

## **Secondary Injury Prevention and Farming with an Arm Amputation (08/07)**

During 2006-2007, the National AgrAbility Project Staff conducted a focus group and interviewed seven farmers who experienced an arm amputation. Farming with an arm amputation, other limitations, or disability can be more dangerous and can lead to additional injuries. Often these additional injuries, which we call “secondary injuries” are related to the limitation and/or occur more often because the farmer/rancher may attempt farm/ranch work tasks that exceed his/her limitations and the design of the prosthetic device do not adequately accommodate the farmer/rancher.

A secondary injury might be as simple as a cut, or as severe as a bone fracture requiring medical attention and time off work. Farming with an arm amputation can also lead to added back or joint pain resulting from overcompensating or by repetitive overuse of your “good arm,” both of which could also be a secondary injury.

Issues these seven farmers with arm amputations had were reported or discussed during the focus group/interviews. Some of this is reported in their own words, so please keep that in mind when reading.

These seven farmers who had arm amputations, reported a variety of secondary injuries that had occurred while performing farm tasks. The most common issues reported by these farmers included:

- Getting the prosthetic device caught onto something;
- Upper back pain;
- Repetitive stress injury or overuse injury of the opposite limb;
- Injuries or sores to the stump;
- The prosthetic device breaking;
- Phantom pain;
- Falls due to balance related issues, and;
- Increased sensitivity to cold or heat.

The following is a list of comments or suggestions made by the seven farmers who had arm amputations, which may help others better understand their day-to-day issues and/or help in preventing secondary injuries.

- During the first year, or your adjustment period, balance or relearning how to balance can be an issue. Adjusting to the loss of a limb and the weight of the new prosthesis can take some time.
- While in my adjustment process, I had difficulty recovering from a slip, sometimes resulting in another fall. Taking extra time or wearing non slip foot wear would have helped me during this time.
- Be sure to slow down and “take time to think things through” before performing a task. After my loss, I had to learn new ways to accomplish the same task that I used to do with two arms, or find others to help me.
- Opening and closing the upper extremity prosthetic device adds additional stress to my upper back area. I found visiting a chiropractor or physical therapist and learning exercises, receiving upper back manipulations or discovering ways to reduce this stress was very helpful.
- Stay alert to any new advances. For example, I learned recently about improvements made in the silicone liners for the prosthetic sockets. These liners are said to help reduce sores that can occur to my stump.
- Most all of us here have experienced phantom pain, and there isn’t any “magic bullet” to alleviate that pain sensation. A variety of treatments have been discussed today, including trying medications, counseling, nerve blocks, hypnosis, biofeedback, or electrical nerve stimulation. We all agree, however, that keeping your mind busy seems to help the most.
- Working around livestock with my prosthetic hook can be very dangerous. I’ve come very close to getting my prosthetic hook caught on to a cow chain or rope. I have considered getting a quick release chest harness for my prosthesis because of that.
- My prosthetic hook became entangled in the twine when tossing bales. I figured out a different way to toss the bail without my hook getting caught..
- Prosthetic joints are not designed strong enough for lifting or carrying heavy objects. I’ve broken my elbow lock and wrist unit so many times, that I store extra parts on hand for my own repairs, not unlike other pieces of farm machinery. I may switch to elbow locks and wrist units made of titanium, since I’ve heard that they break less often.

- The sheer added weight of the prosthetic device, as well as the harness caused me discomfort. I actually drilled extra holes into the device/socket to make it lighter. I find wearing “V-neck-T-shirts” can also prevent the harness from cutting in around my neck area.
- You have to take time to take care of your stump. Farming where I do, extreme temperature swings can lead to injuries of the stump. Excessive perspiration during the summer months causes my stump to slide inside the socket, resulting in sores on my stump. Likewise, during the cold winter months, I need external insulation around the outside of the socket to help keep my stump warm. Again, stay alert to any new advances that might make your stump, socket design, or stump sleeve a better, tighter fit.
- Like any other farm machinery, prosthetic devices will require maintenance and frequent cleaning of the joint to keep out the mud and dirt.
- I’ve found that I use other labor saving devices much more often, to help prevent overuse (e.g., tiring) injuries of my good arm. Simple changes like using pneumatic tools, cordless tools, nail guns, all can be used to reduce the stress I place on my good arm, which makes my day go much better.
- If I’m climbing a ladder, wrapping my prosthesis around the outside of the ladder is much safer than using the prosthetic hook on a ladder rung. Learn to practice safer methods like this. Also, replacing ladders whenever you can is a great idea. For example, external bin stairs to allow walking up versus climbing bin ladders is a good idea; or adding a simple enclosure around an old bin ladder can make climbing safer when using a prosthetic device.
- Relocating levers, making lever extenders, a spinner knob, and using the throttle foot control has helped me more safely operate my tractors and reduced the potential of catching my prosthetic or having other injury/tractor accidents.