**Supplemental Table S1**. Equation for estimation of combined mean and standard deviation for data analysis.

|  |  |
| --- | --- |
| Estimate | Equation |
| Combined mean | $$X\_{1,2}=\frac{N\_{1}\*X\_{1}+N\_{2}\*X\_{2}}{N\_{1}+N\_{2}}$$ |
| Combined Standard Deviation | $$\sqrt{\frac{N\_{1}\left(SD\_{1}^{2}+D\_{1}^{2}\right)+N\_{2}\left(SD+D\_{2}^{2}\right)}{N\_{1}+N\_{2}}}$$ |
| SD (when only mean or median with range were reported) | $$\frac{range}{4}$$ |
| SD (when only the interquartile range was reported) | $$\frac{Q\_{3}-Q\_{1}}{1.35}$$ |
| SD (when only 95% CI was detailed) | $$\left(\frac{95\%CI-X}{1.96}\right)\*√N$$ |

 Note: CI, confidence interval; D, mean difference between combined mean and individual mean values; N, number of observations/subjects; Q, quartile; X, mean value.

**Supplemental Figure S1.** Funnel plots for publication bias of studies included in meta-analysis divided for cerebrospinal fluid (A) and serum/plasma (B) specimens.

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**Supplemental Figure S2.** Copper levels taking into account only shorter PD duration patients in Hegde, 2004 and Boll, 1999.



**Supplemental Figure S3.** Iron levels taking into account only shorter PD duration patients in Hegde, 2004.



**Supplemental Figure S4.** Zinc levels taking into account only shorter PD duration patients in Hegde, 2004.

