How Uncomfortable Is High-Flow Oxygen via Nasal Cannula?

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Normal volunteers tolerated a flow rate of 15L/minute but found it more uncomfortable than 6 L/minute.

A new technique called “apneic oxygenation” is purported to prevent desaturation by delivering high-flow oxygen via nasal cannula to ventilate the lungs passively just before intubation. But could this cause patient agitation during the moments before sedation and paralysis? Researchers investigated its tolerability in a crossover study of 77 healthy volunteers.

Participants were given oxygen for 10 minutes at 15 L/minute or 6 L/minute and then after a washout period were given oxygen at the other flow rate. All participants tolerated both regimens, but the higher-flow regimen caused greater discomfort (a difference of 25 mm on a 100-mm visual analogue scale).

Comment: High-flow oxygen delivered by nasal cannula may be unpleasant, but this study shows that normal, nonconfused patients can tolerate it for at least 10 minutes. This study should in no way dissuade its use.

Citation(s):

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