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Title: Influence of different factors in maximal nasal inspiratory pressure (SNIP) values in healthy volunteers

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Body: Inspiratory muscle force is usually evaluated through the maximal inspiratory mouth pressure during static manoeuvre (MIP). Nevertheless, the lack of coordination between the patient and the technician hampers the correct evaluation of MIP. In order to overcome this limitation, a dynamic nasal manoeuvre has been described (SNIP). The SNIP test measures the maximal inspiratory pressure obtained in the nose during a sniff manoeuvre. However, the influence of methodological issues on the results of the SNIP have not been described in deep. Aim:To evaluate the relevance of three methodological factors on SNIP values. Method:35 healthy volunteers were included in a transversal blind study (11men, 28±11years). The nostril chosen for the study was selected according to the best SNIP value obtained. We analyse three different factors which could influence the results of the manoeuvre: open vs. occluded contralateral nostril, RV(residual volume) vs. FRC(functional residual capacity) for the initial lung volume, and visual feed-back incentive or not. Results:The SNIP values were significantly modified by either the visual stimulus or the occlusion of the contralateral nostril. However, lung volume chosen to initiate the manoeuvre did not affect the SNIP values.

	Opened Nostril	Closed Nostril	p
	96±20	101±25	<0.05
SNIP cmH2O	Without visual stimulus	with visual stimulus	p
	83±22	91±24	<0.05
	Manoeuvres from TLC	Manoeuvres from RV	p
	95±25	91±23	ns

TLC: total lung capacity, RV: residual volumen

Conclusion:The technique to obtain the SNIP should be standardized since different methodological factors (such as visual feed-back and occlusion of the contralateral nostril) can modify the results.