

Does home oxygen therapy (HOT) in addition to standard care reduce disease severity and improve symptoms in people with chronic heart failure? A randomised trial of home oxygen therapy for patients with chronic heart failure

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Plain English summary

The home oxygen therapy (HOT) trial

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Plain English summary

Oxygen therapy is the administration of additional oxygen for medical reasons. Patients with severe chronic heart failure suffer from breathlessness that may ruin their quality of life (QoL). Partly because patients with severe lung disease benefit from home oxygen therapy (HOT), patients with severe heart failure are often prescribed home oxygen. However, oxygen therapy can be burdensome. It limits mobility, it can cause soreness around the nose and the equipment is noisy. There is no evidence to support its use in patients with heart failure.

The HOT trial was designed to measure any beneficial effects on QoL measured with the Minnesota Living with Heart Failure questionnaire. We allocated, at random, 114 patients with severely symptomatic heart failure either to receive home oxygen for 15 hours a day or not to receive oxygen therapy. All participants continued to receive the best medical therapy for their condition. The average age of patients was 70 years, and 70% of patients were men. None of the patients had a low level of oxygen in their blood.

As only 11% of patients reported that they used the oxygen for the full 15 hours a day, the trial was stopped early. We found no evidence that home oxygen improved patients' QoL, symptoms or any other measurement of severity of heart failure. There was a small improvement in survival with oxygen, but the difference was not statistically significant.

Further study might identify whether or not having emergency oxygen available at home would reduce the need for admission to hospital.

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