COPD–OSAHS overlap syndrome: investigations and treatment

**Diagnosis**
- Measure arterial blood gas when awake to assess for ventilatory failure. Do not delay treatment for acute ventilatory failure for further investigations
- Offer spirometry if COPD severity is not already determined
- Offer home or hospital respiratory polygraphy
- Consider transcutaneous CO₂ monitoring with respiratory polygraphy to guide treatment

**OSAHS and nocturnal hypoventilation excluded**

Follow [NICE’s guideline on COPD](#)

**OSAHS confirmed**

No severe hypercapnia

- PaCO₂ ≤ 7 kPa

**OSAHS confirmed**

Severe hypercapnia

- PaCO₂ > 7 kPa

**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

**OSAHS and nocturnal hypoventilation confirmed**

- Discuss lifestyle changes tailored to the person’s needs
- Give information on COPD-OSAHS overlap syndrome, including the treatments available and choosing the best treatment for the person

**Consider CPAP**

- Consider heated humidification for upper airway side effects, such as nasal and mouth dryness, and CPAP-induced rhinitis

**Consider NIV**

**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
- Ensure follow-up is in line with [DVLA guidance on assessing fitness to drive](#)
- 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 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

Consider stopping CPAP or NIV and using a symptom-management approach for severe COPD if symptoms or quality of life do not improve, or CPAP or NIV add to the burden of therapy

**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