



Figure S1. Cerebral blood flow (CBF) measured by ASL-fMRI.

A) Comparison between placebo and ibuprofen recipients using a summary measure of brain regions associated with pain (the NeuroSynth pain map). In the placebo group, note the apparent placebo effect between 0 and 15 minutes followed by a uniform increase in CBF between 15 and 30 minutes.

B) To avoid confounding by the placebo effect, the slope of CBF change between 15 and 30 minutes was used to compare the two groups. (* $p < 0.05$, Wilcoxon test).

C) Whole-brain topologic inference on the slope between 15 and 30 minutes highlighting areas that survive an uncorrected $p < 0.05$. Nothing survived false discovery rate estimation due to the low number of analyzable images in the placebo group. Slopes were not evaluable in 5 out of 10 subjects in the placebo group and 8 out of 19 subjects in the ibuprofen group primarily due to motion artifacts. Despite this limitation the image illustrates the brain areas with the most pronounced numeric changes: insula, anterior cingulate cortex and secondary somatosensory cortex.