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## Combination DPI DEVICES TECHNIQUES, PRIMING & CARE

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- **Disclosures:**
  - This presentation and clinical recommendations support “best available evidence” from medical literature.
  - I refrain from making recommendations regarding products or services.
  - I have no financial relationship requiring divesting.
  - I have associations or memberships with the following organizations
    - Stony Brook University Hospital
    - Association of Asthma Educators
    - National Association of Pediatric Nurse Practitioners
    - Asthma Coalition of Long Island



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CONTENT & GRAPHICS FOR THIS PRESENTATION HAS BEEN ADAPTED FROM VARIOUS LECTURES, POWER POINT PRESENTATIONS THAT I HAVE GIVEN THROUGH MY POSITION @ STONYBROOK UNIVERSITY HOSPITAL, AND THE ASTHMA COALITION OF LI

Good resource : American Association for Respiratory Care Guide to Aerosol Delivery Devices  
[https://www.aarc.org/resources/aerosol\\_nonrts.pdf](https://www.aarc.org/resources/aerosol_nonrts.pdf)



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## Combination ICS DPI Medication

- Two medicines in one device:
  - ✓ Inhaled steroid
  - ✓ Long acting bronchodilator
  - ✓ Available in different strengths
  - ✓ Do not blow into device,
  - ✓ Do not get device wet, store in dry place
- Always rinse your mouth with water and spit it out after taking this medicine to avoid local Side effects: hoarseness, oral thrush
- Currently FDA approved in US: Accessed from site: 6/1/15  
<http://www.fda.gov/Drugs/DrugSafety/InformationbyDrugClass/ucm082370.htm>
- [ADVAIR Diskus \(salmeterol xinafoate/fluticasone propionate powder for inhalation\)](#)
- [NEW 2015: Breo Ellipta \(fluticasone furoate and vilanterol trifenate\)](#)




- Device that delivers medication to the lungs in the form of a dry powder
- DPI-Dry powder inhalers (e.g. diskus, flexhaler, Ellipta,)
- Need to follow specific instructions (usually ages 6yo & up)
- Require “quick and deep” inhalation, requires a specific inspiratory effort & ability to follow

#### COMBINATION ICS DPI

- *Advair diskus- disc shape- kids refer to it as the hamburger*
- *Plastic case, mouthpiece, loading lever, dose counter*
- *Inside has gears that forward the blister packets of powder medication, and a mechanism to open the packets*



	<b>Fluticasone in Combination with Salmeterol (bronchodilator)</b>	Advair Diskus 100/50 Advair Diskus 250/50 Advair Diskus 500/50	Control/prevent asthma.	Advair Diskus 100/50 is for age 4 to 11.  Advair Diskus 100/50, 250/50 and 500/50 are for age 12 and older.  Usual dose: One inhalation twice daily.	Shaking: no Spacer: no Priming: no Counter: yes <b>Cleaning:</b> Weekly, clean the outside of the device with a dry tissue The "Use by" date is 1 month from date of opening. Store: Room temperature-cool & dry place Out of children's reach
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Source: <http://www.aaaai.org/conditions-and-treatments/treatments/drug-guide/inhaled-corticosteroids.aspx>



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• [ADVAIR Diskus \(salmeterol xinafoate/fluticasone propionate powder for inhalation\)](#)

Initial U.S. Approval: 2000



3 Strengths : **100/50 , 250/50, 500/50 (fluticasone propionate and salmeterol inhalation powder) DRY POWDER INHALER BREATH ACTUATED DEVICE (60 doses)**

is indicated for the treatment of asthma in patients aged 4 years and older.

Pregnancy Category C.

beta-blockers could be considered, although they should be administered with caution

**Black box warning: increased risk of asthma-related death from LABA**

Accessed: <http://www.fda.gov/Drugs/DrugSafety/InformationbyDrugClass/ucm082370.htm>



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- [ADVAIR Diskus \(salmeterol xinafoate/fluticasone propionate powder for inhalation\)](#)

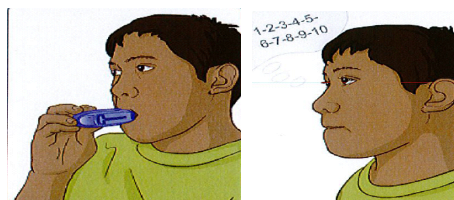


Open



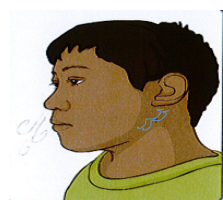
Click

- ✓ BREATHE OUT AWAY FROM DISKUS
- ✓ HOLD DISKUS FLAT DON'T MOVE OR SHAKE IT AFTER LOADING THE DOSE



Take the Medicine

Hold Your Breath x 10sec



Breathe out slowly through nose

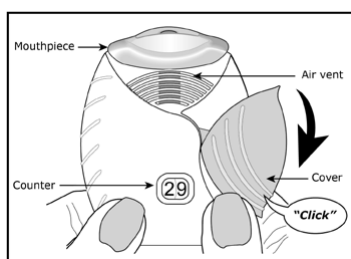


Close



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- [Breo Ellipta \(fluticasone furoate and vilanterol trifenate\)](#) Initial U.S. Approval: indication for asthma 4/2015



2 strengths : 100/25 , 200/25 (fluticasone furoate and vilanterol inhalation powder), DRY POWDER INHALER BREATH ACTUATED DEVICE (30 doses)

Is a combination ICS/LABA indicated for the once-daily treatment of asthma in patients aged 18 years and older. Pregnancy Category C.

beta-blockers could be considered, although they should be administered with caution

**increased risk of asthma-related death from LABA**

[http://www.accessdata.fda.gov/drugsatfda\\_docs/label/2015/204275s001lbl.pdf](http://www.accessdata.fda.gov/drugsatfda_docs/label/2015/204275s001lbl.pdf)



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## HOW TO USE A Combination Diskus DPI

- Use instructional handouts for each type
- Use a video clips:
- [http://www.cdc.gov/asthma/inhaler\\_video/](http://www.cdc.gov/asthma/inhaler_video/) (Eng/Spanish)
- or an App on your electronic devices
- **Assist Me-**  
FREE with multiple inhaler assistance  
step by step instructions on correct inhaler



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## COMBINATION MEDICATION -DPI DISKUS FACT SHEET

- Requires minimal mouth to hand coordination
- Drug aerosol is created by directing turbulent air through loose powder- respirable dose depends on inspiratory flow
- Advantage of needing no propellant
- Store in cool, dry place @ room temperature-  
Example Not a bathroom
- Throw out after 1 month out of package
- Follow manufacturers guidelines
- Appropriate for older children, adults able to follow the proper instruction/technique for use



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**EDUCATING FOR USE :**

- Review device instructions carefully, and practice with a placebo device themselves prior to teaching others.
- Demonstrate assembly and correct use of device to patients using a checklist.
- Provide the patient with written instructions on how to use the device, and include a written plan for use of the medication (frequency based on symptoms).
- Have the patient practice use of the device while being observed
- Review patient use of the device at each return visit.
- Review the patient's understanding of the inhaled medications at each return visit (when to use, purpose of drug, prescribed frequency).
- Have a high index of suspicion for incorrect use or non-adherence if poor management of airway disease occurs.



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**Scenerio**

- Derrick is a 14 yo male with long standing unstable asthma. He is hospitalized for his 2<sup>nd</sup> asthma exacerbation admission this year.
- During the asthma education class he states " That purple disc medicine doesn't work, I cant feel it going in" ....
- What might be the problems to consider, what might you change for him?



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## WHO WOULD ADVAIR DISKUS BE INDICATED?

- A. 14 yo female athlete with moderate persistent asthma  
Currently on Medium strength ICS & Albuterol multiple times /wk for EIA symptoms
- B. 3 yo boy with mild persistent asthma  
Currently not well controlled
- C. 28 yo male with down syndrome & developmental delays with moderate persistent asthma  
Currently not well controlled
- D. 5 yo female with severe persistent asthma, not well controlled, + risk for exacerbation , currently on High dose ICS
- E. 12 month old male with poorly controlled severe persistent asthma  
Currently at high risk for hospitalization



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## WHO WOULD ADVAIR DISKUS BE INDICATED?

- Q. 14 yo female athlete with moderate persistent asthma  
Currently on Medium strength ICS & Albuterol multiple times /wk for EIA symptoms  
Currently not well controlled  
✓ A- Yes indicated- Age, classification, not well controlled
- Q. 5 yo female with severe persistent asthma  
Currently taking High dose ICS, symptoms average 2x/wk  
✓ A- Yes indicated- Age, classification, not well controlled





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## **“WHEN YOU CAN'T BREATHE, NOTHING ELSE MATTERS”**

Federal trademark registration **By:** [American Lung Association](#)

