

Figure 1. Scalp topography of connectivity networks, averaged across all 10 subjects, plotted for the 10%, 30%, and 50% thresholds of strongest statistically significant directed coherence links. The first column (white dashed box) refers to wakefulness, while plots in the other columns (grey dashed box) indicate, from left to right, propofol effect-site concentrations of 2, 3 and 4 mcg.ml⁻¹. The upper row

at each threshold represents the Grand Average across subjects of long-range connections, with the colour and thickness of arrows coding for the average strength of each link. The lower row indicates the average strength of postero-anterior (black) and antero-posterior (red) connections in the α band coded by the length and thickness of the arrows. Corresponding statistics are shown in Supplementary Material, Figure S4.

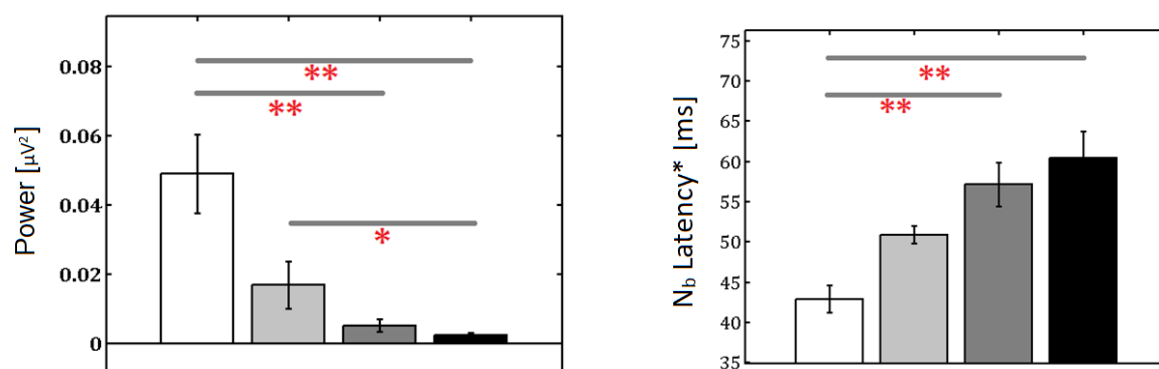


Figure 2. Change in auditory middle latency response features for increasing propofol effect-site concentrations: awake (white), 2 mcg.ml⁻¹ (light grey), 3 mcg.ml⁻¹ (dark grey), 4 mcg.ml⁻¹ (black). Each bar represents the mean and standard error: n=10 at all points for power; for Nb latency, n=9 awake, 8 at 2 mcg.ml⁻¹, 7 at 3 mcg.ml⁻¹, and 6 at 4 mcg.ml⁻¹. * p < 0.05; ** p < 0.01.

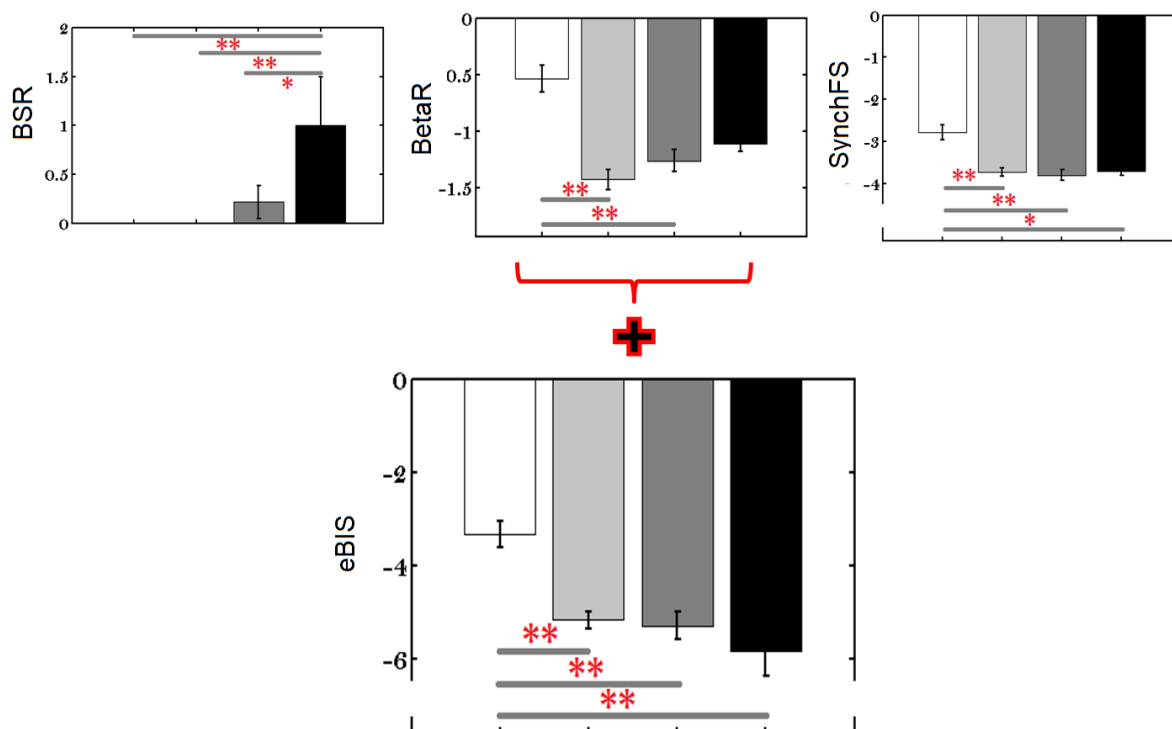


Figure 3. Changes in BIS sub-parameters and estimated BIS for increasing propofol effect-site concentrations: awake (white), 2 mcg.ml⁻¹ (light grey), 3 mcg.ml⁻¹ (dark grey), 4 mcg.ml⁻¹ (black). Each bar represents the mean and standard error (n=10) of the specific feature. * p < 0.05; ** p < 0.01.

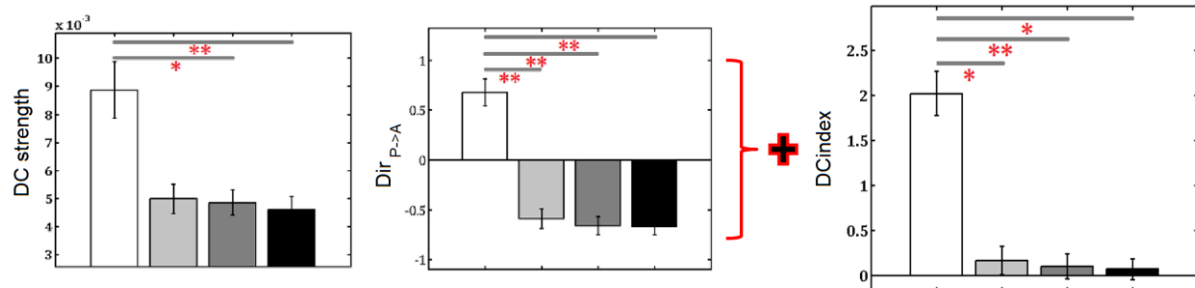


Figure 4. Changes in directed coherence features for increasing propofol effect-site concentrations: awake (white), 2 mcg.ml⁻¹ (light grey), 3 mcg.ml⁻¹ (dark grey), 4 mcg.ml⁻¹ (black). Each bar represents the mean and standard error (n=10) of the specific feature. $Dir_{P \rightarrow A}$ = relative direction of postero-anterior links. * p < 0.05; ** p < 0.01.

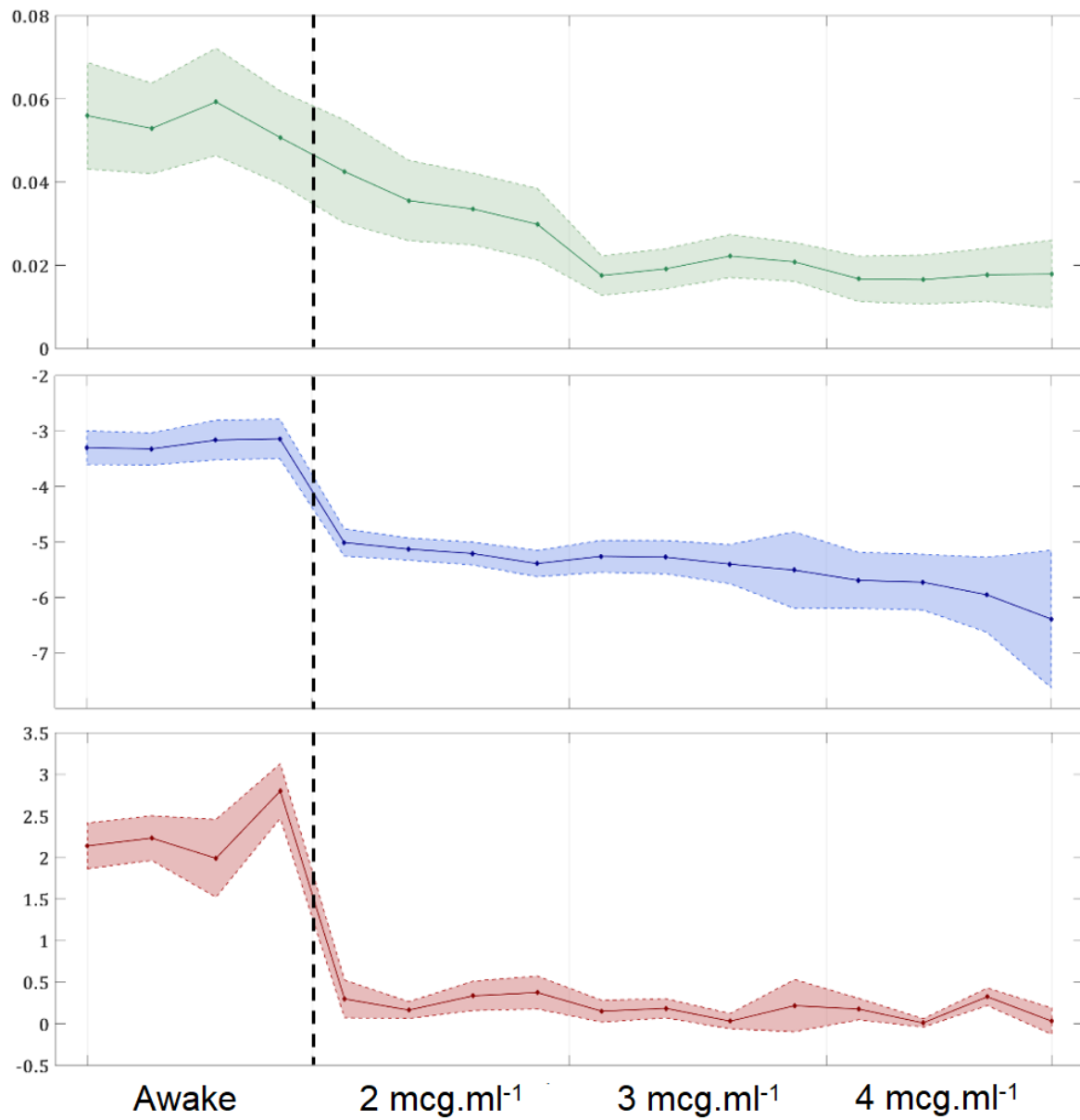


Figure 5. Middle latency response power (green), estimated BIS (blue) and DCindex (red) trends in wakefulness and at stable propofol effect-site concentrations. The plots represent average values (n=10) and 99% confidence intervals. Each time point represents a 60 s epoch.