

The COVANOS trial – insight into post-COVID olfactory dysfunction and the role of smell training

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Background: Olfactory dysfunction is a cardinal symptom of COVID-19 infection, however, studies assessing long-term olfactory dysfunction are limited and no randomised-controlled trials (RCTs) of early olfactory training have been conducted.

Methodology: We conducted a prospective, multi-centre study consisting of baseline psychophysical measurements of smell and taste function. Eligible participants were further recruited into a 12-week RCT of olfactory training versus control (safety information). Patient-reported outcomes were measured using an electronic survey and BSIT at baseline and 12 weeks. An additional 1-year follow-up was open to all participants.

Results: 218 individuals with a sudden loss of sense of smell of at least 4-weeks were recruited. Psychophysical smell loss was observed in only 32.1%; 63 participants were recruited into the RCT. The absolute difference in BSIT improvement after 12 weeks was 0.45 higher in the intervention arm. 76 participants completed 1-year follow-up; 10/19 (52.6%) of participants with an abnormal baseline BSIT test scored below the normal threshold at 1-year, and 24/29 (82.8%) had persistent parosmia.

Conclusions: Early olfactory training may be helpful, although our findings are inconclusive. Notably, a number of individuals who completed the 1-year assessment had persistent smell loss and parosmia at 1-year. As such, both should be considered important entities of long-Covid and further studies to improve management are highly warranted.