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Supplemental Material

Effects of Ambient Air Pollution Exposure on Olfaction: A Review

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Table S1. Olfactory function tests

Test	Assessed Modality	Test Description	Reference(s)
University of Pennsylvania Smell Identification Test (UPSIT)	Odor identification	40-item "scratch and sniff" test	Doty et al. 1984b, 1984a
Cross-Cultural Smell Identification Test (CC-SIT), also called the Brief Smell Identification Test (B-SIT)	Odor identification	12-item test modified from UPSIT, specifically designed to include cross-cultural odors	Doty et al. 1996
Barcelona Smell Test 24 (BAST_24)	Odor identification	24-item test, with participants asked if they can: detect odor, recognize it, and identify it from among 4 choices	Cardesín et al. 2006
San Diego Odor Identification Test (SDOIT)	Odor identification	8-item test with participants given the same 20 choices for all 8 odors	Krantz et al. 2009; Murphy et al. 1994
Sniffin' Sticks	Odor identification	16-item test using felt-tip pens, with participants selecting correct odor from a list of 4 choices for each odor	Hummel et al. 1997
	Odor threshold	Participants presented with three pens at a time, one containing n-butanol and must pick pen containing n-butanol	
	Odor discrimination	Participants presented three pens at a time and must pick which of three pens is different from other two	
5-item Modified Sniffin' Sticks	Odor identification	5-item test modified from Sniffin' Sticks, with participants given same 20 choices for all 8 odors	Mueller and Renner 2006
Connecticut Chemosensory Clinical Research Center Test (CCCRC)	Odor identification	10-item test with participants given the same 20 choices for all 10 odors	Cain et al. 1983
	Odor threshold	Participants presented with pairs of bottles, one containing butanol and other containing blank and must determine which contains butanol	
Smell Diskette Test	Odor identification	8-item test, with participant choosing correct odor from among 3 choices per odor presented as words and pictures	Briner and Simmen 1999

Scandinavian Odor Identification Test (SOIT)	Odor identification	16-item test, with participant selecting correct odor from a list of 4 choices for each odor	Nordin et al. 1998
Odorant Confusion Matrix (OCM)	Odor identification	10-item test, which participant choosing correct odor from a list of the 10 odors, with each item presented multiple times, but overall the same number of times for each item (e.g. 5 or 10)	Wright 1987
T&T Olfactometry	Odor identification	5-item test, with participants presented with progressively higher concentrations of each until able to identify odor	Fujii et al. 2002; Zusho 1983
	Odor threshold	Same as odor identification test, but threshold concentration taken as level at which participant can detect odor	
Alinamin test	Odor identification	Thiamine propyldisulfide administered intravenously and time from administration to patient recognition of smell measured, as well as time of duration of smell	Furukawa et al. 1988
Odor Stick Identification Test (OSIT)	Odor identification	13 items specifically chosen for Japanese population, with participant choosing correct odor from 4 choices for each odor	Hashimoto et al. 2004

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