Seven reasons you DON'T need an electric arm prosthesis

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The popular media have made today's electrically powered arm prosthesis seem to be the eighth wonder of the world, the solution to every amputee's needs, and the only alternative worth fighting for. Nothing could be further from the truth!

Threading a needle doesn't require any prosthesis.

Today's technology is marvelous, and far more sophisticated and useful than the best we had to offer yesterday. Reliability, comfort, and functional capabilities have all reached new heights. Yet, despite these significant technological advances, there is no prosthesis in the world whose usefulness is even close to that of the human arm.

There are many misconceptions about electronic arms; here are seven pointers which may help you choose more wisely among today's alternatives.

1) You don't need an electronic arm to be a whole person.

A prosthesis only eases the anguish temporarily if one's major concern is the altered self-image that typically follows amputation. ANY prosthesis might be helpful in working through such issues, and the passive devices are usually much lighter in weight than ones that can move.

People born without an arm segment, in a very real way, have no loss to replace, only a different reality. Please recognize that prostheses are always but one choice among many, and that learning to function one-handed (or no-handed) is an equally valid choice.

Most people will eventually become comfortable with their bodies — without clothes, prosthesis, eyeglasses, and other social artifacts. Ideally, the prosthesis will enhance an already positive self-image. In the long run, it is a poor substitute for a weak self-image.

2) You don't need an electronic arm to be independent.

For many people, an artificial arm can be a tremendous aid to independent functioning. It may be that an electronic arm is the best of the options being considered. But this is NOT true for everyone.

Independence lies in the attitude and efforts of the individual, not in the hardware used. A prosthesis is the right choice only if it is the best path to independence. It is never the only path!

3) You don't need an electronic arm to be successful.

We now have ample evidence to be certain that success in life doesn't rest on whether one wears an artificial arm. People who wear a body-powered arm are just as successful overall as those who choose an electronic device or no prosthesis at all.

4) You don't need an electronic arm to function.

No device offers anywhere near the same range of functions as the hand or arm that has been lost. Each

prosthesis can restore only a portion of what is missing, and every type has its own advantages and disadvantages.

Even a passive arm, sometimes erroneously called a "cosmetic" or "nonfunctional" prosthesis, may increase abilities. For example, such arms are frequently used passively throughout the day to stabilize paper or a book on the desktop, or to hold a soft drink and free the other hand for gesturing.

A mechanical or body-powered arm is typically the most rugged alternative available and is often best suited for use in dusty environments such as foundries, or in wet environments which can damage electrical connections. Some people really like its simplicity, reliability, and the ruggedness.

Most people who choose to live without using a prosthesis are able to become fully independent, sometimes with the aid of special adaptive equipment at home. A well-trained occupational therapist can be very helpful in teaching people how to solve such problems of everyday living.

5) You don't need an electronic arm to make everything easier.

ALL prostheses require effort by the wearer. Because it is the most sophisticated, the electronic arm sometimes requires the most initial effort to learn the proper control sequence. The amputee may need to practice subtle movements again and again until they can be performed without concentrating.

ALL prostheses require learning how to put them on, secure them, and take them off. People who make a strong and sustained effort to use all the capabilities of a prosthesis are usually the most satisfied wearers. Those who want the artificial limb to "do it for me" are ultimately disappointed.

6) You don't need an electronic arm if follow-up visits will be difficult.

Reliability of today's body-powered and electrically operated arms are approximately equal: three visits a year for an inspection and minor repairs is typical. Very careful users need less service; hard users may need much more frequent help. If financial considerations, transportation difficulties, or a remote residence make follow-up difficult, prostheses with moving parts are usually not the best choice.

Independence training to function without using artificial limbs or a passive device is usually more satisfactory in such situations. Sometimes, having a spare prosthesis allows "mail order servicing," but this isn't a solution when the residual limb changes significantly, inevitably requiring a visit to the prosthetist.

7) You don't need an electronic arm if you can't tolerate frustration.

Despite its elegance, an electronic arm is not "bionic." It requires some care every day, such as recharging the batteries, keeping the outer glove away from stains such as newsprint ink, and keeping the inner socket clean and free from perspiration residues. And despite anyone's best efforts, someday the battery will run down for no apparent reason - or a tiny, internal wire will break!

The people who do the best with electronic arms are those with a good sense of humor, those who can overcome petty annoyances without becoming upset or angry. If the amputee's frustration tolerance is near zero, no arm prosthesis will ever be satisfactory. In general, the lower one's tolerance for frustration, the simpler the prosthesis one should consider.

The only trouble-free arm prosthesis is the "invisible" one: no prosthesis at all. This is a common choice, and may be best for those with low frustration tolerance. Each person must choose from four alternatives: no prosthesis, a passive device, a body-powered device, or an electric prosthesis. Sometimes, a "hybrid arm" which combines features from several types is the final solution.

Weigh the pros and cons, ask questions, talk to previous users as well as to rehabilitation team members. Don't be fooled by the seven misconceptions. There are dozens of positive reasons to choose an electric arm — or not to choose one.

People have the freedom and also the responsibility to participate in the decision as to which prosthesis, if any,

might be best for them. Make a positive choice for the best long-term result.

About the author ...

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