

Diagnosis

- Consider serum venous bicarbonate as a preliminary test if pre-test probability of OHS is low. If bicarbonate levels are below 27 mmol/litre, OHS is unlikely
- Measure arterial blood gas when awake to diagnose OHS and assess extent of chronic ventilatory failure. Do not delay treatment for acute ventilatory failure for further investigations

Priority factors for rapid assessment

- severe hypercapnia PaCO₂ >7 kPa when awake
- hypoxaemia (<94% on air)
- acute ventilatory failure
- vocational driving or vigilance-critical job
- unstable cardiovascular disease
- pregnancy
- preoperative assessment for major surgery
- non-arteritic anterior ischaemic optic neuropathy

Discuss lifestyle changes tailored to the person's needs
Give information on OHS, including the treatments available and choosing the best treatment for the person

No acute ventilatory failure

Diagnosing OSAHS and nocturnal hypoventilation

- Offer home or hospital respiratory polygraphy to determine the presence of OSAHS
- Consider transcutaneous CO₂ monitoring with respiratory polygraphy to guide treatment

Severe OSAHS excluded

Consider NIV
(see monitoring below)

Rhinitis

Assess people with nasal congestion for rhinitis and treat if confirmed (for details, see the guideline)
Changing from nasal to orofacial masks and adding humidification can help with CPAP tolerance

Severe OSAHS

Offer CPAP
Consider heated humidification for upper airway side effects and CPAP-induced rhinitis

Monitor and offer NIV as an alternative if symptoms do not improve, hypercapnia persists, AHI or ODI are not sufficiently reduced or CPAP is poorly tolerated

Acute ventilatory failure

Offer NIV

Hypercapnia resolves

Consider stopping NIV and monitor response
(see monitoring below)

Consider respiratory polygraphy if acute ventilatory failure has been stabilised and hypercapnia controlled

No OSAHS

Hypercapnia persists

Consider continuing and further optimising NIV
(see monitoring below)

Decompensation after stopping NIV

Consider a trial of CPAP if frequent episodes of obstructive apnoea and minimal hypoventilation

Monitoring and support (for further details, see the guideline)

- Monitor and optimise therapy with CPAP and NIV
- Tailor follow-up to the person and offer face-to-face, video or phone consultations with telemonitoring data, if available
- Offer access to a sleep and ventilation service for CPAP and NIV users for advice, support and equipment
- Offer educational or supportive interventions by trained specialists to improve adherence

Supplemental oxygen

- Consider supplemental oxygen if hypoxaemia persists despite optimised control of nocturnal hypoventilation and AHI on CPAP or NIV, and address any additional underlying causes of hypoxaemia where possible
- Review if oxygen is still needed after treatment with CPAP or NIV has been optimised