

## Autogenic drainage (AD) for children & young people

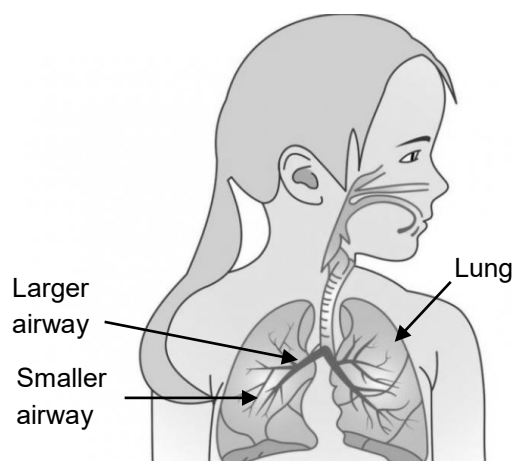
This leaflet explains how to carry out Autogenic drainage (AD) to help your child's breathing. It is a breathing technique that aims to maximise airflow to the lungs and aid clearance of secretions from the chest. It uses air flow to move secretions from the smaller airways into the large airways. The aim is to move secretions to these large airways with breathing before doing a cough. This will reduce effort, as a cough is only done when secretions are near to the throat.

**Note to young people reading this:** To make this leaflet easier to read we have addressed it to parents or carers; please excuse us for referring to you as 'your child'!

### The AD technique

#### Step 1: getting started

Choose a position in which your child is comfortable and able to relax. This may be sitting upright but you may use other positions such as lying on the side or back if more helpful. Clear any secretions from your child's nose and throat. Make sure they use any inhalers or nebulisers they need to open up and prepare their airways before treatment, if required. Make sure they drink plenty of water throughout the day to make their secretions thinner and less sticky.



#### Step 2: AD breath in

Ask your child to breathe in through their nose as quietly and slowly as possible, to allow time for air to get behind the secretions and prevent them from moving back down. The breath in should be about twice the size of a normal in breath.

#### Step 3: pause

At the end of the breath in, ask them to pause for a few seconds, keeping their upper airways and throat open and their chest and stomach as still as possible. This allows time for air to get behind the secretions and to fill their lungs completely.

### Step 4: AD breath out

Ask them to breathe out through their mouth. The aim is to create a steady flow of air through their airways. The out breath should be as fast as a 'sigh' as possible without forcing the breath, e.g. as if they were trying to steam up a mirror. If they wheeze when they breathe out, then they are trying too hard. If you hear secretions 'crackling', then they are breathing out correctly.

The AD breaths in and out are repeated in a breathing cycle.

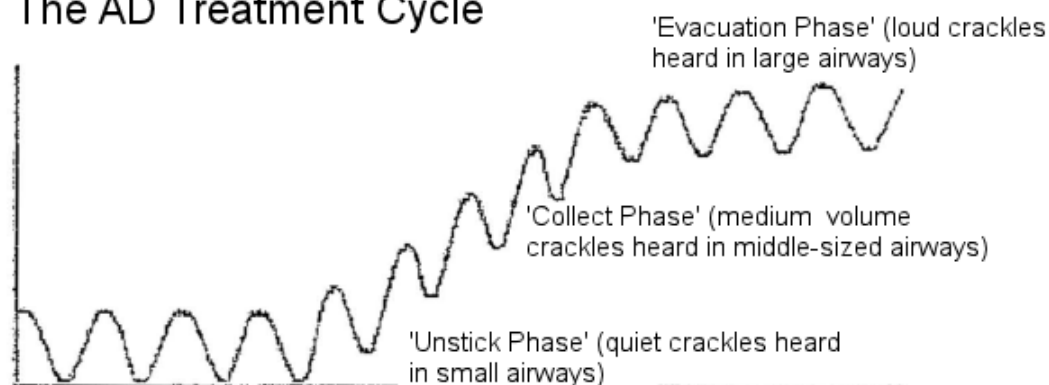
### Assessment breath

Before starting an AD cycle of treatment, an assessment breath will help you to find out if your child's secretions are in the larger or smaller airways. To do this, ask them to take a deep breath in, pause and then do an AD breath out as far as they can, until their stomach muscles tense.

Listen and feel for the secretions moving. If crackles are quiet and are heard towards the end of the breath out, then secretions are in the small airways. If crackles are loud and are heard at the start of the breath out, then secretions are in the large airways.

### The AD treatment cycle

#### The AD Treatment Cycle



#### The "Unstick phase"

If the secretions are heard in the smaller airways, get them to breathe in and then out (in the AD style) as far as they can each time, feeling their stomach muscles tensing. They should continue to take AD breaths in and out like this, aiming to hear the crackles each time they breathe out. The secretions should start to move and get louder.

#### The "Collect phase"

As the secretions move from the small to the middle-sized airways, the crackles get louder. They should continue to take AD breaths in and out but taking a deeper breath in (they do not need to breathe out as far as they can now). Ask them to continue to take AD breaths in and out in this way until you can hear the secretions getting louder.

## The "Evacuation phase"

As the secretions move into the larger airways the crackles get louder still and the AD breath in needs to be deeper again. Ask them to take the deepest breath in possible and breathe out again until you can hear the crackles on their breath out. They should continue to take AD breaths in and out in this way until they can feel the secretions at the back of their throat. Coughing should be avoided until the secretions can be cleared with just one or two effective huffs or coughs. This will prevent any unnecessary tightening of the airways and is less tiring but may take practice.

Once they have cleared these secretions, repeat the cycle by starting again at the "*Unstick phase*", continue to do as many cycles of AD as required until your child's chest feels as clear as possible.

## Points to consider

- It may feel uncomfortable doing AD breathing during the "*Unstick phase*". Your child may find it necessary to take a few slightly larger breaths at intervals during this phase. It gets easier with practice.
- By placing your hands on your child's chest you may be able to feel the secretions moving, which helps if your child's chest is quiet.

## Further information

Cystic Fibrosis Trust [www.cftrust.org.uk/aboutcf/livingwithcf/physio/](http://www.cftrust.org.uk/aboutcf/livingwithcf/physio/)

For more information about the Trust, visit our website at [www.royalberkshire.nhs.uk](http://www.royalberkshire.nhs.uk)

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This document can be made available in other languages and formats upon request.

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