

CAM Therapies: Hypnosis

So many CAM therapies clearly alter psychological state, whether it's hypnosis, meditation, yoga, cognitive behavioral therapy. So what happens with these therapies when you look at how these therapies could be working? So first of all, hypnosis is something that we studied quite a long time ago, and we looked at basically—here's pain intensity ratings with a heat stimulus, pain unpleasantness ratings with a heat stimulus of 47 degrees on the arm. And you found when we first tested them in an alert condition, then we put them in a hypnotic trance and without any suggestions and found that there was no difference in their pain ratings, and then we gave suggestions to increase the pain and they reported higher pain, and suggestions to decrease the pain and they gave lower pain. So when we first did this we said, okay, they're doing what we're telling them to do, that doesn't mean they're actually feeling anything differently, they want to please us. But when you look in the brain, we found, in fact, the processing of the painful stimulus in the brain was very consistent with these ratings. And since I'm going over a lot of things, we did two types of suggestions. We did suggestions that were targeting the perception of the intensity of the pain. We did other suggestions that were targeting how much the pain bothered the person, where we told them to feel the pain, feel the burning sensation and they learned to reinterpret it as more or less pleasant. And when we did the sensories, the suggestions for the intensity, here is primary somatosensory cortex, with suggestions to increase, suggestions to decrease. This is brighter than this, signifying more neural activity and there was significant difference in the two in the primary somatosensory cortex. On the other hand, when we gave the emotional suggestions that increased the unpleasantness of the pain without changing the intensity or the decreased unpleasantness (bright, less bright) and here's the difference showing the statistical difference, so that we could modify the activity either in the somatosensory cortex or in the cingulate cortex depending upon the types of suggestions. But the changes in the neural activity were very consistent with the changes in their perception that we were creating with hypnotic suggestions.