

The Increasing Global Impact of Asthma

Asthma is a chronic inflammatory lung disease characterized by recurrent breathing problems and symptoms such as breathlessness, wheezing, chest tightness, and coughing¹. Asthma symptoms vary over time, and also differ in severity from one individual to another. In the most extreme cases, the airways can become so inflamed and constricted that people are unable to breathe. When it is not effectively treated, asthma can lead to hospitalization, missed time from work and school, limitations on physical activity, sleepless nights, and in some cases death.

Causes and prevalence of asthma

The causes of asthma are not fully understood, but the disease is a result of interaction between environmental and hereditary factors^{1,2}. Up to 90% of asthma is classified as allergic³ and is triggered by allergens such as dust mites (in bedding, carpets etc.), animal dander, pollen and mould³. Tobacco smoke and exposure to chemical irritants in the workplace are also considered risk factors⁴.

Asthma impacts people of all ages and ethnic backgrounds, and it is estimated that as many as 300 million people worldwide suffer from the disease⁵. In Europe, 30 million people are affected by asthma and the prevalence in Western Europe has doubled over the last decade⁵. By 2025 it is predicted that a further 100 million people worldwide will suffer from asthma, mainly due to the increasing number of people living in towns and cities⁵.

Although asthma affects all age groups, it often starts in childhood⁶. Approximately half of the people with asthma have experienced an attack before the age of 10⁶.

Asthma rates across Europe

- The UK and Ireland have some of the highest asthma rates in the world – almost double the European average (13.8% versus 7.2%). The number of asthma attacks has increased by 500% in the last 25 years and the UK's general practitioners see more than 3,000 new cases every day (i.e. 20,000 per week)⁵.
- Around 8% of the Swiss population now suffer from asthma, compared with only 2% 25-30 years ago².

Highest prevalence rates in Europe (average 7.2%) ⁷	
Country	Prevalence (%)
UK	13.8
Finland	11.0
Ireland	10.5
Netherlands	8.7
Switzerland	8.0 ²
France	6.9
Spain	5.0
Germany	4.7

Impact of severe asthma

Severe asthma has a serious impact on the lives of patients, affecting their relationships, social lives and work opportunities. It can cause potentially life threatening asthma exacerbations with debilitating breathlessness, and a constant fear that the next attack could be fatal.

Some patients with severe symptoms are less responsive to standard asthma therapy and have been shown to experience greater morbidity and a lower quality of life than those whose disease is adequately controlled⁸. These patients are at greater risk of experiencing severe asthma attacks, hospitalization and even death from their asthma^{9,10}. According to the World Health Organization one person dies every hour from asthma-related causes in Western Europe¹¹, and experts claim the majority of these deaths are preventable.

Out of the total population of patients with asthma, the proportion with severe disease has been estimated at 18% in Western Europe and 32% in Central and Eastern Europe^{12,13}. This equates to around 1-3% of the general population¹⁴, the equivalent of 4.5-14 million people in the 25 countries of the European Union.

Approximately 20% of these patients have uncontrolled severe persistent asthma¹³, and approximately 50% of these are considered allergic to common aeroallergens⁸. The percentage with severe persistent uncontrolled allergic asthma can therefore be estimated as approximately 2% of all asthma patients.

Personal consequences of severe asthma

In 2005 the European Federation of Allergy and Airways Diseases Patients' Associations (EFA) conducted a survey of 1,300 patients with severe asthma in France, Germany, Spain, Sweden and the UK¹⁵. The results demonstrate the impact that severe asthma can have on individuals' lives:

- 75% of those interviewed suffered disturbed sleep once a week or more, and the same percentage experienced wheezing attacks on a weekly basis.
- Around one in five experienced speech-limiting attacks once a week – especially frightening since they would be unable to cry out for help.
- More than half of respondents said they suffered anxiety and stress because of their asthma, and one in four said they felt their condition was life-threatening. The most common words associated with asthma were “breathlessness”, “suffocation”, and “fear”.
- More than one in three said their social life was restricted. Almost a third said asthma stopped them going on holiday; 38% said it stopped them going out with friends; 49% could not have pets or visit people with pets; and 70% were unable to participate in physical activities.
- One in five felt that they missed out on job opportunities (in Sweden the number rose to one in three), and 9% thought their illness has cost them promotion. Some had been forced to change jobs or retire early.

Economic burden

The social and economic burden of asthma is substantial. In Europe the cost of asthma is estimated at 17.7 billion euros a year, in addition to lost productivity estimated at 9.8 billion euros².

Patients with inadequately-controlled severe asthma account for much of the morbidity, mortality and economic burden associated with the disease^{2,9,10}. In the UK, around half of the total cost of asthma is accounted for by the 20% of patients with the most severe form of the disease⁵.

Management of severe asthma

Asthma is a chronic condition which often requires continuous medical care. Patients with moderate to severe asthma have to take long-term daily medication, such as anti-inflammatory drugs⁴.

Experts are concerned that the level of asthma control in Europe falls short of the goals for long-term disease control outlined in guidelines established by the Global Initiative for Asthma (GINA), including minimal symptoms, no emergency visits, and no limitation on daily activities^{1,16}.

¹ GINA Global Initiative for Asthma. Pocket Guide for Asthma Management and Prevention.

² The European Lung White Book: The First Comprehensive Survey on Respiratory Health in Europe 2003.

³ Holt PG, Macaubas C, Stumbles PA, et al. The role of allergy in the development of asthma. *Nature* 1999;402(Suppl.):B12–17.

⁴ World Health Organization; www.who.int/mediacentre/factsheets/fs206/en/

⁵ GINA Global Initiative for Asthma. The Global Burden of Asthma Report, 2004.

⁶ www.ginasthma.com/QandA.asp?intId=114

⁷ Health, Food and Alcohol and Safety, Special Eurobarometer 186 / Wave 59.0, European Opinion Group EEIG, December 2003.

⁸ European Network for Understanding Mechanisms of Severe Asthma (2003) The ENFUMOSA cross-sectional European multicentre study of the clinical phenotype of chronic severe asthma. *European Respiratory Journal* 22:470-477.

⁹ Tough SC, Hessel PA, Ruff M, et al. Features that distinguish those who die from asthma from community controls with asthma. *J Asthma* 1998;35:657–665.

¹⁰ Turner MO, Noertjojo K, Vedal S, et al. Risk factors for near-fatal asthma. A case-control study in hospitalized patients with asthma. *Am J Respir Crit Care Med* 1998;157:1804-1809.

¹¹ The World Health Report 2003, Shaping the Future, the World Health Organization.

¹² Rabe KF, Vermeire PA, Soriano JB, et al. Clinical management of asthma in 1999: the Asthma Insights and Reality in Europe (AIRE) study. *Eur Respir J* 2000;16:802-7.

¹³ Rabe KF, Adachi M, Lai CK, et al. Worldwide severity and control of asthma in children and adults: the global Asthma Insights and Reality surveys. *J Allergy Clin Immunol* 2004;114:40-47.

¹⁴ Siroux V, Pin I, Pison C, et al. Severe asthma in the general population: definition and prevalence. *Rev Mal Respir* 2004;21:961-69.

¹⁵ European Federation of Allergy and Airways Diseases Patients' Associations (EFA) survey 'Fighting for Breath', May 2005.

¹⁶ www.ginasthma.com/PressReleaseItem.asp?I1=6&I2=1&intId=893