



A Member of  SOLUTIONHEALTH

# Respiratory Medications

“I BREATHE IN MY COURAGE AND  
EXHALE MY FEAR”

Pulmonary Strong Wellness  
2020

## Two Names??



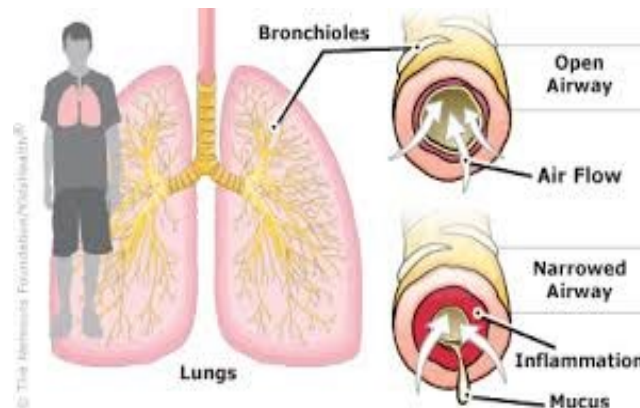
- ❑ Every medication has two names- **GENERIC** and **BRAND**
- ❑ **Generic** name- is the scientific name which describes the main chemical in the drug.
- ❑ **Brand** name- is the name that the specific company uses when it makes that drug.
- ❑ Example-Acetaminophen-a common headache medicine. Brand names include Anacin Aspirin Free and Tylenol.

# Classes of Pulmonary Medications

- Bronchodilators (Short and Long Acting **OR** Adrenergic and Anticholinergic)
- Corticosteroids- “Steroids”
- Combination Medication
- Mucolytics
- Allergy medications
- Antibiotics

# Bronchodilators

- ❑ Preferred delivery method--**INHALERS**--but can be taken as pills, liquids or nebulized liquids
  - MDI**-Metered Dose Inhaler (aerosol)
  - DPI**-Dry Powder Inhaler (powder)
  - Nebulizer**-changes medication from a liquid to a mist
  - SMI**-Soft Mist Inhaler (Respimat)
- ❑ Relaxes tight muscles in the airways which open the airways, relieves cough & mucus production
- ❑ Side Effects may include increase heart rate, headache and shakiness-tremors



# Short-Acting Bronchodilators

- Provide quick relief--therefore fast-acting--within 15-20 min
- Last 2-6 hours
- Known as a “Rescue Inhaler”
- Used on a “as needed” basis
- Using your “Rescue” inhaler before activities &/or triggers that make your breathing worse, may help lessen or prevent increased shortness of breath
- Increased use of rescue inhalers may indicate COPD/Lung Disease is not well controlled



# Short-Acting Bronchodilators (SABA)

- Atrovent (ipratropium bromide) MDI or Nebulizer
- Combivent Respimat (albuterol and atrovent) SMI
- DuoNeb Nebulizer (Liquid form of Combivent)
- Proair, Proventil, Ventolin (all albuterol) MDI or RespiClik
- Xopenex (levalbuterol) MDI or Nebulizer

# Long-Acting Bronchodilators (LABA)

- DOES NOT provide quick relief-do not take for an “attack”.
- Last 12-24 hours
- Usually referred as “Maintenance” or “Controller” Inhalers.
- Used on a **regular scheduled** basis-not “as needed”

# Long-Acting Bronchodilators (LABA or LAMA)

- Serevant (salmeterol xinafoate)-MDI or DPI
- Perforomist (formoterol)-Nebulizer
- Brovana (Aformoterol)-Nebulizer
- Spiriva HandiHaler-DPI or Respimat SMI  
(tiotropium)--Avoid getting powder in eyes
- Striverdi Respimat-SMI (olodaterol  
hydrochloride)
- Incruse Ellipta-DPI (unmeclidinium)
- Tudorza Pressair-DPI (aclidinium bromide)



# Corticosteroids

- ❑ Corticosteroids are man made drugs that closely resemble cortisol, a hormone that your adrenal glands produce naturally
- ❑ Corticosteroids are often referred to by the shortened name "steroids." Steroids can be given in pill form or I.V.
- ❑ Like all steroids these are given with the hope of reducing the inflammation that occurs in the airways
- ❑ Gargling & rinse mouth out with water (do not swallow water) to help prevent hoarseness, throat irritation and infection (thrush)
- ❑ Not to be used for an asthmatic attack
- ❑ **Always** take bronchodilator first

# Possible Side Effects of Steroids

- Increased appetite, weight gain
- Sudden mood swings
- Muscle weakness
- Blurred vision
- Increased growth of body hair
- Easy bruising
- Swollen, “puffy face”
- Acne
- Worsening diabetes
- High blood pressure
- Nervousness, restlessness
- Stomach irritations
- Water retention, swelling
- Cataracts or glaucoma
- Osteoporosis (bone weakening disease)

**NOTE-** Frequency of side effects may vary from patient to patient.  
-Not all patients develop side effects.

# Inhaled Corticosteroids (ICS)

- Alvesco (ciclesonide) MDI
- Arnuity Ellipta (fluticasone furoate) DPI
- Asmanex (mometasone) MDI
- Flovent (fluticasone propionate) Diskus or MDI
- Pulmicort (Budesonide) DPI or nebulizer
- QVAR (beclomethasone) MDI

# Combination Medication

2 + Medications combined into one inhaler

- ❑ Include LABA & ICS such as Advair Diskus, Breo Ellipta, Dulera and Symbicort
- ❑ Triple therapy inhalers such as Trelegy Ellipta & Breztri Aerosphere has ICS with 2 different types of bronchodilators
- ❑ A short acting maintenance & rescue inhaler (SABA) such as Combivent
- ❑ A inhaler that contains 2 different types of bronchodilators such as Anoro Ellipta, Stiolto Respimat & Bevespi Aerosphere

# Mucolytics

- ❑ Muco (coming from mucous)
- ❑ Lytic (meaning to eat or dissolve)
- ❑ Mucinex and Mucomyst
- ❑ These medications help to break the bonds in mucous that make it so thick, and therefore you can cough it up easier.
- ❑ Make sure to note the color for the doctor!



# Allergy Medications

- ❑ Mast cells are part of your body's defense system
- ❑ When allergens make contact with these cells they dissolve or rupture and release a number of chemicals including histamines
- ❑ Histamines-cause swelling and increased mucus production
- ❑ Goals of Allergy medication are to block histamine release from mast cells that cause allergic reaction. These meds help stabilize mast cells and are used to prevent asthma attacks & symptoms of seasonal or chronic allergic rhinitis

# Antihistamines

- Zyrtec (certirizine)
- Claritin (loratadine)
- Allegra (fexofenadine)
- Astelin (azelastine)
- Chlor-Trimeton  
(chlorpheniramine)



# Antibiotics

- ❑ Antibiotics are used to treat infections caused by BACTERIA
- ❑ It's IMPORTANT to take all your antibiotics and medications as prescribed
- ❑ If antibiotic is not taken as directed-- bacteria may become weakened, but not destroyed
- ❑ Call your doctor at the first signs of infection





# Spacers/Valve Holding Chambers (VHC)

- ❑ Spacers/VHC are crucial!
- ❑ They increase the deposition of the medication
- ❑ Makes the MDI easier to use
- ❑ Strongly recommended to use a spacer/VHC with a ICS MDI
- ❑ Should NEVER be used for DPI's (Dry Powder Inhalers)



# Proper MDI Technique

1. Shake the MDI for at least 5-10 sec. **Remember to PRIME.** Prime rates differ, please check manufacturers specifications
2. Attach the spacer to the inhaler with the canister in a upright position then shake several times
3. Exhale to the end of your normal breath-**not** into the spacer.
4. Actuate it (squeeze it while it's in a spacer)
5. Take a slow steady deep breath in. This should take 3-4 seconds. If the spacer makes a “whistling” sound, you are breathing in too fast. You should **NOT** hear a “whistle”
6. **HOLD** it for 5 -10 seconds, take spacer out of your mouth. Pucker your lips as if you were going to blow out a candle. Breathe out slowly
7. Inhalers that require 2 puffs, wait at least 30 sec-1 minute between puffs.
8. Replace the cap on the mouthpiece of the MDI & spacer after you have finished

# FYI

- ❑ Don't use nebulizers, or MDI's near a flame or heat source
- ❑ Don't start new over the counter drugs without talking to MD
- ❑ Cleaning your nebulizer, MDI or spacers weekly. Never wash in soap with lotion ie Palmolive
- ❑ *Pure WHITE Ivory liquid soap is the best if using soap*
- ❑ *Simple disinfectant-3 parts water to 1 part vinegar-soak for 30 min, rinse well and air dry*
- ❑ Cleaning & Disinfecting are 2 different procedures! **Refer to Self Protection PowerPoint for Disinfecting procedure.**

# Respiratory Inhalers

## At a Glance 2017

Allergy & Asthma Network is a national nonprofit organization dedicated to ending needless death and suffering due to asthma, allergies and related conditions through outreach, education, advocacy and research.



AllergyAsthmaNetwork.org

800.878.4403

Short-acting beta <sub>2</sub> -agonist bronchodilators		Long-acting beta <sub>2</sub> -agonist bronchodilators	
quick relief of symptoms such as coughing, wheezing and shortness of breath for 3-6 hours		offer lasting relief of symptoms such as coughing, wheezing and shortness of breath for at least 12 hours	
<b>ProAir® HFA</b> albuterol sulfate HFA A	<b>ProAir® RespiClick</b> albuterol sulfate inhalation powder HFA A	<b>Preventil® HFA</b> albuterol sulfate A	<b>Ventolin® HFA</b> albuterol sulfate HFA A
<b>Xopenex HFA</b> levalbuterol tartrate A	<b>Arcapta™ Neohaler™</b> indacaterol inhalation powder C	<b>Serevent® Diskus®</b> salmeterol xinafoate inhalation powder HFA A C	<b>Striverdi® Respimat®</b> olodaterol hydrochloride HFA C
Inhaled corticosteroids			
reduce and prevent swelling of airway tissues they do not relieve sudden symptoms of coughing, wheezing or shortness of breath			
<b>Aerospan®</b> 80 mcg fluticasone ★ A	<b>Alvesco® HFA</b> 80 mcg, 160 mcg ciclesonide HFA A	<b>Asmanex® HFA</b> mometasone furoate HFA A	<b>Asmanex® Twisthaler™</b> 110 mcg, 220 mcg mometasone furoate inhalation powder HFA A
<b>Flovent® Diskus®</b> 50 mcg, 100 mcg, 250 mcg fluticasone propionate inhalation powder HFA A	<b>Flovent® HFA</b> 44 mcg, 110 mcg, 220 mcg fluticasone propionate HFA A	<b>Pulmicort Flexhaler®</b> 90 mcg, 180 mcg budesonide inhalation powder HFA A	<b>QVAR® (HFA)</b> 40 mcg, 80 mcg beclomethasone dipropionate HFA A
Combination medications		Combination medications	
contain both inhaled corticosteroid and long-acting beta <sub>2</sub> -agonist (LABA)		contain both long-acting muscarinic antagonist (LAMA) and long-acting beta <sub>2</sub> -agonist (LABA)	
<b>Advair Diskus®</b> 100/50, 250/50, 500/50 fluticasone propionate and salmeterol inhalation powder HFA A C	<b>Advair® HFA</b> 45/21, 115/21, 230/21 fluticasone propionate and salmeterol xinafoate HFA A	<b>Breo® Ellipta®</b> 100/25 mcg, 200/25 mcg fluticasone furoate and vilanterol inhalation powder HFA A C	<b>Dulera®</b> 100/5, 200/5 mometasone furoate and formoterol fumarate dihydrate HFA A
<b>Symbicort® (HFA)</b> 80/4.5, 160/4.5 budesonide and formoterol fumarate dihydrate HFA A C	<b>Anoro® Ellipta®</b> 62.5 mcg/25 mcg umedclidium and vilanterol inhalation powder HFA C	<b>Bevespi Aerosphere®</b> 9 mcg/4.8 mcg glycopyrrolate and formoterol fumarate inhalation aerosol HFA C	<b>Stiolto™ Respimat®</b> 2.5 mcg/2.5 mcg tiotropium bromide and olodaterol HFA C
<b>Utibron™ Neohaler®</b> 27.5 mcg/15.6 mcg indacaterol and glycopyrrolate inhalation powder C			
Muscarinic antagonist (anticholinergic) bronchodilators			
relieve cough, sputum production, wheeze and chest tightness associated with chronic lung diseases			
<b>Atrovent® HFA</b> ipratropium bromide HFA C	<b>Long-acting</b> <b>Seebri™ Neohaler®</b> glycopyrrolate inhalation powder C	<b>Incruse® Ellipta®</b> umeclidium inhalation powder HFA C	<b>Spiriva® HandiHaler®</b> tiotropium bromide inhalation powder C
<b>Spiriva® Respimat®</b> tiotropium bromide HFA A C	<b>Tudorza™ Pressair™</b> acetylcholine bromide inhalation powder HFA C	<b>Combination</b> antagonist and beta <sub>2</sub> -agonist <b>Short-acting</b> <b>Combivent® Respimat®</b> ipratropium bromide and albuterol HFA C	