

Asthma

A GUIDE TO ASTHMA

Revised 4th
edition

The purpose of the Organisation for Respiratory Health in Finland is to promote respiratory health and good life for people suffering from respiratory diseases.

 The Organisation for
Respiratory Health in Finland

Asthma is a long-term respiratory disease that affects one in ten Finnish adults.

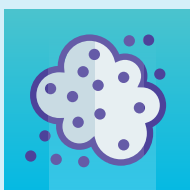
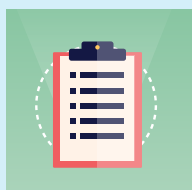
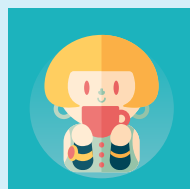
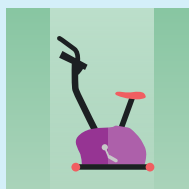
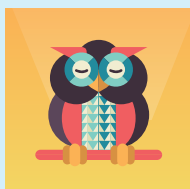
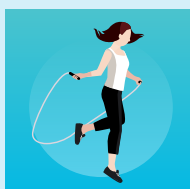
Although predisposition to asthma is lifelong, it is possible to lead a full life with the condition. Most people with asthma can achieve good asthma control with the right medication and sensible lifestyle choices.

The treatment of asthma is based on anti-inflammatory asthma medication and good self-care. The goal is to make everyday life symptom-free.

This guide will give you an overview on asthma, its diagnostics, monitoring, medical treatment and self-care.

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Painotuote
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Printed by: Grano Oy, 10,000 copies
Organisation for Respiratory Health in Finland 2024,
revised 4th edition

1 What is asthma?

Asthma is a chronic inflammatory disease that affects the mucous membrane of the bronchial tubes. First symptoms usually include a persistent cough, increased production of mucus and shortness of breath.

People with asthma are prone to respiratory symptoms because the inflamed and swollen mucous membranes are sensitive to stimuli such as dust, cold air, exertion and tobacco smoke. Such stimuli make the smooth muscles surrounding the airway contract. This causes bronchial contraction and complicates breathing. Exhalation becomes labour-intensive, which results in shortness of breath. Inflamed mucous membrane produces mucus that further obstructs the airways.

The lungs of individuals with mild and incipient asthma function normally most of the time and symptoms are intermittent. Individuals with severe or untreated asthma experience symptoms frequently, and the obstruction of their airways may be permanent and partly irreversible.

In most cases, the inflammation can be kept mild and under control with medication.

1.1 Symptoms of asthma

The underlying factors for developing asthma are individual and the disease can manifest at any age. The cause of asthma is unknown, but its onset is often linked to environmental stimuli, stress, physical exertion or a respiratory infection.

The symptoms of asthma include:

- » persistent cough
- » increased mucus production
- » shortness of breath
- » occasional wheeze or whistling noise when exhaling

Symptoms commonly occur at night or in the morning. Individual factors that may exacerbate symptoms:

- » viral respiratory infections
- » physical exertion
- » cold air
- » allergens
- » air pollutants, dust and smoke

1.2 Risk factors

Risk factors related to asthma include:

- » allergies
- » hereditary tendencies (parents or siblings with asthma)
- » allergic rhinitis
- » other upper respiratory tract conditions
- » smoking and exposure to tobacco smoke
- » obesity (BMI over 30)

Indoor mould and moisture damage has been linked to respiratory symptoms and the risk of developing asthma, but the cause-and-effect relationship remains unclear.

People with asthma are more prone to gastroesophageal reflux disease (GERD), but the condition does not apparently cause asthma. Reflux disease is a condition in which stomach contents rise up into the esophagus resulting in heartburn, a burning sensation under the sternum, and the reflux of stomach contents into the mouth.

2 Different types of asthma

Asthma can range from mild to severe. For some, the disease is a result of allergic sensitisation, whereas others suffer from extreme inflammation of the bronchial mucous membrane or difficult-to-treat asthma. In this section, we will discuss the most important types and clinical presentations of asthma identified so far. Recognising the type of inflammation is important for successful treatment.

Currently, the best known type is called Type 2 inflammation, in which the major contributors are Type 2 inflammatory mediators. The disease is usually identified by either increased eosinophil levels in the blood or increased nitrogen oxide in exhaled air. Type 2 inflammation can be either **allergic eosinophilic asthma** or **non-allergic eosinophilic asthma**.

Corticosteroid treatment is usually clearly more effective with Type 2 asthma than with **non-Type 2 asthma**. So far, the mechanisms behind non-Type 2 asthma and the mediators and cells involved are not as well known as Type 2 asthma.

2.1 Allergic asthma

Roughly every other adult with asthma also has allergies. They are often prone to atopic dermatitis and allergic rhinitis. Individuals with allergic asthma tend to react to substances that they are sensitive to, and their body defends itself by producing an immunoglobulin E (IgE) antibody for the allergen in question.

Most people who have had asthma since childhood are also allergic to something. If allergic asthma starts in adulthood, it usually starts in early adulthood, before the age of 30.

Allergic or seasonal rhinitis and asthma often appear together. There is a concept of “one airway, one disease”.

Allergic rhinitis and sinusitis may worsen the symptoms of asthma. Allergic and chronic rhinitis should be treated appropriately (with cortisone nasal spray). Allergies should also be treated, and desensitisation is an option that should be considered.

Organisation for Respiratory Health in Spotify

Adult-onset asthma can come as a surprise

How does life change when you develop asthma in adulthood? Could the illness have been avoided, and is it possible to heal? Interview with a specialist and an asthma patient.

 The Organisation for Respiratory Health in Finland



2.2 Asthma and chronic obstructive pulmonary disease (COPD)

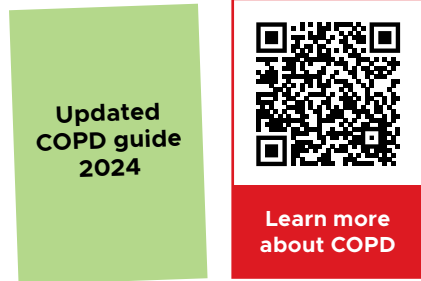
Smoking doubles the risk of developing asthma. Individuals with smoking-related asthma are often men who are middle-aged or older. Some of them also contract chronic obstructive pulmonary disease (COPD). The efficacy of inhaled asthma preventer medication may not be as good for individuals who smoke, and the disease is often poorly controlled.

Smoking alters the asthma inflammation and makes it resemble the inflammation associated with COPD. It damages the bronchial mucous membrane and lung tissue. It is estimated that 16–27% of people with asthma or COPD have a combined syndrome of both.

It can be challenging to tell the difference between COPD and asthma because

their symptoms are similar: cough, increased mucus production, recurring infections and shortness of breath. The onset of COPD is often slow and symptoms manifest gradually. An individual who develops COPD may have had a “smoker’s cough” for years. Fluctuating symptoms are typical of asthma.

Unlike with asthma, in COPD the bronchial obstruction is progressive and permanent.



Should I quit smoking?

Smoking is expensive. Smoke also affects your loved ones.
Cigarette butts are hazardous waste. Smoking and nicotine are harmful to health.
It's possible to stop smoking. Life without nicotine is longer, healthier and tastier.

Did you decide to quit using nicotine products?

NO **UNSURE** **YES**

▶ I'm quitting cold turkey.
▶ I'm cutting down.
▶ I'm using nicotine replacement therapy temporarily to help with quitting.
▶ I need support (support group, peer support, family, friend).

STEP 1 Starting the change

STEP 2 Not using nicotine becomes an everyday thing

STEP 3 Living nicotine-free

The Organisation for Respiratory Health in Finland hengitysliitto.fi | 0800 148 484 **Stumppi**

2.3 Asthma in the elderly

Among the elderly, asthma is a common but underdiagnosed disease. Other concurrent conditions, such as cardiac insufficiency or COPD, make diagnosing asthma more difficult. Many symptoms of asthma, such as shortness of breath, may be interpreted as being part of another condition. The simultaneous use of multiple medicines is another factor that poses challenges among elderly people, which is why it is a good idea to have regular medication reviews.

Asthma in the elderly is more common and severe among women. Asthma diagnosed after the age of 65 is often non-allergic, and response to treatment is also often poorer than in younger people.

2.4 Asthma in obese people

Obesity and abdominal obesity in particular increase the risk of developing asthma. Fatty tissue around the abdominal area produces inflammatory mediators that spread to the lungs through blood circulation.

Obesity puts a strain on the entire body, including the cardiovascular and circulatory system. Especially fat that has accumulated in the abdominal cavity and around the chest area makes breathing more difficult. The diaphragm's movement becomes reduced, which in turn reduces lung capacity, the functioning of respiratory muscles and the flexibility of the rib cage.

An obese person breathes differently than a person within the normal weight range. A person with severe obesity may develop respiratory failure. In respiratory failure, breathing becomes shallow and rapid, the lungs do not fill properly and lung function is reduced. If the person has asthma, even minor weight loss can make breathing easier and improve well-being.

Anti-inflammatory medication is not as effective on individuals who are obese.



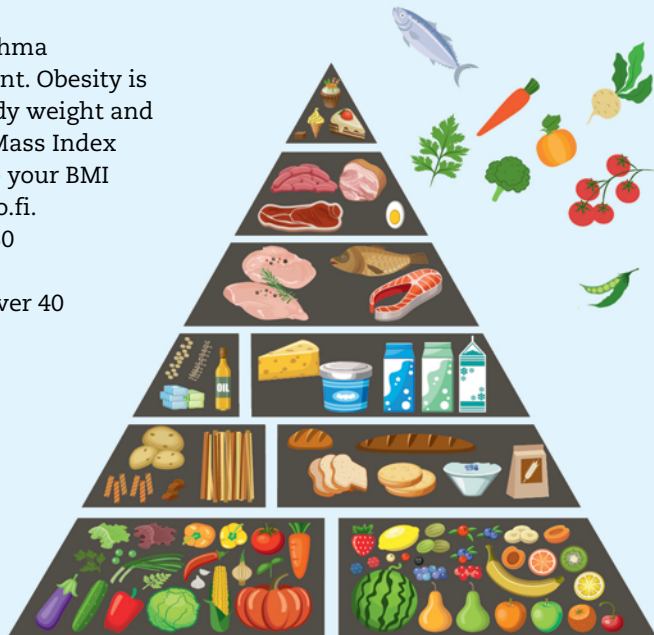
More about diet and nutrition

Body weight affects asthma symptoms and treatment. Obesity is calculated based on body weight and height using the Body Mass Index (BMI). You can calculate your BMI online at terveyskirjasto.fi.

- » Overweight BMI 25–30
- » Obesity BMI 30–40
- » Severe obesity BMI over 40



Body mass index (BMI) calculator



They often need a substantial amount of additional medication to treat their respiratory symptoms and face challenges in getting their respiratory condition under control. Exacerbations that can even lead to hospitalisation are common.

Obesity also predisposes to sleep apnoea. Untreated sleep apnoea increases the risk of asthma symptoms at night.



2.5 Severe refractory and difficult-to-control asthma

Severe asthma is often confused with difficult-to-treat asthma as the symptoms are often similar: increased chronic respiratory symptoms and increased asthma exacerbations, all of which contribute to poorer functioning and quality of life.

An individual with difficult-to-control asthma has, for whatever reason, not succeeded in managing their asthma despite maximal treatment. The problems

are usually caused by some of the following:

- » smoking
- » obesity
- » lack of commitment to self-care
- » not taking medication as prescribed

Many people with difficult-to-treat asthma struggle to remember to take their daily medication or take their inhaled medication incorrectly. Once these issues are remedied, the person's health will improve. However, if that does not happen, the person may have severe asthma. A pulmonologist's assessment is usually necessary if severe refractory asthma is suspected.

Approximately 5% of all people with asthma have severe asthma. Severe asthma knows no age: it can start in childhood, adulthood or old age, although most people who develop severe asthma are middle-aged. Severe asthma is somewhat more common in women than in men.

The symptoms of severe refractory asthma cannot always be controlled, even with maximal therapy. Some cases of severe refractory asthma can be treated with biologics that are administered in central hospitals and university hospitals. When deciding on treatment, the aim is to determine the type of inflammation as precisely as possible to select the right treatment.



2.6 Occupational asthma

Occupational asthma is caused by biological and chemical substances in the work environment. Asthma may develop when an individual is exposed to factors that sensitise or irritate airways.

A person may be suspected to have occupational asthma if that individual works in a profession with an increased risk of asthma or uses a substance that is known to cause occupational asthma.

Asthma is considered to be work-exacerbated if it gets worse when working but does not meet the criteria for occupational asthma set out in the Workers' Compensation Act. In approximately one fifth of adult-onset asthma cases, asthma has been found to exacerbate with a dusty work environment, work in abnormal temperatures or strenuous work. In such cases, the workplace-related factors that exacerbate asthma must be cut down or completely eliminated.

Measures may include the use of a respiratory mask, reorganising of work duties and improvement of working conditions.

Occupational asthma is a medicolegal term and a compensable occupational disease pursuant to the Employment Accidents Insurance Act. The diagnosis of occupational asthma requires that the likely and primary cause of asthma is a substance present in the work environment.

Physicians diagnose occupational asthma based on medical grounds. Insurance companies make their decision on compensating asthma as an occupational disease based on legal grounds. If occupational asthma is diagnosed, the employee with asthma must be appropriately protected and possible solutions may include other work duties or work locations where the employee is not exposed to factors that exacerbate symptoms.

The most common substances that cause asthma include:

- » microbes typical of moisture damage and flour dust;
- » wheat and animal feed;
- » animal epithelia, hair and secretions;
- » dust mites in warehouses;
- » wood dust; and
- » chemicals used by hairdressers.

Professions associated with occupational asthma:

- » baker;
- » textile worker;
- » metal worker;
- » agricultural worker;
- » cleaner;
- » painter; and
- » hairdresser.



Asthma and choice of career

Asthma only limits career choices in rare cases. Mild, well-controlled asthma does not usually rule out any profession.

However, professions that involve significant exposure to airway irritating dust or allergens are not recommended to people with asthma. Examples of such professions include hairdresser, animal handler, baker and cleaner. Heavy physical labour is usually not suitable for people with severe asthma.

If occupational asthma or work-exacerbated asthma cannot be controlled well enough, or if ability to work is threatened, rehabilitation is a possibility that should be looked into.

Further information on career choices and asthma is available on the Finnish Institute of Occupational Health website at www.toissaterveena.fi.

Military service and asthma

Asthma does not disqualify you from military service or a career in the military if your symptoms are under control and your medication is in order. Each conscript's condition is individually assessed before the start of military service.



Mild, well-controlled asthma does not usually rule out any profession.



3 Diagnosis and examinations



Asthma is diagnosed using breath tests. Key tests include spirometry and 2-week at-home PEF monitoring. If necessary, exercise and provocation tests may also be performed.

Spirometry is a breath tests that measures lung function and indicates lung volume and the degree of obstruction of bronchial tubes. The PEF test measures the maximum speed of expiratory flow during the first second of exhalation. Both tests are used in diagnostics and follow-up treatment.

In at-home PEF monitoring, expiratory flow is measured before and after the use of reliever medication that opens the airways. There are grounds to suspect asthma if there are significant differences between PEF values taken in the morning and evening and if the results improve with the use of reliever medication.

For some asthma patients, PEF monitoring is used to help monitor their asthma control. The important thing is to determine what is the optimal PEF value for you. Factors that affect the PEF value include gender, age and height, which

means that your optimal PEF value will change over time.

The monitoring period is 1 week. Breath tests are performed immediately after waking up and again in the evening.

If you are using reliever medication that opens airways, tests are performed before taking the medicine and 15–20 minutes after taking the medicine. At least 3 consecutive blows of air are needed per measurement. If the difference between the two best results is over 20 l/min, additional blows are needed. It is recommended to record all 3 results.

How to perform a PEF test:

- » Reset the measuring device.
- » Fill your lungs with as much air as possible.
- » Place the mouthpiece tightly between your lips and teeth.
- » Blow out sharply as hard and fast as you can (explosively fast start).
- » Write down the result.
- » Always stand up when taking the test, if possible.

Watch the PEF test video on the YouTube channel of the Organisation for Respiratory Health:

Astman hoitotasapainoa seurataan uloshengityksen huippuvirtauksen avulla. Se mitataan PEF-mittarilla.

Views: 24,000

4 Medical treatment

The goal of asthma treatment is to achieve good asthma control, which means making the life of the individual with asthma as symptom-free as possible. This requires regular monitoring and adjustment of medication to suit your individual needs as instructed by your physician.

Every person with asthma should always carry reliever medication to quickly alleviate symptoms when necessary. Heavy use of reliever medication is a sign of poor asthma management, and the use of preventer medication should be increased. The less reliever medication is needed, the more successful treatment has been. The goal is good asthma control:

- » good functional capacity and quality of life;
- » symptom-free life;
- » reliever medication taken no more than twice per week; and
- » no deviating PEF values.

If asthma is poorly controlled, physical exertion often causes symptoms. Repeated bouts of bronchitis may also be a sign of poorly controlled asthma.

People with allergic rhinitis can use corticosteroid nasal sprays and antihistamines. Avoidance of allergens that cause symptoms should be discussed with a physician. The use of a neti pot may alleviate symptoms and discomfort.

Fluctuating symptoms are typical in asthma: a healthy period may be followed by a flare-up. Increased symptoms are treated according to instructions provided by a physician.

Signs of an asthma exacerbation:

- » increased need for reliever medication;
- » stuffy flu-like feeling;
- » shortness of breath and difficulty breathing, especially at night;
- » increased coughing or mucus production;
- » poorer tolerance to exercise; and
- » lower PEF values.



4.1 Preventer medication

Regular use of anti-inflammatory preventer medication plays a key role in the treatment of asthma. Preventer medication helps keep the inflammation of bronchial mucous membrane under control and can sometimes even soothe it completely. The medication is based on inhaled corticosteroids (glucocorticoid).

Inhaled corticosteroids can start to have an effect in just a few days. Sometimes it can take one or two months to get the best results. It is important to keep using preventer medication even if the symptoms go away. Once the asthma is well-controlled, the medication should be used as prescribed by a physician, only taking enough to keep the symptoms under control.

Your physician may also prescribe a combination inhaler with preventive corticosteroids and one or two long-acting reliever medicines that open the airways. Inhaled tiotropium, a long-acting airway opener, may also be used as an additional drug. Some individuals with asthma take medication, such as leukotriene inhibitors, in pill form in addition to inhaled

corticosteroids. They alleviate the inflammation and open airways.

If necessary, the physician may prescribe a course of cortisone tablets to be taken orally during flare-ups.

There are also injectable biologics available for the treatment of very severe allergic asthma and eosinophilic asthma. This type of medicine is only used for specialist medical care patients who, despite all available forms of treatment, have severe symptoms of asthma with recurrent exacerbations, and if the medicine is suited for their asthma type.

Once your asthma has been well-controlled from six months to a year, your physician can assess whether the amount of medication could be reduced. The medication of people with allergies should not be reduced just before the pollen season, and the medication of people with symptoms from freezing temperatures should not be reduced just before winter.

Depending on the level of asthma control, the physician may also consider the possibility of periodic medication. In this case, medication would be taken in periods during, for example, a respiratory infection or the pollen season.



ORAL CARE

Inhaled medications can cause various symptoms such as dry mouth, oral candidiasis, infection or voice hoarseness. Write down any symptoms you may have. Don't forget oral care when taking your medication and have regular dental check-ups.

COPING WITH EVERYDAY LIFE

Are you having trouble coping with everyday life? What kind of difficulties are you having?

SELF-CARE

yes



In
guid

Prepare for your appointment

There's a lot you can do to make your appointment a success. Before your appointment, take an asthma test and write down how you have been feeling for the past six months. Also write down the things you need guidance or advice on and the questions you want to ask.

Take an asthma test

www.astmatesti.fi

The test gives an overview of your asthma control over the past four weeks.

Total test score >

Print out the test and take it with you.

List your medication

Write down all the medications you are taking. Also write down the vaccines you have been given and any over-the-counter medications and natural remedies you take. You can also create a medication list at **www.laakekortti.fi**, print it out and take it with you. Take any paper prescriptions with you and ask your pharmacy for a summary of your electronic prescriptions if needed.

Medicines you are allergic to:

Questions or doubts you have about medication or administration technique:

Do PEF monitoring for a week

The PEF test measures how fast you can exhale after a deep inhalation and indicates if there is any airway congestion.

PEF instructions:

www.hengitysluitto.fi/astma

Bring one week's test results with you to your appointment.

OVERALL HEALTH

Do you have any symptoms that affect your well-being? For how long/how often have you had those symptoms? Is there something that makes the symptoms worse/better?

OTHER DISEASES

What other diseases do you have? In your opinion, how do they affect your condition and the treatment of your asthma?

- | | | |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | I understand asthma as a disease |
| <input type="checkbox"/> | <input type="checkbox"/> | I'm familiar with my medication and adhere to it according to my doctor's instructions |
| <input type="checkbox"/> | <input type="checkbox"/> | I know how to monitor my asthma |
| <input type="checkbox"/> | <input type="checkbox"/> | – using an asthma test |
| <input type="checkbox"/> | <input type="checkbox"/> | – I know why, how and when to carry out PEF monitoring |
| <input type="checkbox"/> | <input type="checkbox"/> | I know what to do during an asthma flare-up |
| <input type="checkbox"/> | <input type="checkbox"/> | I exercise regularly |
| <input type="checkbox"/> | <input type="checkbox"/> | My asthma doesn't interfere with sleep and rest |
| <input type="checkbox"/> | <input type="checkbox"/> | I don't use tobacco products (cigarettes, snus, e-cigarettes) |
| <input type="checkbox"/> | <input type="checkbox"/> | My weight is under control |

I need guidance and advice on self-care in the following areas:

Any other concerns you may have:



The Organisation for
Respiratory Health in Finland

The purpose of the Organisation for Respiratory Health in Finland is to promote respiratory health and good life for people with respiratory diseases.
www.hengitysliitto.fi tel. +358 20 757 5000

4.2 Reliever medication

Reliever medication is medication that quickly opens airways. It is used when asthma symptoms get worse or breathing becomes difficult. Reliever medication is a fast way to open airways that have narrowed due to an irritant. Reliever medication can also be used before a strenuous activity to prevent the contraction of bronchial tubes.

Reliever medicines are usually fast-acting sympathomimetics (beta-2 agonists). They relax the bronchial smooth muscle and open the airways. Other drugs (anticholinergics) reduce bronchial muscle contraction and mucus production.

Long-acting asthma reliever medication is used as an additional medicine alongside regularly inhaled corticosteroids. Both long-acting beta-2 agonists and long-acting anticholinergics (tiotropium) are available. Depending on the medicine, the airway-opening effect of long-acting medicines lasts between 12 and 24 hours.

Reliever medication reduces symptoms and improves exercise tolerance. It

reduces exacerbation periods of people who are prone to exacerbations. A commonly used form of medication is a fixed-dose combination inhaler that contains inhaled corticosteroids and a long-acting beta-2 agonist, which allows both drugs to be inhaled at the same time. There are also new fixed-dose combination medications available that combine three substances (inhaled corticosteroids, long-acting beta-2 agonists and long-acting anticholinergics), allowing all three drugs to be inhaled at the same time.

Your physician may prescribe you a combination of corticosteroids and long-acting bronchodilators to be used regularly morning and night. This type of medication can also be used as needed when symptoms occur (single inhaler approach).

The use of long-acting reliever alone, without inhaled corticosteroids, is harmful to people with asthma. Although symptoms may initially be alleviated, inhaled corticosteroids are always needed to treat the inflammation of the mucous membrane of the lungs.



Possible side effects of corticosteroid treatment

Corticosteroids have a number of potential side effects, such as oral thrush, thinning and bruising of skin, pneumonia, cataract and osteoporosis. This is why physicians prefer to prescribe a lower and safe yet effective dose of inhaled corticosteroids.

All things considered, inhaled corticosteroids **should be used** because their adverse effects are mild compared to asthma getting worse if not used.

If the use of inhaled corticosteroids is interrupted for an extended period, there is a high risk that the asthma gets worse and corticosteroids need to be taken in pill form for longer to treat it. This often makes the adverse effects of corticosteroids more severe. Any topical adverse effects in the mouth and throat can be reduced by rinsing the mouth after using the inhaler.

4.3 Inhalers

When inhaled medication is prescribed, a suitable inhaler must also be selected to administer the medicine. It is important that the physician or nurse makes sure that the patient knows the correct inhaler technique when prescribing a new inhaled medicine. The correct use of the inhaler should be checked at every follow-up appointment. Correct inhaler technique can also be checked at the pharmacy when picking up prescription medication.

Inhalers are either dry powder inhalers or pressurised metered dose inhalers. When selecting a suitable inhaler, the simultaneous function of the hands and breathing, as well as inhalation speed should be taken into account. If using a dry powder inhaler is possible and there are no medical grounds for using a pressurised metered-dose inhaler, the first choice is a dry powder inhaler. They have



All things considered, corticosteroids should be used because their adverse effects are mild compared to asthma getting worse if not used.



a significantly lower carbon footprint than metered-dose inhalers. When using a **dry powder inhaler**, you should inhale powerfully and hold your breath for 5–10 seconds. It does not require simultaneous release of medicine and inhalation. Dry powder inhalers are not always suitable for the elderly or individuals with severe refractory asthma as they might not be able to reach a sufficient speed of inhalation.

The use of a **metered-dose inhaler** requires the simultaneous use of hands and inhalation because the dose must be released at the same time as inhalation begins. However, it does not require a high speed of inhalation. The drug is administered while breathing in slowly, calmly and deeply. Breath then needs to be held for ten seconds. This type of inhaler is usually suitable for the elderly and individuals with severe refractory asthma only when used with a spacer. Without a spacer, inhalation is usually only successful in younger patients.

When selecting an inhaler for an elderly person, attention should be paid to the force of inhalation and hand function (e.g. shaking and joint pain) and problems such as poor vision. A metered-dose inhaler with a spacer might be the best solution in such cases.

The use of a spacer makes it easier to take the drug and reduces the amount of medicine that will remain in the mouth and throat. The spacer makes it possible to breathe the medicine in calmly with 5–10 inhalations.

List of medications

- » You can make your treatment go more smoothly by listing your medication and any hypersensitivities you might have.
- » You should also include vaccinations, such as flu vaccines, and medications that do not require a prescription, i.e. over-the-counter medication and natural remedies.
- » Always bring an up-to-date list of your medication when you see a physician or have a follow-up appointment.
- » You can list your medication on a blank sheet of paper, ask for a list from your health centre or maintain a list at www.laakekortti.fi.



List of medications

Instructions for correct inhaler technique are available in Finnish in instructional videos by the Association of Finnish Pharmacies.



Videos by the Association of Finnish Pharmacies

In 2023, inhalers were included in the medicine substitution system. Read an article about it in our magazine. Ask your pharmacy about the possibility of substituting your medicine.



Read an article about inhaled medications in our magazine

4.4 Reimbursements for medicine expenses

Asthma medicines are included in Kela's (Social Insurance Institution of Finland) special reimbursement category. Kela reimburses 65% of the cost of asthma medication.

In order to receive reimbursement for asthma medication, a physician must diagnose you with asthma. Secondly, the anti-inflammatory asthma medication must have been in regular use for 6 months before entitlement to a special rate of reimbursement can be granted. Until then, asthma medication falls under the basic rate of reimbursement.

Entitlement to reimbursement is applied for based on a medical certificate issued by a doctor, which states the examinations and diagnostic tests performed and their results, benefits from the use of medication and an assessment on its continuity. The medical certificate should be submitted to Kela. Once Kela has processed your case, they will send you a new Kela card with the code 203 (chronic asthma and similar chronic obstructive pulmonary diseases) on it.

Prescription drugs have an annual maximum limit on out-of-pocket costs. Kela monitors medication purchases automatically based on information it re-

ceives from pharmacies and notifies the pharmacy when the maximum limit has been reached. Customers can monitor their purchases and the annual limit in Kela's OmaKela online service.

4.6 Drug hypersensitivity and polypharmacy

Drug hypersensitivity is more common in people with asthma. People who are hypersensitive to a drug often also suffer from chronic rhinitis and non-allergic asthma.

Some people with asthma (around 5%) are hypersensitive to anti-inflammatory drugs. Acetylsalicylic acid (aspirin) and similar anti-inflammatory drugs, such as ibuprofen, may increase asthma symptoms. Paracetamol painkillers can usually be used for pain.

So-called non-selective beta blockers (e.g. propranolol), which are used to manage heart rate and blood pressure, may worsen asthma and interfere with the effect of reliever medication. Most people with asthma can normally use the so-called beta1-selective beta blockers (such as bisoprolol and metoprolol). Eye drops containing beta blockers (e.g. timolol) for the treatment of intraocular pressure (IOP) may also make asthma worse.

Codeine and morphine may sometimes cause obstruction of bronchial tubes.



5 Monitoring

Asthma can fluctuate from occasional symptoms to severe asthma. Symptoms can vary even daily, depending on irritants. Good medical treatment can reduce symptoms, which in turn may change the need for medication.

If you take regular asthma medication, you will usually have one follow-up appointment per year, or more often as needed. Follow-up appointments can be carried out by an asthma nurse, who can refer the patient to a physician if necessary. However, a physician's assessment should be performed at least every 3–5 years.

Follow-up appointments usually take place in a health centre or occupational health care. If the patient's asthma control is constantly or frequently poor or if flare-ups occur repeatedly, the physician may refer the patient to a clinic specialising in pulmonary diseases.

Health centres do not usually invite you for follow-up appointments, which means that you need to make sure that you remember to schedule your follow-up appointments yourself.

Asthma tests are also helpful for assessing asthma control. An asthma test is available at www.astmatesti.fi. When you have an appointment, you will usually be asked about flare-ups, orally taken courses of corticosteroids, and any visits to the emergency department. It is a good idea to write these down beforehand. Perform a PEF test before your follow-up appointment if you have been instructed to do

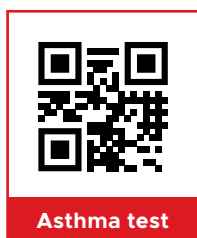
so. The test will help the physician assess how well your asthma is under control.

The health and care plan is a tool designed for self-care, and it can be used to check what to do and who to contact if your condition gets worse. The plan should be updated regularly to ensure that the information is up to date. The plan includes information about all of your diseases and their treatment, medication and monitoring.

Tip: Particularly individuals with long-term or multiple conditions should request a written health and care plan.



Tip: You can mention the health and care plan during a doctor's appointment. Prevention of breathing-related symptoms, appropriate medication, need for aids and preparing for pollen season or winter are examples of information to include in your plan as an asthma patient. Although your physician is responsible for writing the plan, your input is also needed. Prepare by writing down your own assessment on your state of health, condition and coping in daily life and by listing your medication, including any over-the-counter drugs and natural remedies.



Health centres do not usually invite you for follow-up appointments, which means that you need to make sure that you remember to schedule your follow-up appointments yourself.

6 Self-care

Self-care of asthma aims for symptom-free life, management of the condition and prevention of exacerbations. In practice, self-care means regular taking of medication, monitoring of your own health, recognition of symptoms, avoidance of irritants and adjustment of medication in accordance with your physician's instructions during, for example, the flu season, pollen season, street dust season and winter. Your physician will also assess whether you need to include PEF tests in your self-care routine.

Each person with asthma is the foremost expert on their own condition. In order to be able to make choices and decisions about your own treatment, you need information about the disease, medication, use of medication and factors that exacerbate the disease.

You can get written instructions from your physician to support self-care and medical treatment. The instructions are an easy tool for checking what to do in different situations and how to adjust your medication as needed.

6.1 Vaccinations

The seasonal flu vaccine should be taken annually before the start of the flu season in November–December. People with asthma are in the risk group for influenza and can get vaccinated for free at their local health centre. The vaccine is also recommended to those close to an individual with asthma. It is advisable to get vaccinated against COVID-19 in accordance with current government guidelines.

Asthma patients aged over 65 receive a pneumococcal vaccine as part of the national vaccination programme. Other asthma patients should also consider getting the pneumococcal vaccine at their own expense to get protection against pneumococcal infections. The vaccine prevents pneumonia caused by pneumococcus bacteria. According to current knowledge, the pneumococcal vaccine only needs to be taken once.

Eligible respiratory patients can usually get the influenza vaccine, the booster dose of the COVID-19 vaccine and, if applicable, the pneumococcal vaccine at the same appointment by booking advance.



6.2 Smoking

Smoking increases asthma symptoms and flare-ups and weakens the lungs. Research has shown that the efficacy of asthma medication is not as good for people who smoke.

Quitting smoking is always advisable. Electronic cigarettes may also damage the lungs.

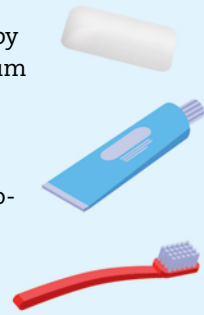
Information and support to quit smoking and the use of other nicotine products is available in the Stumppi.fi service by the Organisation for Respiratory Health in Finland. For free advice from healthcare professionals, call 0800 148 484.

6.3 Oral care

Medication used to treat asthma may cause hoarseness of the throat and thrush in the mouth and throat. Traces of inhaled medication may stay in the mouth after taking the medicine. This increases the growth of yeast fungus (thrush) in the mouth and can make you susceptible to tooth decay. Asthma medicines also contain lactose, which also increases the risk of tooth decay.

The above adverse effects can be easily prevented:

- » Always brush your teeth before taking your medication.
- » Rinse your mouth after taking medication and spit out the water.
- » Medication can make your mouth dry. You can increase salivation by chewing xylitol gum and sucking on lozenges.
- » Brush your teeth regularly with fluoride toothpaste.
- » Have regular dental check-ups.



Read an article
about oral
health in our
magazine

A photograph showing two people from behind, walking up a wide wooden staircase covered in snow. The person on the left is wearing a blue jacket and black pants, while the person on the right is wearing a pink jacket and black pants. The background shows a park-like setting with trees and a clear sky.

 **Organisation for Respiratory Health in Spotify**

Weighing lifestyle choices

If you already have a disease, is it still possible to improve the situation through exercise and weight loss? How to find the motivation for weight management if your medication is making you gain weight?

 The Organisation for Respiratory Health in Finland

6.4 Weight management

If an individual with asthma is overweight, losing weight makes breathing easier, enhances the efficacy of asthma medication and makes the person feel better overall.

Regular mealtimes are important for successful weight management and permanent weight loss. It is recommended that you eat every 3–4 hours. Some of this can be snacks that include food items like whole grains, fat-free dairy products, vegetables or fruit.

It also helps to start eating smaller portions and adopting the healthy eating plate model, in which at least half of the plate is filled with vegetables. You should eat vegetables, fruit and berries with every meal because they help to fill your stomach but are low in calories.

A man with short brown hair, wearing a grey hoodie, is stretching his right arm across his chest with his left hand. He is looking towards the camera with a slight smile. The background is a blurred outdoor setting with a red fence.

**Keep yourself up to date
with asthma treatments
and self-care:**

www.hengityslitto.fi

Find exercise tips for people with asthma and join public events.

 The Organisation for
Respiratory Health in Finland

6.5 Motion

Motion är en viktig del av egenvården vid astma. En god kondition främjar lungfunktionen, eftersom det förbättrar lungventilationen och avlägsnar slem från andningsvägarna. Motion förbättrar också kroppens förmåga att återhämta sig från luftvägsinfektioner och astmaskov samt minskar känslan av andnöd.

En astmatiker har alltid nytta av att motionera. En astmatiker som motionerar klarar sig med lägre medicindoser, lägre sjukfrånvaro och färre sjukhusbesök.

Det lönar sig att röra på sig, även om det till en början skulle kännas svårt. Kroppen anpassar sig snabbt till motionerandet, och också lungfunktionen förbättras. Så småningom blir det lättare att röra på sig och att andas.

Regelbunden motion höjer ansträngningstoleransen och minskar ansträngningssymptomen. När konditionen ökar minskar eller försvinner helt behovet av att använda medicin mot ansträngnings-symptom.

Konditionen ökar endast då man blir andfådd. Man behöver inte vara rädd för att bli andfådd. Det är bra att ta reda på vad som är skillnaden just för dig mellan att vara andfådd och att ha andnöd och hur dessa båda situationer känns. Andfåddheten går om då motionerandet avbryts, men andnöden fortsätter och blir ofta värre, också efter det att motionerandet avbrutits.

Om man av ansträngningen får ökad andnöd, hosta och vinande ljud i andningsvägarna, bör man diskutera med läkaren om användning av medicin som förebygger ansträngningssymptom. Om man ofta får symptom under ansträngning, tas den

ordinerade medicinen före motionsutövningen.

Om långvarig motion orsakar symptom, eller om man lider av svår astma, kan man prova intervallträning, dvs. att växla mellan ansträngning och vila. Till en början kan intervallen till exempel pågå från ett tiotal sekunder till ett par minuter. Vilofasen ska vara åtminstone 1,5 gånger så lång som ansträngningsfasen. Då avses aktiv vila eller att man motionerar på ett sätt som gör det lätt att andas.

6.6 Rehabilitering

Rehabilitering är en väsentlig del i behandlingen av sjukdomen. Med hjälp av rehabilitering försöker man bevara arbets- och funktionsförmågan så god som möjligt. Bästa nyttan har man av rehabilitering, då man söker sig till den i god tid.

Rehabilitering ger kunskap om hur man kan klara av sjukdomen på arbetet, hemma, under studier eller andra livssituationer. Där får man också information om sjukdomen, dess behandling och symptomhantering. Om behandlingen av sjukdomen kräver att man gör förändringar i sina levnadsvanor, får man också hjälp och stöd för detta under rehabiliteringen.

Det lönar sig att själv ta upp frågan om rehabilitering med sin läkare, vårdare eller rehabiliteringshandledare. Man ansöker om rehabilitering med läkarremiss.

FPA:s rehabilitering är avgiftsfri för den som deltar. Mer information om detta finns online på www.kela.fi.

Om det rör sig om en yrkessjukdom, söker man rehabilitering från arbetsgivarens olycksfallsförsäkringsbolag.



7 Travel and asthma

If your asthma is well-controlled, it does not prevent you from flying. The dry, low-pressure air and air conditioning in an airplane may trigger asthma symptoms, so you should carry your asthma medication in your hand luggage.

Carry the medicines in their original packaging. Be sure to take enough of your regular medication to last the entire trip plus a little extra.

If you are travelling outside Europe, check your destination country's guidelines on whether you need to have a certificate or a prescription for your medication in English.

It is always a good idea to have travel insurance when travelling. You should check the terms and conditions of your travel insurance policy well in advance of your trip because some insurance policies do not cover the treatment expenses of chronic diseases even in acute situations. Make sure that your insurance also covers treatment of any asthma exacerbations.

The European Health Insurance Card entitles tourists to medically necessary treatment in the public health care system of another EU country for the same price as the locals. The card also covers acute treatment of chronic illnesses. You can order your European Health Insurance Card from Kela.



Did you know?



This guide is also available online in Swedish and Finnish.

Andningsförbundet The Organisation for
och broschyrer på svenska: **Respiratory Health in**
Finland and its
publications:



This guide is based on the Finnish Current Care Guidelines on Asthma (2022).

The contents of the guide were designed by Mervi Puolanne and Hanna Salminen. The expert review was carried out by Hannu Kankaanranta, Professor of Pulmonary Diseases.

Photos: Mauri Ratilainen, Shutterstock, Kukka-Maria Ahokas

Illustrations: Mikko Sallinen
Layout: Vitale Ay.

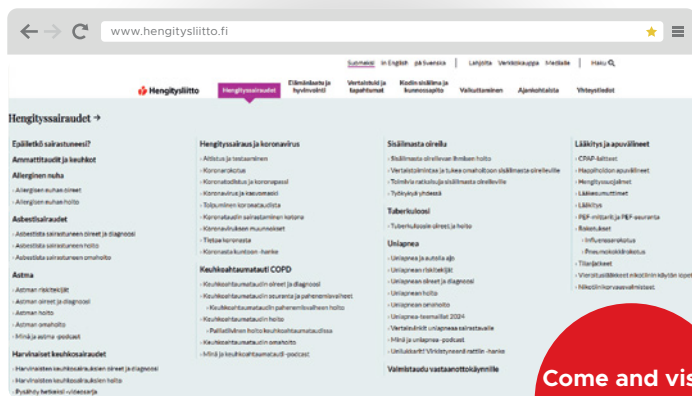
Publishing this handbook was made possible by the support from AstraZeneca Oy.
www.astrazeneca.fi



Have you already visited our website?

On our website, you will find news and practical information about asthma, medication, vaccinations and preparing for your appointment.

We also host popular online events for everyone on themes like quality of life, well-being and exercise – just check out our event calendar.

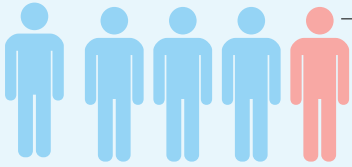


Come and visit!

www.hengityslitto.fi



Get involved!



one in five

Finns suffers from a respiratory disorder or has been diagnosed with a respiratory disease

Respiratory associations offer diverse activities and services locally:

- ✓ peer support: various peer support groups and meetings
- ✓ members' nights, clubs and trips
- ✓ exercise groups and events
- ✓ information: public lectures and events, guides, advice and guidance
- ✓ support for smoke-free living
- ✓ local advocacy and supervision of interests.




The Organisation for Respiratory Health has

around **70** local respiratory associations

2 national associations



around **19,000** members

 The Organisation for Respiratory Health in Finland

Hengityслиitto

Members of the Organisation for Respiratory Health can:

- » participate in local peer groups and exercise groups, events, lectures, and other recreational activities
- » take courses and work as a volunteer in a role that is meaningful to you
- » apply for positions of trust both locally and nationally
- » access local membership benefits in addition to national membership benefits
- » get our Hengitys magazine.

As a supporter of the Organisation for Respiratory Health in Finland, you can:

- » get nationwide membership benefits
- » get our Hengitys magazine.

Fill in the form, cut it out, and fold it along the line on the reverse to form a letter. Fasten the edges with tape. The postage is paid by The Organisation for Respiratory Health in Finland, so you can drop the letter in a mailbox without a stamp.

Postage paid by the Organisation for Respiratory Health.

Hengityслиitto ry

Tunnus 5005132

00003 Vastauslähetys

follow us: @Hengityслиitto
www.hengityслиitto.fi





Join us and find your way to make a difference!

You can also become a supporter!



* See membership fees on our website at www.hengitysliitto.fi.



Yes. I want to join!

The Organisation for Respiratory Health in Finland and its local associations promote respiratory health and good life for people suffering from respiratory diseases.

- I want to become a member of a local respiratory association**
- I want to join the Organisation for Respiratory Health as a supporter**

TIP: Pay the membership fee and fill in the form: www.hengitysliitto.fi

SURNAME
FIRST NAME(S) <small>(underline your preferred name)</small>
DATE OF BIRTH* (DD. MM.YY)
TEL.
EMAIL
ADDRESS
POSTCODE AND CITY/TOWN
PLACE OF DOMICILE
GENDER <input type="checkbox"/> male <input type="checkbox"/> female <input type="checkbox"/> other <input type="checkbox"/> prefer not to say
FIRST LANGUAGE

A member of my family is already a member:

SURNAME AND GIVEN NAMES

I am interested in respiratory health/respiratory diseases. Please specify which:

--

I consent to having my personal data stored in the register of members of the Organisation for Respiratory Health in Finland and local respiratory associations. Privacy policy: www.hengitysliitto.fi

You can send me marketing and fundraising mail

DATE
SIGNATURE

*If the person is under 15, a guardian must write their name and signature



Peer support from the Organisation for Respiratory Health in Finland

One of the key activities of the Organisation for Respiratory Health in Finland and its local organisations around Finland is to offer peer support.

Peer support offers individuals suffering from a certain condition the chance to share their experiences. Together, they can reflect on how their lives, resources and conditions differ from each other and what they have in common. Even more serious topics can be brought up. At its best, peer support is a source of empowerment for both the person receiving support as well as the one offering it.

The illness also affects family members and other loved ones. Many people feel that it is a relief to discuss the condition with other people in the same situations, as you do not have to add to the concerns of family and friends.



Go the website of the Organisation for Respiratory Health in Finland at www.hengitysliitto.fi and find out which local association is active in your region. Come and join the activities!