

Subjects with **functional anosmia** score 16.0 TDI points and less (as derived from Kobal et al. EAORL 2000; 257: 205–211; fur further explanations see Hummel et al. EAORL 2007: 264: p. 241 – see also below)

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| Eur Arch Otorhinolaryngol (2007) 264:237–243 | 241 |
| <p>55 years (20%), and $n = 130$ (46%) for subjects older than 55 years.</p> <p>With regard to the TDI score separating “functional anosmia” from hyposmia, still the value of 16 (assuming that a threshold score of one has been established) applies as already established. In any case, it needs to be kept in mind that the decision to call a subject hyposmic is to some degree arbitrary, as it is defined in relation to general olfactory function in a certain age group.</p> | <p>to perceive suprathreshold concentrations of odors is partly independent of olfactory thresholds, especially when considering data from Rawson et al. [31] who reported an age-related, broader “tuning” of olfactory receptor neurons.</p> <p>Although an age-related loss of olfactory function (also termed “presbyosmia”) is regularly observed, it may not be inevitable. Thus, “age” is not the cause of this loss, but just an accompanying variable (compare [39]). In fact, it has been reported that so-called “suc-</p> |

Based on the current data (see below) **normosmic subjects** have a TDI score of 31 and more

(using age group 21-30 years as a reference with the 10th percentile differentiating between hyp- and normosmia)

| | | | 16 item odor identification | 16 item odor discrimination test | odor threshold | TDI score (sum from identification, discrimination and threshold measurements) | |
|-------------|----------------|-------|-----------------------------|----------------------------------|----------------|--------------------------------------------------------------------------------|-------|
| 1-10 years | N | Valid | 407 | 67 | 67 | 33 | |
| | Mean | | 12.66 | 10.85 | 6.030 | 25.81 | |
| | Std. Deviation | | 2.473 | 2.084 | 2.1045 | 4.529 | |
| | Percentiles | 5 | | 8.00 | 8.00 | 2.850 | 19.25 |
| | | 10 | | 9.00 | 8.00 | 3.250 | 19.60 |
| | | 25 | | 11.00 | 9.00 | 4.250 | 23.00 |
| | | 50 | | 13.00 | 11.00 | 6.000 | 25.00 |
| | | 75 | | 15.00 | 12.00 | 8.000 | 29.00 |
| | | 90 | | 16.00 | 13.20 | 8.750 | 31.45 |
| 95 | | | 16.00 | 14.60 | 9.150 | 35.58 | |
| 11-20 years | N | Valid | 973 | 415 | 502 | 346 | |
| | Mean | | 13.12 | 12.66 | 8.466 | 34.09 | |
| | Std. Deviation | | 1.774 | 1.943 | 2.6756 | 4.202 | |
| | Percentiles | 5 | | 10.00 | 9.00 | 4.441 | 26.75 |
| | | 10 | | 11.00 | 10.00 | 5.500 | 28.68 |
| | | 25 | | 12.00 | 11.00 | 6.750 | 31.50 |
| | | 50 | | 13.00 | 13.00 | 8.250 | 34.25 |
| | | 75 | | 14.00 | 14.00 | 10.000 | 37.00 |
| | | 90 | | 15.00 | 15.00 | 12.000 | 39.50 |
| 95 | | | 16.00 | 15.00 | 13.250 | 40.66 | |

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|-------------|----------------|-------|-------|--------|--------|--------|-------|
| 21-30 years | N | Valid | 2543 | 1221 | 1220 | 1172 | |
| | Mean | | 13.57 | 13.04 | 9.625 | 36.17 | |
| | Std. Deviation | | 1.899 | 1.874 | 3.0213 | 4.235 | |
| | Percentiles | 5 | | 10.00 | 10.00 | 5.250 | 29.50 |
| | | 10 | | 11.00 | 11.00 | 6.250 | 30.75 |
| | | 25 | | 13.00 | 12.00 | 7.500 | 33.50 |
| | | 50 | | 14.00 | 13.00 | 9.000 | 36.00 |
| | | 75 | | 15.00 | 14.00 | 11.750 | 38.75 |
| | | 90 | | 16.00 | 15.00 | 14.000 | 41.75 |
| 95 | | 16.00 | 16.00 | 15.000 | 43.50 | | |
| 31-40 years | N | Valid | 1030 | 449 | 456 | 443 | |
| | Mean | | 13.63 | 12.77 | 9.091 | 35.65 | |
| | Std. Deviation | | 1.658 | 1.841 | 2.8595 | 4.036 | |
| | Percentiles | 5 | | 11.00 | 10.00 | 4.430 | 28.55 |
| | | 10 | | 12.00 | 10.00 | 5.500 | 30.50 |
| | | 25 | | 13.00 | 12.00 | 7.250 | 33.25 |
| | | 50 | | 14.00 | 13.00 | 8.750 | 35.75 |

| | | | | | | | |
|-------------|----------------|-------|-------|-------|--------|--------|-------|
| | | | 75 | 15.00 | 14.00 | 11.000 | 38.50 |
| | | | 90 | 15.00 | 15.00 | 12.575 | 40.50 |
| | | | 95 | 16.00 | 15.00 | 14.830 | 42.25 |
| 41-50 years | N | Valid | 794 | 334 | 334 | 333 | |
| | Mean | | 13.29 | 12.26 | 8.594 | 34.16 | |
| | Std. Deviation | | 1.782 | 2.062 | 2.9041 | 4.813 | |
| | Percentiles | 5 | 10.00 | 9.00 | 3.500 | 25.35 | |
| | | 10 | 11.00 | 9.00 | 5.350 | 28.25 | |
| | | 25 | 12.00 | 11.00 | 6.750 | 31.75 | |
| | | 50 | 14.00 | 13.00 | 8.500 | 35.00 | |
| | | 75 | 14.00 | 14.00 | 10.500 | 37.25 | |
| | | 90 | 15.00 | 15.00 | 12.500 | 39.50 | |
| | | 95 | 16.00 | 15.00 | 14.063 | 41.08 | |
| 51-60 years | N | Valid | 602 | 270 | 275 | 268 | |
| | Mean | | 12.97 | 12.07 | 8.169 | 33.35 | |
| | Std. Deviation | | 1.950 | 1.965 | 3.2140 | 5.030 | |
| | Percentiles | 5 | 9.00 | 9.00 | 3.000 | 25.00 | |
| | | 10 | 10.00 | 9.00 | 4.250 | 27.20 | |
| | | 25 | 12.00 | 11.00 | 6.000 | 30.56 | |
| | | 50 | 13.00 | 12.00 | 8.000 | 33.25 | |
| | | 75 | 14.00 | 13.00 | 9.750 | 36.75 | |
| | | 90 | 15.00 | 14.00 | 12.500 | 39.50 | |
| | | 95 | 16.00 | 15.00 | 14.400 | 41.14 | |
| 61-70 years | N | Valid | 375 | 172 | 182 | 172 | |
| | Mean | | 12.26 | 11.42 | 7.481 | 31.45 | |
| | Std. Deviation | | 2.366 | 2.179 | 3.0445 | 4.987 | |
| | Percentiles | 5 | 7.80 | 7.00 | 2.500 | 22.00 | |
| | | 10 | 10.00 | 8.00 | 3.575 | 25.00 | |
| | | 25 | 11.00 | 10.00 | 5.750 | 28.81 | |
| | | 50 | 13.00 | 12.00 | 7.500 | 31.75 | |
| | | 75 | 14.00 | 13.00 | 9.000 | 34.50 | |
| | | 90 | 15.00 | 14.00 | 11.000 | 36.93 | |
| | | 95 | 15.00 | 14.00 | 12.925 | 38.59 | |
| 71-80 years | N | Valid | 154 | 77 | 111 | 77 | |
| | Mean | | 10.97 | 10.26 | 5.464 | 27.57 | |
| | Std. Deviation | | 2.964 | 2.904 | 3.0678 | 6.899 | |
| | Percentiles | 5 | 4.75 | 5.00 | 1.000 | 12.90 | |
| | | 10 | 7.00 | 6.00 | 1.250 | 17.25 | |
| | | 25 | 9.00 | 8.00 | 2.750 | 23.25 | |
| | | 50 | 11.50 | 11.00 | 5.500 | 28.50 | |
| | | 75 | 13.00 | 13.00 | 7.750 | 32.63 | |
| | | 90 | 14.00 | 14.00 | 9.700 | 35.85 | |
| | | 95 | 15.00 | 14.10 | 10.700 | 37.50 | |
| 81-90 years | N | Valid | 88 | 31 | 84 | 32 | |
| | Mean | | 8.64 | 8.39 | 4.307 | 22.96 | |
| | Std. Deviation | | 3.573 | 2.692 | 2.8901 | 7.552 | |
| | Percentiles | 5 | 2.45 | 4.00 | 1.000 | 11.74 | |
| | | 10 | 4.00 | 5.00 | 1.000 | 13.00 | |
| | | 25 | 6.00 | 6.00 | 1.500 | 15.38 | |
| | | 50 | 8.00 | 9.00 | 3.750 | 24.13 | |

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|----|-------|-------|--------|-------|
| 75 | 12.00 | 10.00 | 6.500 | 27.88 |
| 90 | 13.00 | 12.00 | 8.500 | 33.20 |
| 95 | 15.00 | 13.40 | 10.063 | 36.25 |

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