Phantom Limb Pain

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From *The Amp*, a United States publication, comes
this article on Phantom Limb Pain.

This column was prompted by a letter from John Reigel, NSO, of Cleveland, Ohio. Let me expand on some of the points he wanted discussed.

> *First*: A definition of terms. *Phantom Sensation* is the feeling that the absent limb is still there but not necessarily painful. Almost every amputee experiences phantom sensation but statistically only five percent to ten percent have varying degrees of phantom pain.
> *Second*: Some of my medical colleagues still think that this type of pain is imagined by the amputee. It is not. It is a very real pain and can sometimes be so severe and continuous as to be disabling. However, in the great majority of instances it is intermittent, although is may last for days (and nights) at a time.
> *Third*: The cause and cure are unknown, just as the cause and cure of the common cold, and even cancer, are unknown. We have difficulty satisfactorily treating such ordinary conditions as chronic arthritis and severe flat feet, so the difficulty in adequately treating phantom limb pain should not be surprising.
> *Fourth*: The cause. There are many theories about the cause. None is completely explanatory .As a working basis, the theory most acceptable to me is based on the fact that there is an area in the central nervous system which is a sort of way-station for messages on the way to our consciousness where they can be interpreted, in this specific case, as pain. Signals can either go up from the absent limb, or down from the conscious part of the brain (cortex) and affect the way-station. Sometimes if an amputee talks about or thinks about phantom pain he will trigger an episode. The signals that go up can be described as either " excitatory" or "inhibitory." These terms require no explanation. The inhibitory effect is partly maintained by messages from the skin. If a leg is amputated then a large part of the inhibitory messages that would ordinarily come from the skin of that part will be absent. The excitation messages will dominate and pain could be experienced. A way of thinking about the effect of inhibitory messages from the skin could be exemplified by the instances of the person who bumps his shin and then rubs the skin over a broad area to relieve the pain. He sends skin inhibitory messages to the brain to relieve the pain.
> *Fifth*: Treatments. Many different methods of treatment have been used. It is a simple fact that, when there are many ways to treat a condition, not one of them is much good. If there was one good way that would be the method used.

Treatments attempted have ranged from the use of a freezing spray, to injections of Novocain, either locally or into the lower spine, cutting the nerves to the stump, cutting the roots of the nerves near the spinal cord, cutting the nerve pathways in the spinal cord itself, and even cutting out parts of the brain. Drugs, acupuncture, biofeedback, hypnosis, electrically stimulated implants around the nerve or in relation to the spinal cord, and eve re-amputation have been employed as methods of treatment.

The most recent and, at this writing, the most popular approach has been the use of transcutaneous electrical nerve stimulation (TNS or TENS). In contrast to many of the other previously mentioned methods it is harmless to the amputee. It is not destructive. Sometimes wrapping the stump tightly with an Ace bandage or percussing the stump will help. Putting the leg back on will often help. As one amputee said he wraps the stump and just "lies there and curses."

If the pain is unrelieved by simple, non-destructive, non-damaging techniques, the amputee should referred to one of the highly specialized pain centers. There are now many of these throughout the country.