

Nocturnal temperature-controlled laminar airflow device for adults with severe allergic asthma: the LASER RCT

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Plain English summary

The LASER RCT

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Plain English summary

Allergies (along with viruses) are common triggers of asthma exacerbations or 'attacks', which can cause suffering and frequent visits to the general practitioner or hospital. A new machine known as a temperature-controlled laminar airflow device, which remains at the bedside and is switched on every night, filters out allergy particles in the air of a patient's breathing zone, allowing their lungs to rest in clean air overnight. We tested whether or not this machine could improve the lives of those with severe allergic asthma. We recruited 240 people across 14 centres that treat severe asthma across the UK; approximately half received the active device and the other half received a machine that looked exactly the same but did not remove the allergens (a 'placebo' machine). One in five participants was recruited using newer methods of social media such as Facebook (Facebook, Inc., Menlo Park, CA, USA) and Twitter (Twitter, Inc., San Francisco, CA, USA). Participants found the machine easy to use and to live with and there were no significant side effects. The number of attacks reduced a lot in both participants using the active device and those who used the placebo device – two participants in five did not suffer any attacks during the trial. However, there was no difference in the number of attacks between the two groups. This might have been because participants did not record everything that happened to them. There was no difference in measurements showing how well the lungs were working, nor in participants' quality of life after 1 year of participating in the trial. Those who were interviewed told us that the study visits and questionnaires could be burdensome, although it was helpful to think more about their asthma. An improvement was seen in one aspect of participants' breathing as well as in their quality of life after 6 months of using the machine, but these potential health benefits could not outweigh the cost of the machine.

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