Treating asthma and COPD - a systematic review


Record Status
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Authors' objectives
The intent of this report is to assess the scientific evidence underlying current treatment methods for asthma and COPD (chronic obstructive pulmonary disease) in adults and children. The report addresses primary prevention, pharmacological and surgical treatment, patient education, psychological methods, rehabilitation, climate therapy, and alternative medicine. Background information is presented on the causes, prevalence, and mortality from the disease and the utilization of health services. Socioeconomic and cost-effectiveness analyses are also included.

Authors' conclusions
Asthma and COPD are both chronic public health diseases that are on the rise in Sweden. For asthma, the increase is most obvious among children and young adults, while COPD is increasing among older smokers, particularly women.

The cause behind the increase in asthma is unknown. However, the dominant, confirmed cause behind COPD is tobacco smoking. To prevent the advancement of COPD, it is important to detect the disease early. The most important preventive measure is to intervene effectively against smoking.

COPD is associated with substantial limitations in everyday life and a lower quality of life despite medication. Although asthma also leads to a lower quality of life, individuals with asthma have a greater chance of becoming symptom-free through modern medication. To assess the treatment of asthma and COPD, it is essential to use outcome measures that reflect the impact of the disease on an individual's life (health-related quality of life, symptom scales, need for acute care, mortality).

The new drugs for treating asthma have major advantages. They also have contributed toward a dramatic decline in the cost of hospitalization for asthma patients.

The review of the scientific literature has shown: - that smoking cessation is the single most important intervention against COPD. Smoking cessation increases survival substantially and reduces symptoms. For many individuals with severe COPD, drugs provide only limited relief for their medical, psychological, and social situation. - that current maintenance treatment for asthma using long-acting beta-2 stimulants and inhaled steroids is based on solid scientific evidence that shows a positive effect. - that treatment as needed with short-acting beta stimulants for asthma symptoms and exacerbations is well founded. - that other treatment principles for asthma such as chromoglicate, antileukotrienes, and immunotherapy have documented effects. - that the benefits of cough medications in obstructive lung diseases is inadequately studied. - that treatment with theophylline tablets is not beneficial for patients. - that continual treatment with short-acting beta stimulants is not effective. - that preventive measures against asthma symptoms, such as allergen elimination, need to be assessed. - that scientific evidence on alternative medicine as a complementary treatment method for asthma and COPD is either weak or completely lacking. There is a major need for controlled, well-executed studies.

The methods for improving patient compliance with treatment regimens need to be developed and can be strengthened when patients themselves participate in decisions on treatment methods.

There is a major need to assess special asthma clinics and treatment methods at home for severe COPD. Different
forms of COPD rehabilitation play an important role, but need to be developed and assessed.

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