Supplemental Digital Content 1: Schematic description of the analysis of the Blood Oxygen Level Dependent signal.

Legend of Figure 1 : Schematic description of the analysis of the Blood Oxygen Level Dependent (BOLD) signal obtained through functional magnetic resonance imaging. For each subject, preprocessing consisted first in normalizing and smoothing functional images after having realigned them with the corresponding structural image. They were then band-pass filtered before being denoised with regard to white matter, cerebrospinal fluid (CSF), outliers and movements noises, as well as noise related to each experimental condition, namely baseline (W1), light sedation (S1), and deep sedation (S2). First-level analysis ensued, and consisted in a statistical parametric mapping to identify voxels significantly correlated with each region of interest (ROI) for each experimental condition (W1, S1, and S2) for each subject. The next step, or second-level analysis, was a network and group statistical analysis. For each set of ROIs defining a network, a group map was constructed to identify voxels significantly positively (connectivity) or negatively (anti-correlation) correlated with the set of seed regions at the group level. This was done for W1, S1, and S2. Regression analyses (CORR.) were also performed, seeking at a positive or negative correlation between connectivity in each studied network and increasing depth of sedation, a negative relationship meaning that connectivity decreases when depth of sedation increases. Studied networks were the Default Mode network (DMn), the left and right Executive Control network (LECn and RECn), the Salience network (SALn), the Auditroy network (AUDn), the Sensorimotor network (SMn), and the Visual network (VISn).

Figure 1: