

# The HANDS vs LUNGS Approach

## How to Pick an Inhaler for a COPD patient

**STRONGER LUNGS**

### WEAKER HANDS

Consider Parkinson's disease, essential tremor, osteoarthritis, rheumatoid arthritis, frailty, etc.

#### Weak hands, but strong lungs



Turbuhaler



Diskus



Ellipta



Genuair

### STRONGER HANDS

#### Both strong hands and lungs

Any inhaler is likely appropriate. Cost and convenience may be the foremost considerations. Consider choosing the same device type if more than one inhaler is needed.

#### Both weak hands and lungs



Genuair

**WEAKER LUNGS**

i.e. airflow limitations or severe COPD

#### Strong hands, but weak lungs



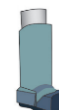
Breezhaler



Handihaler



Genuair



metered-dose inhaler



Respimat

# How to Pick an Inhaler

## for a COPD patient

### Why does picking the right inhaler matter?

In COPD, medications in each class are generally considered to be equally effective. Each medication in a class comes in a different inhalation device. Unfortunately, up to 50% of patients with COPD are unable to demonstrate proper inhaler technique with their prescribed device.<sup>5-7</sup> Individualizing the inhaler to the patient may help prevent inhaler errors, and therefore improve COPD outcomes.

### What is the Hands vs Lungs Approach?

The idea is that to pick an inhaler, you have to consider just two factors: the capability of the patient's hands, and the maximum inspiratory effort of the patient's lungs. In general, a patient with weak hands (for example, due to shakiness from Parkinson's disease or joint pain from arthritis) should use a device that requires low dexterity. Meanwhile, a patient with weak lungs (i.e. due to severe COPD) may require a device that can be inhaled even with a low inspiratory effort.

### Where does each inhaler fit?









The metered-dose inhaler, or **MDI**, requires patients to have sufficient hand strength to actuate the canister from the top. The device also requires hand-to-breath coordination. The device generates a spray that requires a very low inspiratory effort to inhale. Adding a spacer device to the MDI is recommended to ensure a full dose and reduces the need for hand-to-breath coordination.

The **Respimat** device is spring-loaded, and patients require sufficient hand strength to properly engage the spring. The device also requires hand-to-breath coordination. The device generates a "soft mist" that requires a very low inspiratory effort to inhale.

The **Breezhaler** and **Handihaler** devices both have capsules that must be loaded into the device; patients require dexterity to load these capsules properly. Patients also require sufficient hand strength to push the spring that pierces the capsule. These devices require a very low inspiratory effort to use.

The **Ellipta**, **Diskus**, and **Turbuhaler** devices all require patients to be able to aerosolize a compacted powder using a sharp, fast breath. The Turbuhaler requires a particularly strong breath (e.g. 60L/min vs 30L/min).<sup>9</sup> These devices require very little hand dexterity to operate.

The **Genuair** device can be used in nearly every situation.<sup>10</sup> It has a large button to load the device which requires little strength or dexterity to use. It does require a sharp, fast breath to inhale, but features a feedback mechanism which notifies users if the inspiratory effort was insufficient. Thus if patients consistently cannot get the dose from their device, there is an opportunity to re-teach inhaler technique.

Inhaler	Best for Weak Hands?	Best for Weak Lungs?
 metered-dose inhaler		✓
 Respimat		✓
  Breezhaler Handihaler		✓
   Diskus Ellipta Turbuhaler	✓	
 Genuair	✓	✓