</b></p> 	<ul style="list-style-type: none"> <li>• Wear your breathing mask while eating if oxygen is needed</li> <li>• Use your oxygen when finished eating</li> </ul>
<p><b>Constipation</b></p> 	<ul style="list-style-type: none"> <li>• Drink 6 - 8 cups of fluids per day</li> <li>• Increase fibre intake (such as whole grains, beans, vegetables and fruits, bran cereals, whole grain pasta and rice)</li> <li>• Aim for 25 - 35 grams of fibre per day</li> <li>• You may need to add extra fibre to foods (bran)</li> <li>• Exercise if you can</li> </ul>

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# Foods with Fibre

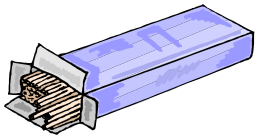
## Why is fibre good for you?

High fibre foods:

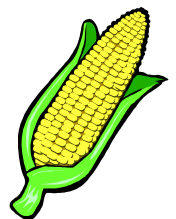
- Help with constipation
- Lower cholesterol levels
- Controls blood sugars
- Helps you feel full so you eat less

## How much fibre do I need?

- Aim for 25 – 35 grams of fibre per day



Fibre Content of Foods		
Food	Serving	Fibre (g)
Bran Flakes	1 cup	12 g
Kidney Beans	2/3 cup	12 g
Pork and Beans	2/3 cup	10 g
Raisin Bran cereal	1 cup	7 g
Shreddies	1 cup	6 g
Mini Wheat's cereal	1 cup	5 g
Whole Wheat Pasta	1 cup	5 g
Peas	Half a cup	4 g
Mixed Vegetables	Half a cup	3 g
Whole Wheat Bread	1 slice	2.5 g
Oatmeal (quick oats)	2/3 cup	2.5 g
Apple	1 apple	2.5 g
Orange	1 orange	2.5 g
Broccoli	Half a cup	2 g
Carrots	Half a cup	2 g
Canned Corn	Half a cup	2 g
Potato (no skin)	1 potato	2 g
Blueberries	Half a cup	2 g
Banana	1 banana	2 g
Tomato	1 tomato	1.5 g
Brown Rice	Half a cup	1.5 g



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# High Energy & Protein Diet

Some people with Lung Disease need to gain weight

- Extra energy and protein in your diet may help stop weight loss and may help you to gain some weight back

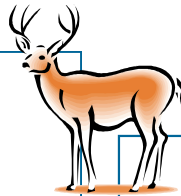
## General Tips:

- Eat from all 4 food groups
- Eat small frequent meals
- Try having snacks between meals
- Avoid filling up on liquids like tea, coffee, broth and juice
- Limit foods that have little nutritional value such as chips, pop, candy, cookies, bacon, hotdogs, french fries, etc.
- Do not use foods that are labelled light, calorie reduced or low calorie
- Try eating high protein and energy foods at each meal



## High Protein Foods

- Cheese
- Powdered milk
- Eggs
- Meat
- Yogurt
- Peanut Butter
- Nuts and seeds (non-salted)
- Beans (brown, kidney, white etc)
- Fish



## High Energy Foods

- Cheese
- Whole milk
- Non-hydrogenated margarine & oil
- Salad dressing
- Mayonnaise
- Cream soups

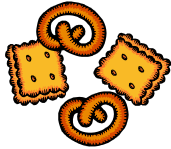


## Tips for adding protein and energy to your diet

- Melt cheese on meats, casseroles, vegetables and add to sandwiches, soups and salads
- Powdered milk can be added to cereal, mashed potatoes, soup, sauces, casseroles, scrambled eggs and puddings
- Add beans to soups and casseroles
- Add non-hydrogenated margarine to sandwiches, crackers, potatoes, noodles and vegetables



# High Energy & Protein Diet



## High protein and energy snack ideas

- Cheese and crackers
- Peanut butter and crackers
- Bagel/bun with peanut butter or cream cheese
- Bannock with non-hydrogenated margarine
- Vegetables with dip
- Hard boiled egg
- Half a sandwich (tuna, egg, meat, peanut butter)
- Pudding made with milk
- Yogurt with granola
- Cereal with whole milk
- Tuna and crackers
- Milkshakes
- Nutrition supplements



**If you are not well enough to eat a meal try a healthy shake instead!**

### High Energy Milk

- 1 cup whole (homogenized) milk
- 1/4 cup of powdered whole milk

Combine ingredients in blender

Makes 1 serving

### High Protein Shake

- 1 packet of Carnation Instant Breakfast Essentials
- 1 cup whole (homogenized) milk
- 1/4 cup of powdered whole milk

Combine ingredients in blender

Makes 1 serving

### Yogurt & Fruit Shake

- 1 cup of fruit
- 1 cup of fruit flavored yogurt
- 1 cup of whole milk
- 3 ice cubes

Blend the fruit, milk and yogurt in a blender  
Add ice and blend until mixed well

Makes 2 servings

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# Tips for Weight Loss

## A healthy weight can:

- Improve breathing ability in people with Lung Disease
- Help to prevent or manage diabetes
- Improve blood sugars, blood pressure and cholesterol
- Reduce the risk of heart attack or stroke
- Improve your overall well-being and energy levels

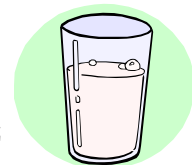
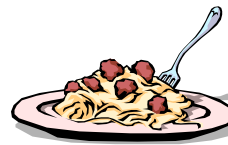
## What is a Healthy Weight Loss?

- Choosing healthy foods more often
- Watching the amount of food we eat
- Being physically active everyday
- Healthy weight loss is 1 - 2 pounds (0.45 - 0.9 kg) per week
- Even a small weight loss of 5 - 10% of your body weight can make a big difference in your health

## Tips for Losing Weight:

### 1. Enjoy a wide variety of foods

- Eat from all 4 food groups



### 2. Limit high fat and sugar foods

- For example: hotdogs, bologna, chips, candy, chocolate, juice, pop, fast foods, fried foods, chinese food, french fries, lard, butter, battered meats, etc.

### 3. Beware of portion sizes (see back side of handout)

### 4. Eat more fibre

- Fibre keeps you full longer. Try foods like whole grain breads and cereals, vegetables, fruit, beans, lentils, brown rice, brown pasta, etc.

### 5. Think about your drink

- Beverages can have a lot of extra calories. Watch how much you drink of juice, pop, coffee with cream and sugar, iced coffee, slush, energy drinks, sport drinks, etc.

### 6. Eat when you are hungry

- Let your body tell you when you are actually hungry

### 7. Eat regular meals

- Eating 3 meals a day helps to keep your metabolism up

### 8. Take time to eat

- Eating more slowly helps you to know when you are full



### 9. Rethink your snack

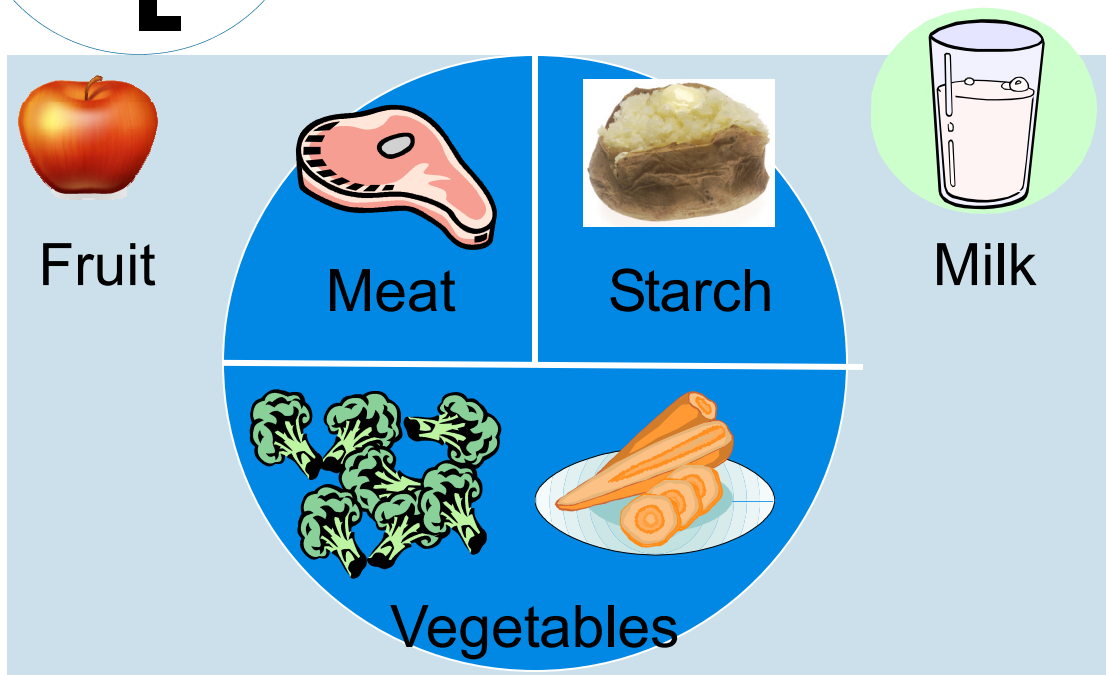
- Pick foods from the 4 food groups for snacks. Watch out for high calorie snacks like chips, chocolate bars, cookies, donuts, etc.

### 10. Be physically active

- Aim to be active for half an hour every day. This means getting your heart rate up and breathing harder



# Tips for Weight Loss

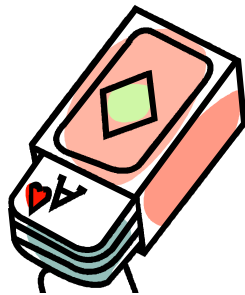


**This is what your plate should look like!**

## What should a portion look like?



Fruit should be the size of a tennis ball



Meat should be the size of a deck of cards



Starches should be the size of your fist



Fats should be the size of the tip of your thumb



Vegetables should be 2 handfuls or half your plate

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# Tips to Reduce Salt Intake

## Why is it important to reduce your salt intake?

- Eating too much salt can cause your body to retain water making breathing more difficult for people with Lung Disease
- Having too much salt can make your blood pressure go up and increase your risk for heart disease
- Having high blood pressure can damage your kidneys

## How much salt do I need?

- Your goal is to keep your salt intake under 2300 mg (1 tsp)



## How to cut back on the salt in your diet:

- Remove salt shaker from table
- Use herbs or no-salt spices like pepper, onion powder, garlic powder, oregano, basil, etc.
- Avoid adding salt to food when cooking
- Read food labels and avoid foods with more than 300 mg sodium per serving
- Eat less processed, packaged and fast foods

## Salt Substitutes:

- Salt substitutes are not for everyone. You should check with you doctor or dietitian before using a salt substitute.

## Try this recipe to help season your foods

### No-Salt Seasoning

5 tsp	onion powder
1 tbsp	garlic powder
1 tbsp	paprika
1 tbsp	dry mustard
1 tsp	dry thyme
Half a tsp	pepper
Half a tsp	celery seed

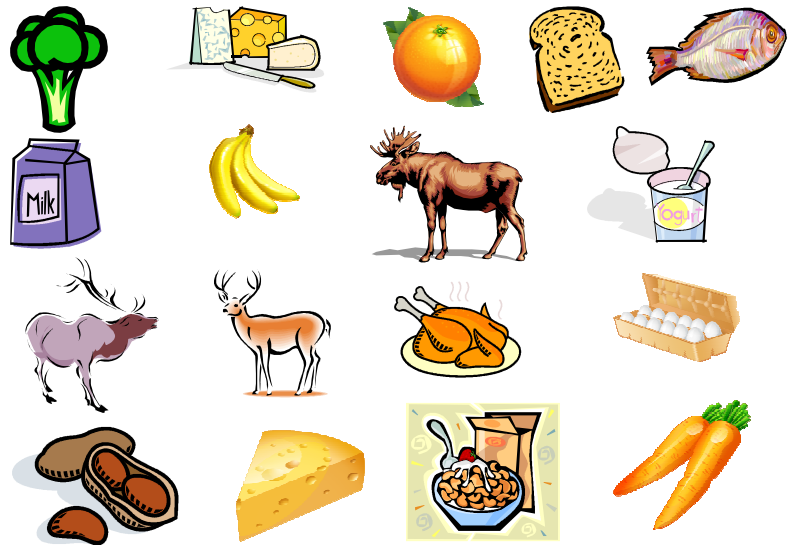
#### Directions:

1. Combine all ingredients in a small jar with a shaker top
2. Use for seasoning fish, poultry, cooked vegetables, soup and stews or place it on the table to use individually

# Tips to Reduce Salt Intake

## What food are low in salt?

- Fresh or frozen fruits and vegetables
- Whole grain breads, buns, cereals, rice, pasta and bannock
- Lentils, beans and barley
- Milk, yogurt and block cheese
- Fresh or frozen meats, wild meats, fish and chicken
- Eggs
- Peanut butter
- Unsalted nuts



## What foods are high in salt?



- French fries and potato chips
- Vegetable juices
- Canned or dried soups and instant noodles
- Canned vegetables and instant potatoes (try rinsing your canned vegetables with water before eating)
- Pickles, olives and sauerkraut
- Nachos, pretzels, popcorn, salted nuts and crackers
- Canned sauces, instant rice and pasta mixes
- Instant oatmeal
- Cheese slices and cheese spread
- Deli meats like ham, pepperoni, salami, bologna and beef jerky
- Hotdogs, smokies, sausages, bacon and canned ham
- Pickled foods
- Condiments like sea salt, seasoning salt, garlic salt, ketchup, mustard, BBQ sauce, soy sauce, teriyaki and salad dressings

*2010 - 2. These materials were developed by the Clinical Subcommittee of the Chronic Disease and Network and Access Program of the Prince Albert Grand Council and its partners and funded by Aboriginal Health Transition Fund..*

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# Tips to Reduce Salt Intake

## Reading a Label:

- When reading an ingredient list on a food label salt can be called salt, sodium or soda
- Monosodium glutamate also contains salt
- If the term salt, sodium or soda is listed in the first three ingredients or listed more than 3 times this food is considered a high salt food
- Choose foods with less than 10% (300 mg) sodium



Nutrition Facts		Valeur nutritive	
Per 1 bowl (300 g) / Pour 1 bol (300 g)			
Amount		% Daily Value	
Teneur		% valeur quotidienne	
<b>Calories / Calories</b>	440		
<b>Fat / Lipides</b>	19 g	<b>29 %</b>	
Saturated / Saturés	4 g	<b>21 %</b>	
+ Trans / Trans	0.2 g		
<b>Cholesterol / Cholestérol</b>	35 mg		
<b>Sodium / Sodium</b>	860 mg	<b>36 %</b>	
<b>Carbohydrate / Glucides</b>	53 g	<b>18 %</b>	
Fibre / Fibres	4 g	<b>16 %</b>	
Sugars / Sucres	6 g		
<b>Protein / Protéines</b>	15 g		
Vitamin A / Vitamine A		45 %	
Vitamin C / Vitamine C		4 %	
Calcium / Calcium		20 %	
Iron / Fer		20 %	

## How much salt do you get in a day?

- 1 cup instant noodles = 730 mg
- Fried Chicken (1 thigh) = 1020 mg
- Egg roll (1) = 250 mg
- Sweet and sour chicken balls (3) = 390 mg
- 1 cup chicken fried rice = 800 mg
- 1 cup chicken chow mein = 982 mg
- 1 slice of pizza (deluxe) = 629 mg
- Hotdog (1) = 670 mg
- 1 sausage = 400 mg
- 2 slices bologna = 620 mg
- 3 slices of bacon = 550 mg
- 1 tsp of salt = 2300 mg
- 1 tsp sea salt = 2300 mg
- 1 tbsp of soy sauce = 1230 mg
- 1 tsp garlic salt = 1480 mg
- 1 large pickle = 830 mg
- 1 cup tomato juice = 690 mg
- 1 tbsp of ketchup = 170 mg
- 60 ml gravy = 330 mg
- 1 tbsp BBQ sauce = 130 mg
- 1 tbsp teriyaki sauce = 700 mg
- 2 tbsp of cheese spread = 500 mg
- 1 cheese slice = 310 mg

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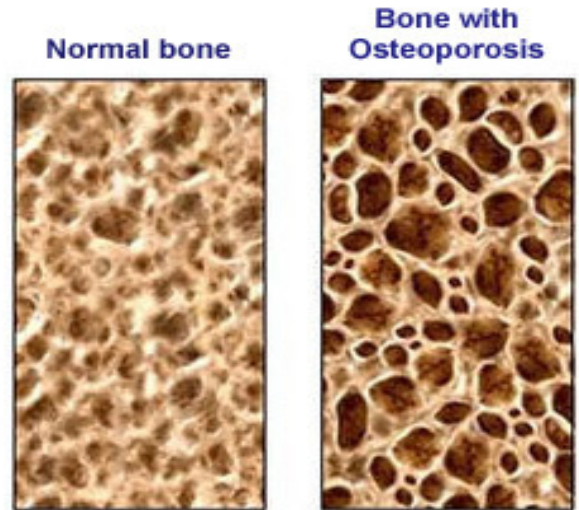
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# Calcium & Vitamin D Rich Foods

## GOOD BONE HEALTH:

- People with Lung Disease are at risk for osteoporosis if they have used corticosteroids for a long time
- Osteoporosis is a disease where bones become weak and more breakable
- You need 1200 mg of calcium and 1000 IU of vitamin D every day
- If you are not getting enough calcium from foods you may need a supplement
- Everyone should take a vitamin D supplement



Food	Serving Size	Calcium Content	Vit D content
Milk (canned and carton)	1 cup	300 mg	100 IU
Chocolate milk	1 cup	300 mg	100 IU
Soy milk with calcium	1 cup	300 mg	100 IU
Yogurt	3/4 cup	400 mg	55 IU
Cheese	1.5 oz (size of 2 dice)	360 mg	4 IU
Pudding made with milk	Half a cup	140 mg	50 IU
Calcium fortified orange juice	Half a cup	185 mg	0
Sardines with bones	1 can (106 g)	400 mg	100 IU
Salmon with bones	75 g (size of palm)	200 mg	0
Broccoli	Half a cup	20 mg	0
Almonds	1/4 cup	100 mg	0
Egg Yolks	1 large egg	0	15 IU
Fish	75 g (size of palm)	0	60 - 200 IU
Margarine	1 tsp	0	25 IU



- \* During the summer months your skin can make vitamin D from the sun
- \* To make vitamin D you need to be outside for a short time with some skin showing
- \* The darker your skin is the longer it takes to make vitamin D
- \* People over 50 make less vitamin D from the sun
- \* During the fall and winter we cannot make vitamin D and need to take a supplement

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# Label Reading

## Why Read a Nutrition Label?

- Helps you to make better food choices
- Helps you to choose foods with less or more of some nutrients
- Helps you compare foods



## Reading a Nutrition Label

### 1. Serving Size

- This is the amount most people eat of the food. The rest of the label is based on this amount. Always compare the serving size to how much you actually eat

### 2. Calories

- Calories tell us how much energy you get from one serving of that food

### 3. Choose foods with LESS:

- Fat
- Saturated Fat
- Trans Fat
- Cholesterol
- Sodium (salt)
- Sugar

- Look for low % Daily Values for these nutrients as too much can increase your risk for heart disease and diabetes

Nutrition Facts	
Serving Size 1 cup 244g (244 g)	
Amount Per Serving	
Calories 168	Calories from Fat 89
% Daily Value*	
Total Fat 10g	16%
Saturated Fat 7g	33%
Trans Fat	
Cholesterol 27mg	9%
Sodium 122mg	5%
Total Carbohydrate 11g	4%
Dietary Fiber 0g	0%
Sugars 11g	
Protein 9g	
Vitamin A 10%	Vitamin C 5%
Calcium 33%	Iron 1%

### Percent Daily Value (% Daily Value)

- Puts nutrients on a scale from 0% to 100%. This tells you if there is a little or a lot of that nutrient in the food

### 4. Choose foods with MORE:

- Fibre
- Vitamin A and C
- Calcium and iron

- Look for high % Daily Values of these nutrients.



# Label Reading

## What to Look for on a Nutrition Label

### 1. Fat

- Eating too much fat, saturated fat and trans fat can increase your risk for heart disease and obesity
- Saturated and trans fat can cause fat to build up in the blood vessels
- Choose foods with:
  - 10 g or less of total fat (15% Daily Value)
  - 2 g or less of saturated fat
  - 0 g or minimal trans fat

### 2. Sodium

- Sodium is another word for salt
- Sodium helps to balance the fluids in our body
- Too much salt can be harmful and may cause high blood pressure
- Choose foods with:
  - 300 mg or less of sodium (10% Daily Value)

### 3. Fibre

- Fibre helps us to stay full longer, which can help you lose weight
- Fibre helps to control blood sugars and lower cholesterol levels
- Keeps us regular
- Choose foods with:
  - 2 g or more of fibre ( 8% Daily Value)

### 4. Sugar

- Too much sugar can cause weight gain and dental cavities
- Being overweight increases your risk for heart disease and diabetes
- Choose foods with:
  - 12 g or less of sugar

### 5. Vitamins

- Vitamin A is important for vision and skin health
- Vitamin C helps your body fight infections

### 5. Minerals

- Calcium is important for keeping your bones and teeth healthy
- Iron helps your red blood cells carry oxygen throughout your body

Nutrition Facts	
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% Daily Value*	
Total Fat 10g	16%
Saturated Fat 7g	33%
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Sodium 122mg	5%
Total Carbohydrate 11g	4%
Dietary Fiber 0g	0%
Sugars 11g	
Protein 9g	
Vitamin A 10%	Vitamin C 5%
Calcium 33%	Iron 1%

If you have diabetes, look at how much carbohydrate is in your foods. Try to pick foods with a lower amount of this nutrient as eating too much can cause blood sugars to go too high.



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