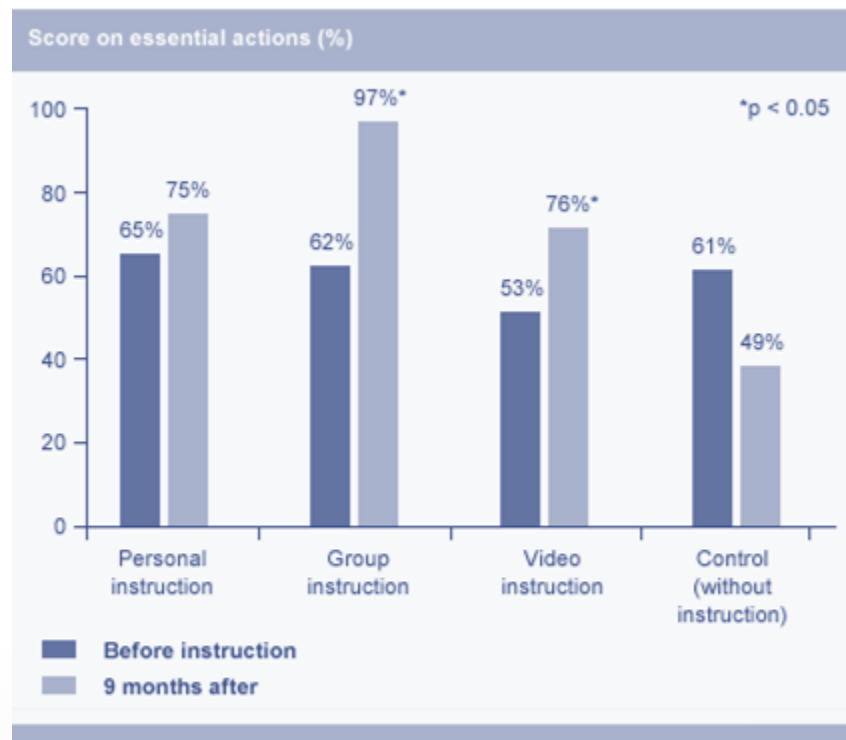


# Aspects pratiques

## Education du patient

Improvement of inhalation technique in relation to instruction method



Adapted from: van der Palen J, Klein JJ, Kerkhoff AH, van Herwaarden CL, Seydel ER. Evaluation of the long-term effectiveness of three instruction modes for inhaled medicines. 1997. *Patient Educ Couns*: 32 (Suppl. 1): S87-95

pathologies

physique

dispositifs

à retenir

# Aspects pratiques

Quels sont les dispositifs  
disponibles?

Comment les choisir?

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pathologies	physique	dispositifs	à retenir
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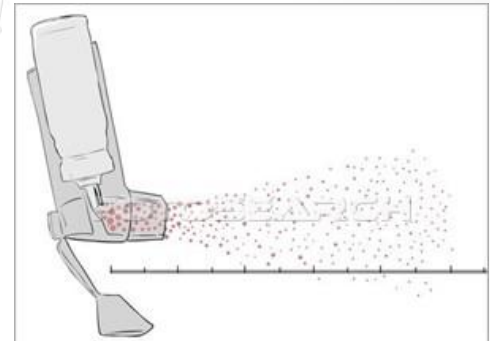
# Dispositifs disponibles



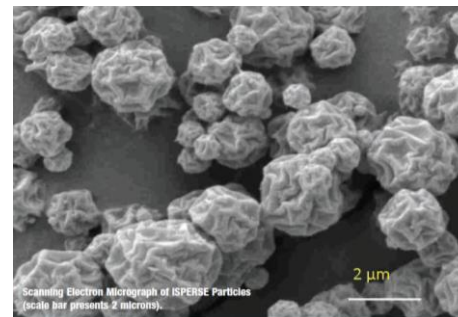
- Nébuliseurs

- MDI = Metered-Dose Inhalers

- pMDI = pressurised Metered-Dose Inhalers

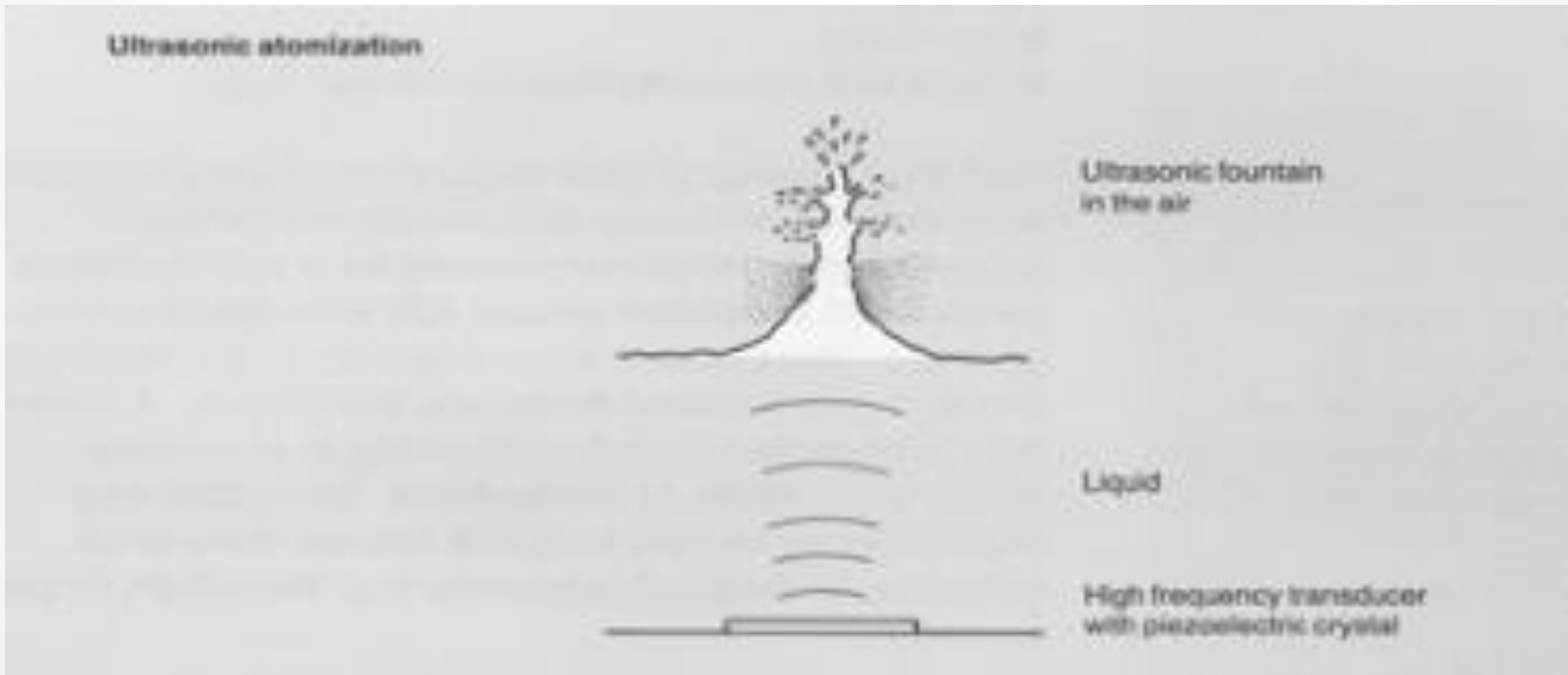


- DPI = Dry Powder Inhalers



•	pathologies	physique	dispositifs	à retenir	•
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# Revue des différents dispositifs



• pathologies

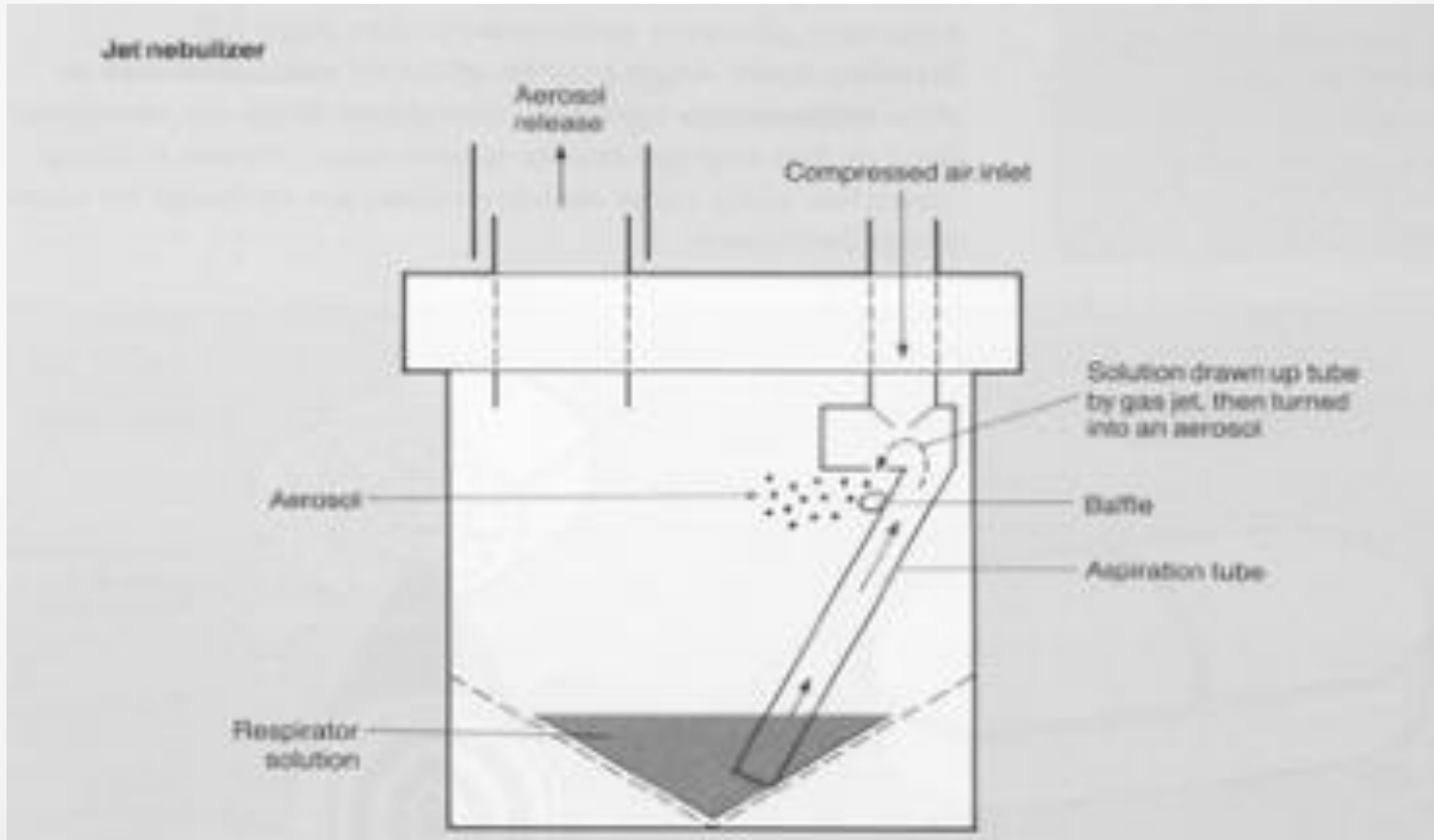
physique

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# Revue des différents dispositifs



• pathologies

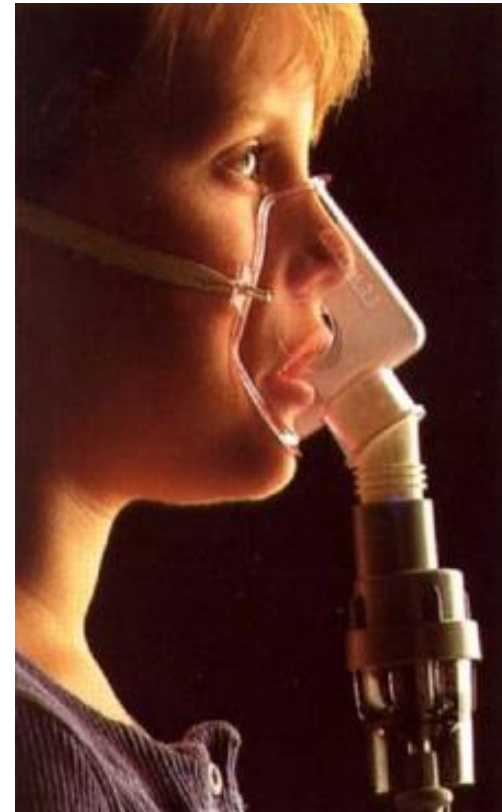
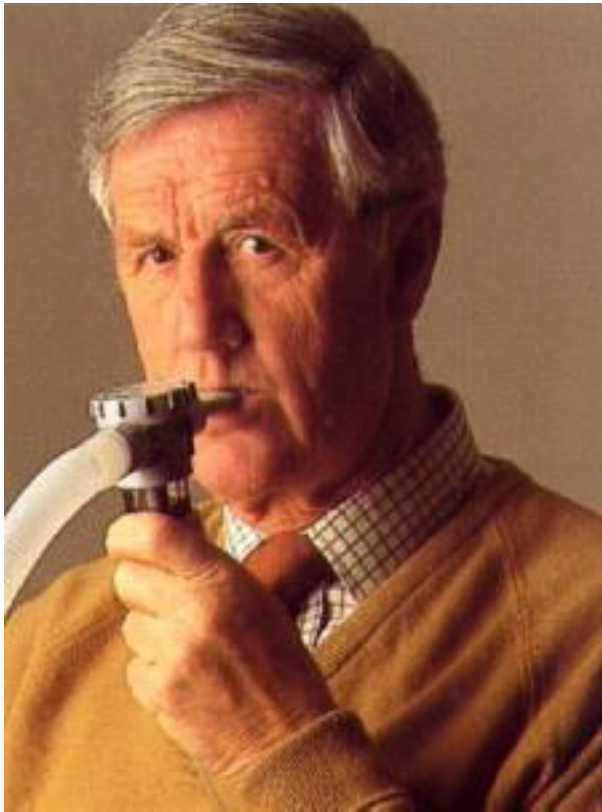
physique

dispositifs

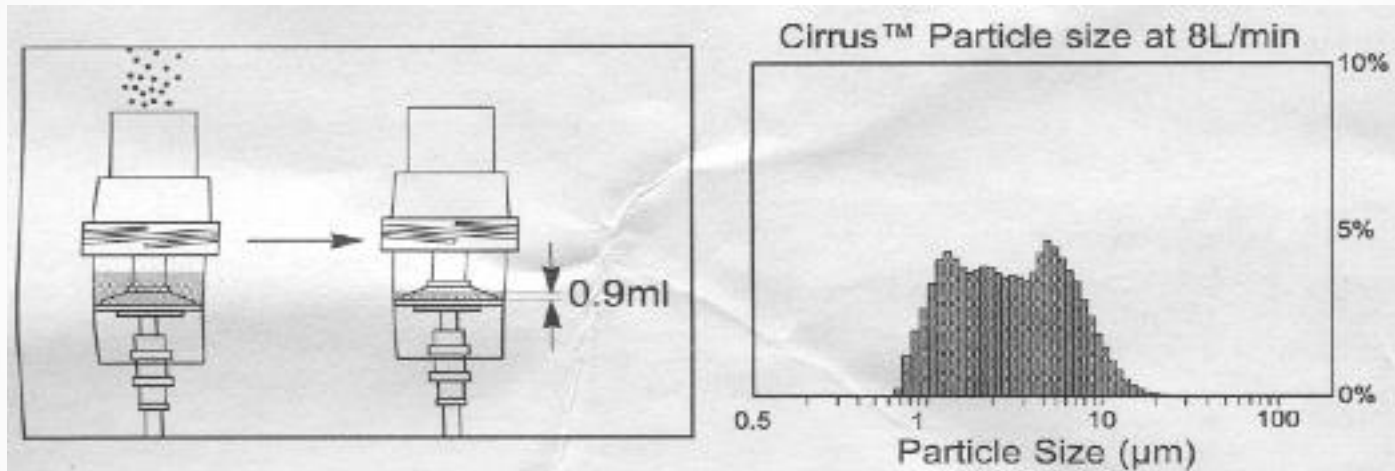
à retenir

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# Revue des différents dispositifs



# Revue des différents dispositifs



• pathologies

physique

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# Revue des différents dispositifs

## pMDI

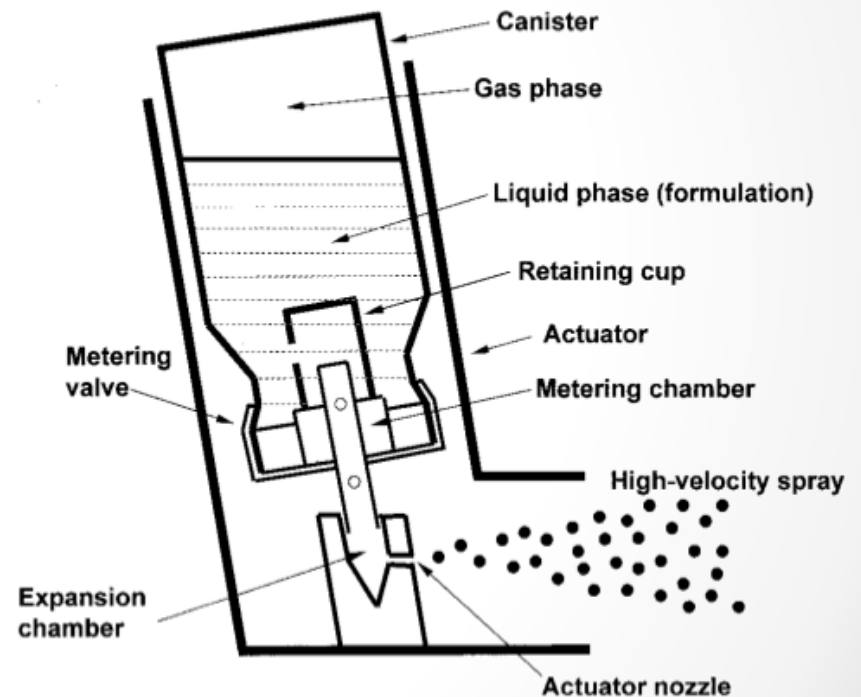
### Do:

- ✓ Take the cap off
- ✓ Shake the inhaler
- ✓ Seal lips around mouthpiece while opening the teeth
- ✓ Start to breathe in slowly through the mouth
- ✓ Then activate inhaler while continuing to breathe in
- ✓ Breathe in slowly, over at least 5 seconds until lungs are full
- ✓ Hold your breath as long as you comfortably can, then relax
- ✓ Replace the cap
- ✓ Check the dose counter on your inhaler regularly (if it has one) so you know when to get a new one in good time
- ✓ Always keep a spare inhaler



### Don't:

- x Breathe in too quickly
- x Activate the inhaler before you start breathing in
- x Stop breathing in when you activate the inhaler
- x Stop breathing when you feel the medicine in your mouth





# Revue des différents dispositifs: Chambre d'expansion

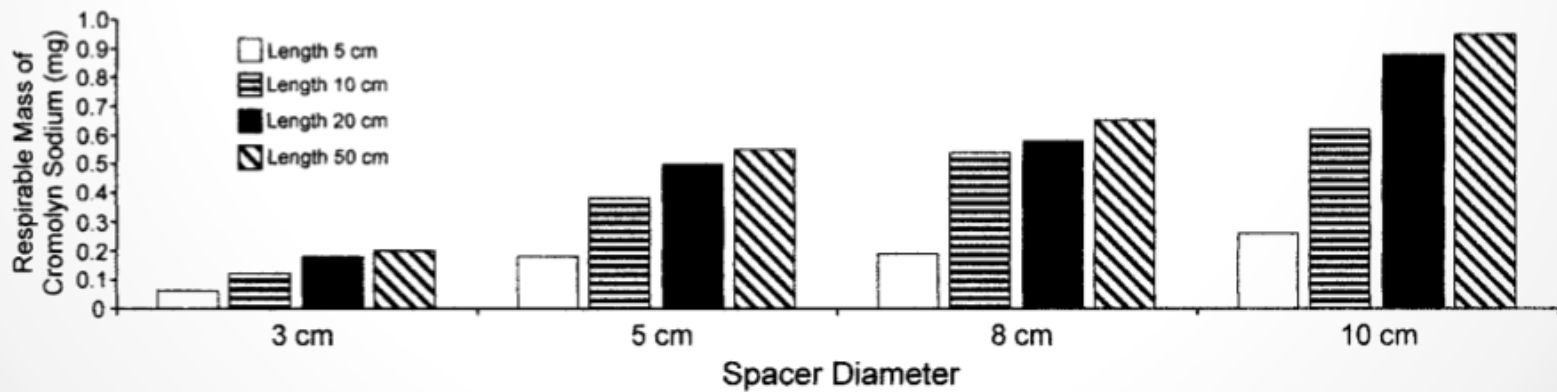
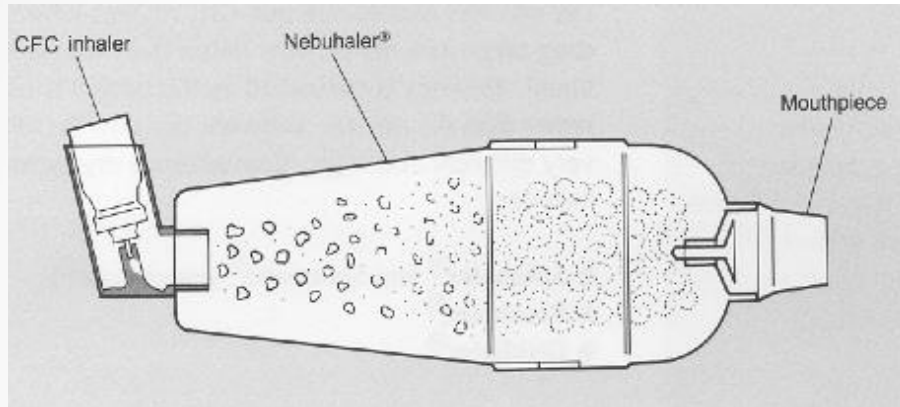
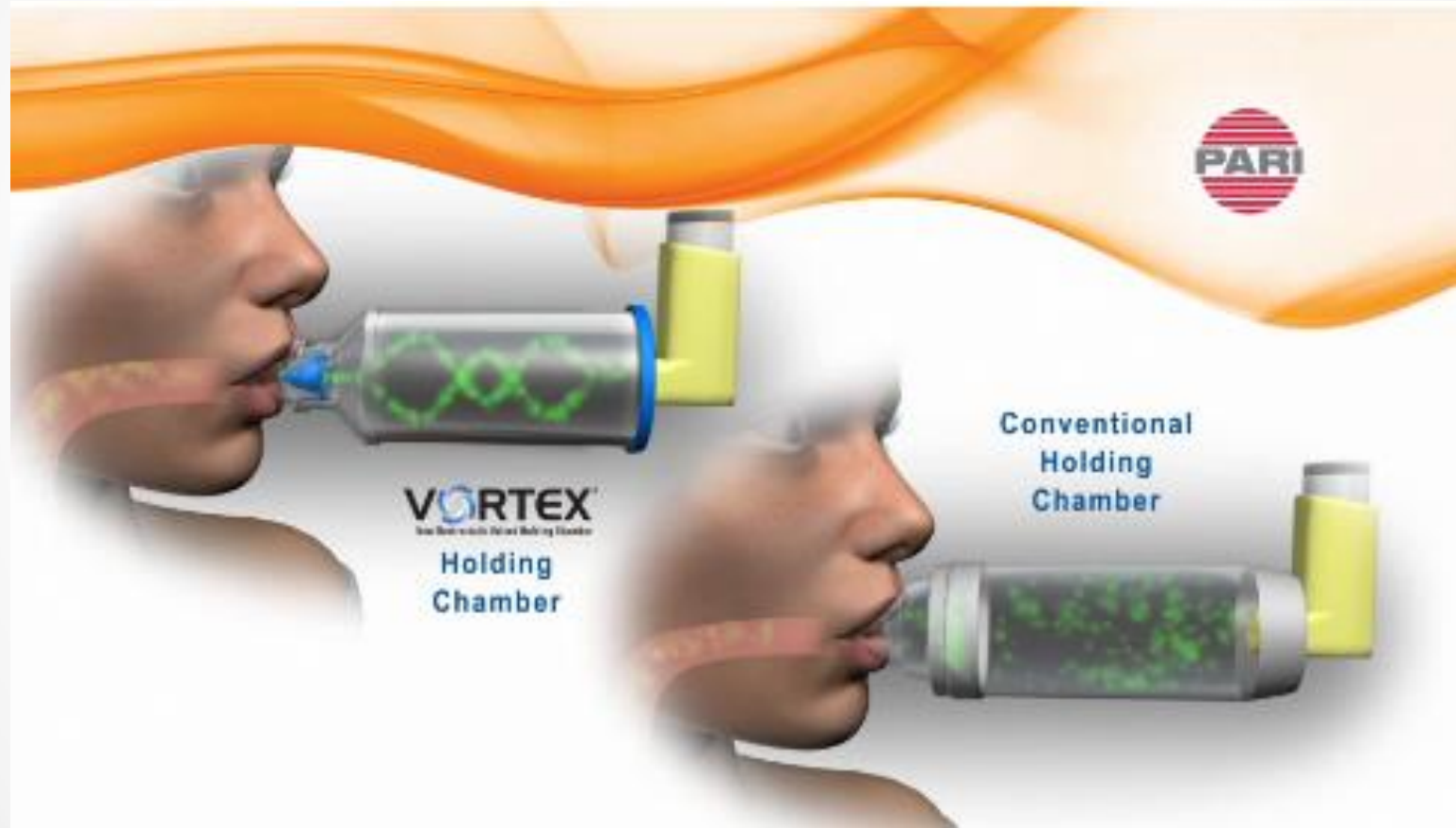


Fig. 8. Effect of spacer diameter and spacer length on availability of cromolyn sodium from a pressurized metered-dose inhaler. (Adapted from Reference 63.)

# Revue des différents dispositifs: Chambre d'expansion



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# Revue des différents dispositifs

## Autohaler

### Do:

- ✓ Take the cap off
- ✓ Shake the inhaler
- ✓ Load the device by lifting the lever
- ✓ Always use in the vertical position
- ✓ Seal your lips around mouth piece while opening the teeth
- ✓ Start to breathe in slowly through the mouth
- ✓ Continue to breathe in slowly and continue when you hear a click
- ✓ Breathe in slowly, over at least 5 seconds until lungs are full
- ✓ Hold your breath as long as you comfortably can, then relax
- ✓ If you do not hear a click (which means that the inhaler has been activated), start again
- ✓ Replace the cap
- ✓ Always keep a spare inhaler



Ex: Airomir (UCB)

### Don't:

- × Breathe in too rapidly
- × Stop breathing in when you hear the activation click
- × Stop breathing in when you feel the medicine in your mouth
- × Hold the inhaler horizontally when you use it
- × Be concerned if you don't feel or taste the medicine in your mouth

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# Revue des différents dispositifs

## Turbohaler

### Do:

- ✓ Unscrew the cap
- ✓ Load the inhaler in the upright position by turning the base forwards and backwards
- ✓ Breathe out deeply
- ✓ Seal lips around mouth piece while opening the teeth
- ✓ Breathe in as briskly, quickly and deeply as you can until your lungs are full
- ✓ Hold breath as long as you comfortably can, then relax
- ✓ Screw the cap back on after use
- ✓ Check the dose counter on the inhaler (if it has one) regularly so that you know when you need a new one
- ✓ Always keep a spare inhaler



### Don't:

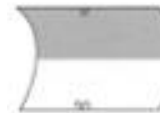
- × Hold the inhaler horizontally when you load it
- × Blow into the inhaler
- × Do not shake or invert the inhaler after loading it
- × Do not chew or bite on the mouthpiece
- × Don't leave the cap off after use
- × Don't be concerned if you don't feel or taste the medicine

in your mouth

Ex.: Pulmicort,  
Symbicort  
(AstraZeneca)



Le chiffre qui apparaît indique, par quantité de 20, le nombre de doses encore disponibles. Quand une ligne rouge apparaît dans la partie supérieure de la fenêtre, 20 doses sont encore disponibles.



Quand la moitié de la fenêtre est rouge, il reste 10 doses.



La fenêtre est entièrement rouge et le chiffre 0 apparaît: il ne faut plus utiliser l'inhalateur.

pathologies

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# Revue des différents dispositifs

## Accuhaler=Diskus

### Do:

- ✓ Open the device
- ✓ Push the lever right across until it clicks
- ✓ Breathe out deeply
- ✓ Seal lips around mouthpiece while opening the teeth
- ✓ Breathe in as briskly, quickly and deeply as you can until your lungs are full
- ✓ Hold your breath as long as you comfortably can, then relax
- ✓ Close the inhaler after use
- ✓ Check the dose counter on the inhaler (if it has one) regularly so that you know when you need a new one
- ✓ Always keep a spare inhaler



### Don't:

- × Blow into the inhaler
- × Stop breathing in when you feel the medicine in your mouth
- × To avoid losing or wasting doses once the inhaler is ready: Close the inhaler after pushing the lever across.
- × Tilt or invert the inhaler once you have pushed the lever.
- × Play with the lever.
- × Push the lever back and forward more than once.

Ex.:  
Sérévent  
Sérétide  
Flixotide  
(GSK)

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# Revue des différents dispositifs

## HandiHaler

### Do:

- ✓ Open the inhaler
- ✓ Load it with a capsule
- ✓ Pierce the capsule using the green button while holding the inhaler in an upright position
- ✓ Inhale the contents of the capsule using the HandiHaler device straight away
- ✓ Breathe out deeply
- ✓ Seal your lips around mouth piece while opening the teeth
- ✓ Breathe in as briskly, quickly and deeply as you can until your lungs are full
- ✓ Hold your breath as long as you comfortably can, then relax
- ✓ Check that the capsule is empty, if not inhale again
- ✓ Replace the cap
- ✓ Always keep spare capsules



Ex.: Spiriva  
(Boehringer)

### Don't:

- × Swallow the capsules
- × Blow into the inhaler
- × Shake or invert the inhaler once you have pierced the capsule
- × Leave the inhaler lying about before you use it once you have pierced the capsule: the powder may become damp and difficult to inhale
- × Keep the green button pressed once capsule is pierced
- × Store the capsules inside the inhaler

# Revue des différents dispositifs

## Aerolizer

### Do:

- ✓ Take the cap off
- ✓ Load the inhaler with a capsule
- ✓ Twist the stem back into place
- ✓ Hold the inhaler upright
- ✓ Pierce the capsule by pressing then releasing the green button
- ✓ Breathe out deeply
- ✓ Seal your lips around the mouthpiece while opening the teeth
- ✓ Breathe in as briskly, quickly and deeply as you can until your lungs are full
- ✓ Hold your breath as long as you comfortably can, then relax
- ✓ Check that the capsule is empty, if not inhale again
- ✓ Discard the used capsule
- ✓ Close the inhaler after use
- ✓ Always keep spare capsules

### Don't:

- x Swallow the capsules
- x Remove a capsule from the foil pouch until you are ready to use it
- x Let the inhaler or the capsule get wet
- x Shake or tilt the inhaler after you have loaded it
- x Blow into the inhaler
- x Press the green button more than once.  
This may cause the capsule to break into small pieces
- x Store the inhaler or the capsules in wet or damp
- x Leave used capsules in the inhaler



Ex: Foradil  
(Novartis)

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# Revue des différents dispositifs

**Novolizer**

Do:

- ✓ Take the cap off
- ✓ Press the button and down and release it after you hear a click
- ✓ Check that the coloured window has changed from red to green, otherwise press the button again until it has
- ✓ Breathe out deeply
- ✓ Seal your lips around the mouthpiece while opening the teeth
- ✓ Breathe in as briskly, quickly and deeply as you can until your lungs are full
- ✓ Hold your breath as long as you comfortably can, then relax
- ✓ Make sure the coloured window has now changed back to red, indicating complete delivery of the dose, otherwise inhale again from step 4
- ✓ Replace the cap
- ✓ Check the dose counter on the inhaler regularly so that you know when you need a new one



MedaPharma

Don't:

- × Blow into the inhaler
- × Stop breathing in when you hear the click

pathologies

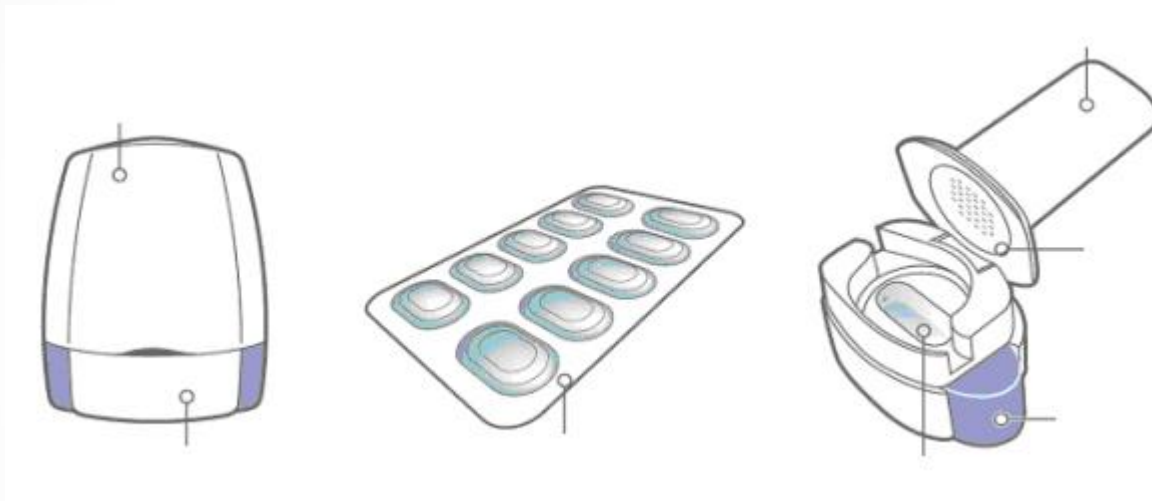
physique

dispositifs

à retenir



# Revue des différents dispositifs



Breezhaler de Novartis (Seebri & Onbrez)

• pathologies

physique

dispositifs

à retenir

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# Revue des différents dispositifs



Respimat (Boehringer): Soft Mist Inhaler

• pathologies

physique

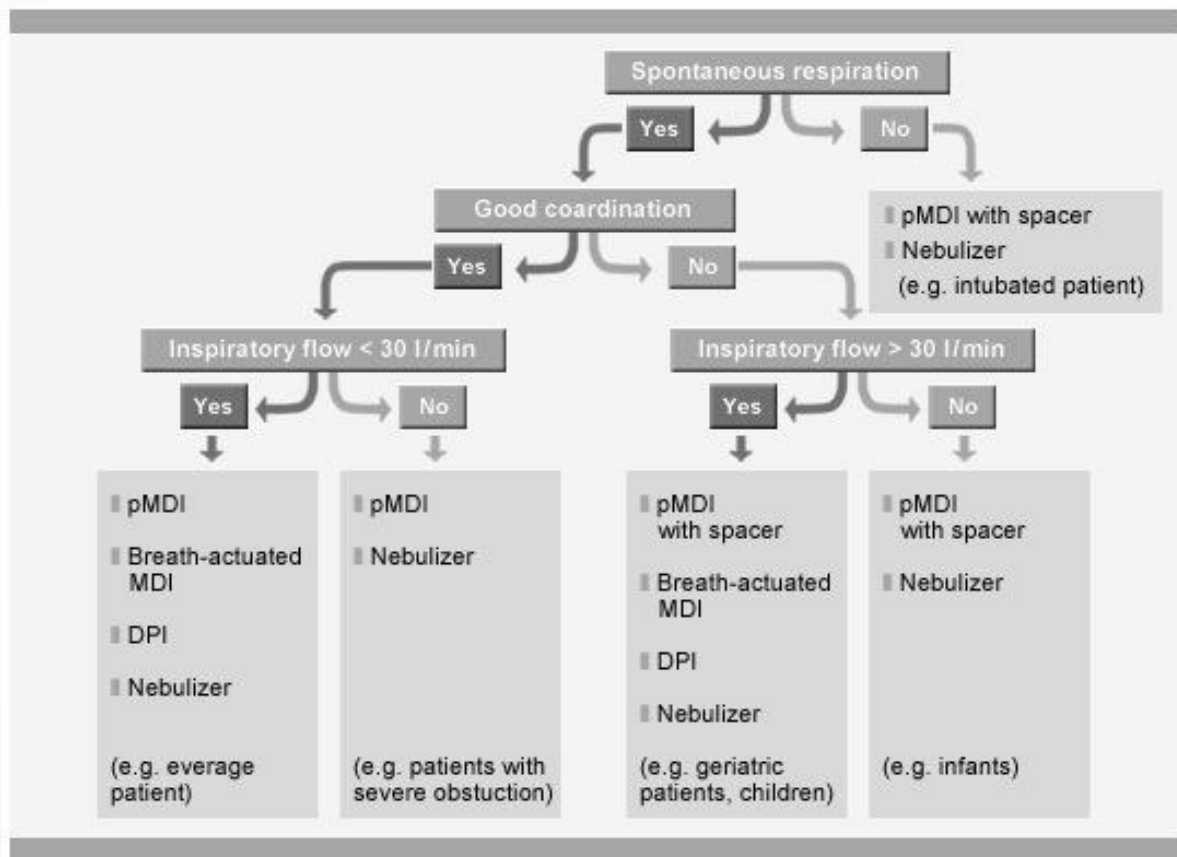
dispositifs

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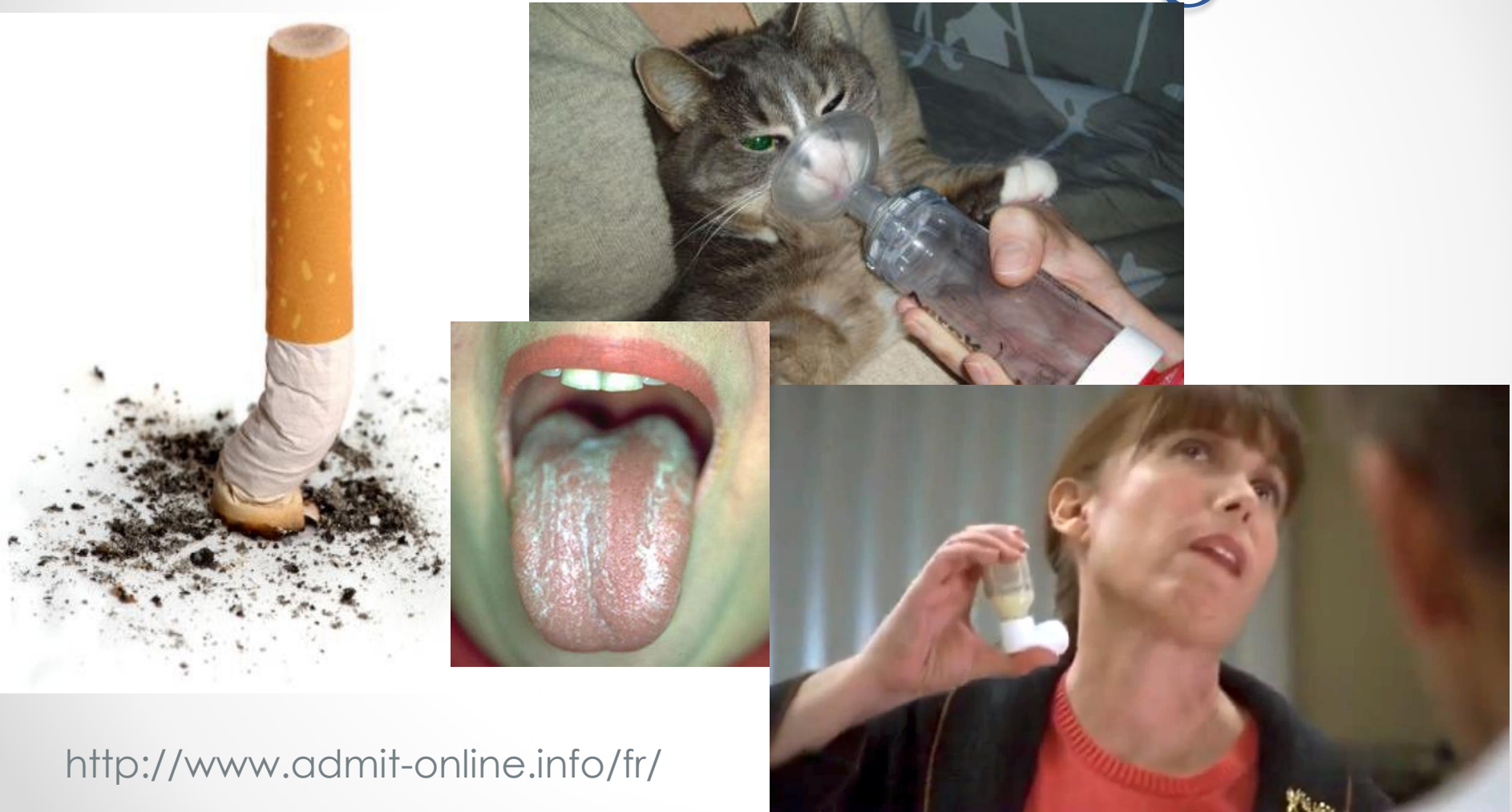
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# Aspects pratiques

- Comment choisir son dispositif?



# Take home message



<http://www.admit-online.info/fr/>



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# Petit glossaire

- BPCO = Broncho Pneumopathie Chronique Obstructive
- COPD = Chronic Obstructive Pulmonary Disease
- HFA = Hydro-Fluoro-Alkane
- CFC = Chloloro-Fluoro-Carbon
- BDP = Beclomethasone DiPropionate (budesonid)