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Medical Indications for Home Ventilation

Home ventilation should be considered for patients with a neuromuscular disorder or chest wall restriction who have documented hypercapnia (arterial pressure carbon dioxide (PCO₂) at rest > 45 mm Hg breathing room air). Not all patients with these arterial blood gas abnormalities will need home ventilation, however it can be considered for these patients. The patient should be stable, i.e. have made a full recovery from any intercurrent illness and be in optimal management of any reversible component of any associated pulmonary disease.

Patients with a normal PCO₂ may be considered for home ventilation with PCO₂ in the range 40–45 mm Hg if they meet any of the following criteria and have a chronic neuromuscular disease; (1) cor pulmonale, (2) nocturnal hypoventilation (as documented by elevations in nocturnal carbon dioxide levels (TCCO₂) and associated morning symptoms), (3) severe supine dyspnea (e.g. diaphragmatic paralysis), or (4) those who have had previous episodes of respiratory failure requiring mechanical ventilation.

Home ventilation may be indicated in any patient with chronic neuromuscular disease or a chest wall restrictive disease with the above mentioned criteria. Patients with central alveolar hypoventilation also qualify in the presence of normal neuromuscular function but abnormal ventilatory control.

Home ventilation is usually not indicated in patients with chronic hypercapnia secondary to either chronic obstructive lung disease or interstitial lung disease.

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