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Immediate postural responses to total nasal obstruction.

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Twenty-five nasal breathing adults were radiographically examined before and after their nasal respiratory pattern had been artificially eliminated for a period of 1 hour. Six angular and six linear variables were measured to determine the extent of the postural reflexive behavior of the cranium, mandible, hyoid bone, tongue, and lips. All subjects coped in their own individual way with the environmental impact. The most generalized findings were parting of the lips ($p < 0.05$), a drop in mandibular position ($p < 0.001$), and a downward movement of the hyoid bone ($p < 0.05$). Cranial extension did not reach statistical significance ($p = 0.06$). The relevance of these findings relative to primate experiments and human clinical research is discussed. If the same postural reactions are maintained over a long-term period, they may be instrumental in influencing the vertical craniofacial growth pattern.

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