

Sleep and asthma

Information for health professionals

Sleep is essential for good health. Healthy sleep means having a regular sleep–wake cycle, getting enough sleep each day, and enjoying good-quality sleep (falling asleep easily, staying asleep through the night, and feeling refreshed after sleeping).¹ Disruption to any of these can compromise health and wellbeing.¹

Asthma is one of many health conditions associated with poor sleep. Asthma symptoms can disrupt sleep, while sleep disturbances can impair asthma control and quality of life.^{2,3}

Poor asthma control is associated with sleep disturbance

Asthma symptoms during sleep or on waking indicate suboptimal asthma control. Frequent nocturnal symptoms indicate increased risk of acute asthma exacerbations.

Some asthma treatments also affect sleep. Sleep disturbance is a common adverse effect of short courses of prednisone/prednisolone⁴ to manage asthma exacerbations. Montelukast has been associated with insomnia and disturbed sleep in case reports, case series and pharmacovigilance studies.^{5,6}

Asthma practice points

Ask about sleep. When assessing asthma in adults and children, ask about nocturnal waking and early morning symptoms of chest tightness, wheeze and breathlessness – use an asthma symptom tool, such as the Asthma Control Test or Asthma Control Questionnaire (available from the [Australian Asthma Handbook](#)).

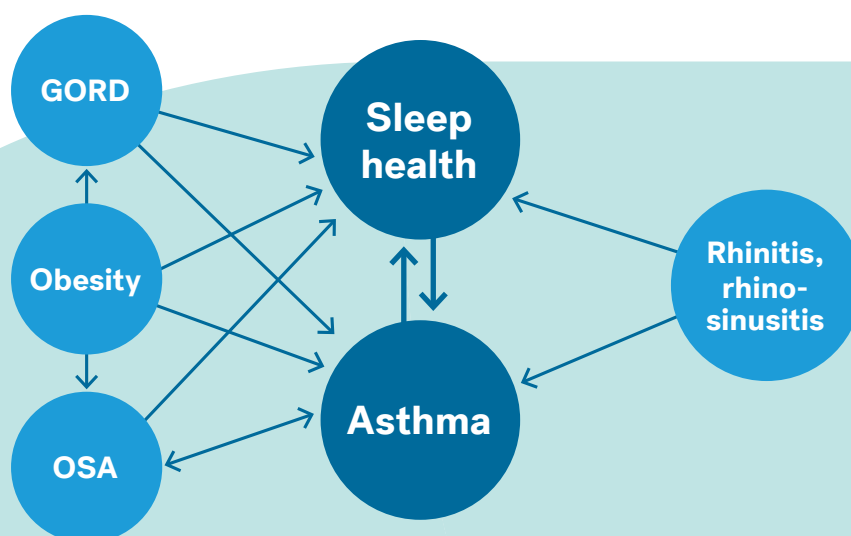
Don't accept nocturnal asthma symptoms as normal. Consider stepping up asthma treatment in a patient with sleep disturbance due to asthma symptoms (after checking and correcting adherence and inhaler technique).

Minimise oral corticosteroid use. Oral corticosteroids often cause sleep disturbance. The need for oral corticosteroids is reduced by treatment with inhaled corticosteroids (with other medication as indicated).⁷ When oral corticosteroids are necessary, they should be taken early in the morning to reduce the risk of sleep disturbance.

Other conditions that affect sleep commonly co-occur with asthma

In an individual with multimorbidity, several conditions may contribute to both sleep disturbance and asthma control. In patients with asthma symptoms that are difficult to control, these should be investigated and managed simultaneously.

Associations between asthma and sleep



Asthma, common comorbidities, and sleep health

Condition	Effects on sleep health	Relevance to asthma
OSA	Unrefreshing sleep, fatigue, poor concentration, low mood, excessive daytime sleepiness ⁸	Estimated prevalence 20–40% in people with asthma ⁹ – likely bidirectional risk association ¹⁰ Associated with increased rates of asthma exacerbations, including severe exacerbations, and with lower quality of life and asthma control ^{10,11} Severity of OSA may be correlated with rate of severe asthma exacerbations ¹¹ CPAP treatment for OSA improves asthma-related quality of life, ¹⁰ and may improve asthma symptom control ¹²
Obesity	Major risk factor for OSA ⁸	Associated with development of some asthma phenotypes ¹⁰ Contributes to asthma symptoms and difficulty managing asthma ¹⁰ Weight loss is associated with improvements in asthma-related quality of life, asthma control and lung function ¹³
Allergic rhinitis	Sleep disturbance ¹⁴	Estimated prevalence up to 80% in people with asthma ⁹
Chronic rhinosinusitis	Sleep disturbance ^{15,16}	Estimated prevalence 22–42% in people with asthma ⁹
ILO	Can occur during sleep ¹⁷	Estimated prevalence 19% in people with asthma ⁹ Can mimic asthma
GORD	Sleep disturbance ¹⁸ Exacerbated by sleep deficiency ¹⁸	Common in people with asthma ¹⁰
Anxiety and depression	Contribute to poor-quality sleep	Estimated prevalence of anxiety symptoms 32% and anxiety disorders 24% in people with asthma ¹⁹ Anxiety and depression common in severe asthma ²⁰

CPAP: continuous positive air pressure; GORD: gastro-oesophageal reflux disease; ILO: inducible laryngeal obstruction (vocal cord dysfunction/upper airway dysfunction); OSA: obstructive sleep apnoea

Primary care sleep and asthma resources

National Asthma Council Australia:
astmahandbook.org.au

Australasian Sleep Association:
sleepprimarycareresources.org.au

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