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Hal Herzog Ph.D., Animals and Us

Does Dolphin Therapy Work?

Can swimming with Flipper cure autism, depression and cancer?

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Recently, a "clinical hypnotherapist" named Judith Simon Prager published an article in the Huffington Post entitled "Dolphin Assisted Therapy: Something Magical in the Waters." It was a classic mix of psycho-babble and bad science.

A former soap opera writer, Prager's therapeutic techniques include "regression to the womb and beyond." In her Huff Post piece, Prager describes her recent visit to the Curacao Dolphin Therapy and Research Center. Prager is convinced that dolphins have magical abilities to cure neurological disorders such as autism. She even describes a case in which dolphin therapy seems to be waking a child who has been in a coma for two years. Prager claims that scientists are on the verge of discovering the secrets behind these marine mammals' mysterious powers to heal the human body and mind. She is dead wrong.

The Claims

Fueled by feel-good media reports such as Prager's, dolphin therapy is a magnet for desperate parents who will pay whatever it takes to help their kids with disorders like autism and Down's syndrome. They flock in droves to the more than one hundred therapeutic Swim-With-Dolphins programs in the Florida Keys, Bali, Great Britain, Russia, the Bahamas, Australia, Israel, and Dubai, all of them hoping that, through some unknown force, these sleek creatures with Mona Lisa smiles will work their magic on broken minds and tormented souls. The claims made about the curative powers of dolphins are over the top: interacting with dolphins, it is said, can alleviate Down's syndrome, AIDS, cranial sacral disorders, epilepsy, cerebral palsy, autism, learning disorders, deafness, and now coma. Among their presumed healing mechanisms are bioenergy force fields, the high frequency clicks and grunts that dolphins use to communicate with each other, and even the ability to directly alter human brain waves.

The astronomer Carl Sagan wrote, "Extraordinary claims require extraordinary evidence." Prager's claims about dolphin magic are certainly extraordinary, but does the actual evidence rise to an equally extraordinary level? Not by a long shot.

Most of the claims that dolphins are medical miracle workers are based on anecdotes, self-reports, or poorly designed experiments conducted by researchers who have an economic interest in the results. (Interestingly, none of the references Prager cites are in peer-reviewed scientific journals). Placebo effects, wishful thinking, and simply having a new experience are more plausible explanations for the supposed improvements seen in dolphin therapy patients than hypothetical "bio-energy force fields." Think about it. In addition to hanging out with some

of the most appealing creatures on Earth, you travel to beautiful places, spend time floating in tropical seas, and live in a supportive environment where your expectations for success are high.

The Scientific Evidence

How can we separate the true effects of the dolphins from all the other neat things that can happen during two weeks at dolphin camp? What, for instance, does the research really show about the effect of ultra high frequency dolphin sounds on handicapped children? A group of German researchers carefully observed sessions in which dolphins interacted with groups of mentally and physically handicapped kids in a Florida dolphin therapy program (their article). They found that most of the dolphins ignored the children, and there was not much ultrasonic dolphin talk going on. In fact, the children were exposed to an average of only ten seconds of dolphin ultrasounds during each session, not nearly enough to be beneficial. The researchers concluded that the kids would have been better off playing with dogs.

But what about the dolphins' purported ability to heal through good vibes, a healing smile, and those mysterious New Age force fields? Careful analyses of these claims have been conducted by several groups of researchers. Lori Marino and Scott Lilienfeld, research psychologists at Emory University, have evaluated the methods of the published studies on the effectiveness of dolphin therapy. (Their articles are [here](#) and [here](#).) They found that none of them met even the minimal standards of medical clinical trials. Among the methodological problems were small sample sizes, inadequate control groups, inability to separate the effects of the dolphins from the effects of simply doing new things in pleasant environments, and researcher conflicts of interests. Marino and Lilienfeld concluded that there is no valid scientific evidence that dolphin therapy is an effective treatment for any of the disorders that its advocates claim. The same conclusion was also reached by another research group ([here](#).)

The Down Sides of Dolphin Therapy

In her article, Prager conveniently neglects to point out the risks and the costs of dolphin therapy. Dolphins can be aggressive, even to the kids they are supposed to be healing. A recent study ([here](#)) found that half of over 400 people who worked professionally with marine mammals had suffered traumatic injuries, and that participants in dolphin therapy programs have been slapped, bitten, rammed (the latter resulting in a broken rib and a punctured lung). You can even contract skin diseases from these animal therapists.

In addition, there are the financial costs. In 2011, the standard two week treatment at the Curacao Dolphin Therapy and Research Center will set you back \$7,350 (roughly \$700 per hour of actual dolphin interaction). You will need to fork up \$1,000 up front when you make your reservation and send them the remaining \$6,350 at least 90 days before your session. Cancellations must be made three months before your session, and even then you forfeit your \$1,000 deposit.

The Ethical Problem

Despite Prager's claims to the contrary, dolphin therapy raises pesky ethical issues. Prager chose to become a therapist. Dolphins do not. While the Curacao dolphins are born in captivity, in other countries they are usually captured in the wild, often in massive roundups. It is estimated that seven dolphins die for each one makes it to a cetacean Guantanamo where it will spend the rest of its life swimming circles in a concrete pool.

Do we have the right to capture intelligent animals with complex social lives and sophisticated communication systems and turn them into therapists for our damaged children? I suppose the practice could be justified if these animals really did possess special curative powers. But I would need rock solid evidence that dolphins can transform an isolated child with autism to a skilled communicator, or that a couple of hours of dolphin play could add fifteen points to the IQ of a girl with Down's Syndrome, or that dolphin electric fields could jolt the middle age depressive out of a debilitating funk.

Unfortunately, that evidence is about as solid as, err....the support for back-to-the-womb regression therapy.