

ON PILLS AND NEEDLES

IT WAS THE BOUT OF THE BOGUS, the fight of the fakes. In the one corner, little blue pills. In the other, make-believe acupuncture.

Would either KO chronic arm pain? Or would one hit the canvas, caving to its competition?

When the bell rang, a winner was declared—sham acupuncture relieved pain better than fake pills. Yet it's not that pretend acupuncture is superior to pretty pills, say the researchers. It's that acupuncture has better footwork, more ceremony, notable ritual. To the study participants, it really could sting like a bee.

The contest between these treatment contenders was refereed by Ted Kaptchuk, an associate director of the Division for Research and Education in Complementary and Integrative Medicine at the School's Osher Institute. Instead of conducting the usual test of whether placebos themselves show any efficacy, Kaptchuk and colleagues wanted to investigate what effects the rituals that accompany medical interventions may have on patients.

"It's upside-down research," says Kaptchuk. The right-side-up findings appear in the February 1 issue of the *British Medical Journal*. The study is among the first to investigate placebos as variables in the clinical environment rather than as generalized phenomena.

The scientists enrolled 270 people in the study; each had arm pain that had persisted for at least three months and had been caused by repetitive use. On average, participants rated their pain at 3 or greater on a 10-point pain scale. All participants received informed-consent forms that described possible side effects: temporary soreness for acupuncture and fatigue and dry mouth for the pills.

The trials had two phases. The first phase evenly split the participant pool, administering the placebo pill to one half while delivering sham acupuncture to the other half.

The placebo pills were small and blue, replicating the size and color of amitriptyline, an antidepressant often used to treat repetitive-strain injuries. The sham acupuncture device looked like a real acupuncture needle, and the method used to "insert" it employed the same props and procedure used for real acupuncture. The only difference: the sham device retracted on contact.



Phase one ended after two weeks with all participants reporting a reduction in pain that allowed them, for example, to sleep better, open jars more easily, or write more comfortably. They also judged the placebo and the sham device to be nearly equal in their capacity to provide relief.

The second phase shuffled the participants into two new groups. Each group was further split so that the placebo pill could be pitted against real pain medication and the sham device could compete with real acupuncture. The pill trial lasted ten weeks, the period needed to ensure a steady-state concentration of the real drug in the bloodstream while the acupuncture trial lasted four weeks, a length of time believed to be necessary to provide pain relief.

What the researchers found when they analyzed the data is a testament to the magic of the mind. Participants receiving the sham acupuncture in the second phase reported a greater drop in pain and symptom severity than that experienced by those taking placebo pills. In addition, the side effects described by participants mirrored those described to them during the informed-consent process: 25 percent of the people undergoing sham acupuncture experienced swelling and soreness in their arm and 31 percent of the people taking placebo pills reported fatigue, dry mouth, and dizziness.

"Placebo effects seem to be malleable," says Kaptchuk, "and they depend upon the behaviors embedded in the medical ritual." ■