

FIGURE 12.19 The Effect of Hallucinogens on Your Brain

In this figure, the effect of psilocybin on brain activity in healthy human volunteers as indicated by changes in cerebral blood flow (CBF) using H₂O-PET is shown. Red shows relative increases, and yellow indicates relative decreases in regional brain activity. Marked increases in activity are seen in areas important for cognitive and affective processes such as the frontomedial cortex extending into the anterior cingulate (1 and 2); the dorsolateral (3), insula (4), and temporal poles (5); and the left posterior cingulate (6). Decreased flow was observed in brain areas important for gating or integrating cortical information processing such as the bilateral thalamus (7), right globus pallidus and bilateral pons (8), and in the cerebellum (9). Psilocybin also reduced neuronal activity in components responsible for higher-order visuospatial processing such as the precuneus (11) and angular gyrus, as well as in supplementary eye fields of the pre-motor area (10) (unpublished data from F. X. Vollenweider).

Source: Nichols (2004, p. 1806), with permission from Elsevier.

