

Farming with an Arm Amputation

Farmers with upper-extremity amputations are at risk of secondary injuries because they may (a) have decreased padding or scar tissue around a stump that may make it vulnerable to damage from bumping or brushing against farm machinery or buildings, (b) wear a prosthesis that may get entangled in farm machinery, materials, crops, livestock, or equipment, (c) use the non-affected arm or hand to break a fall or perform a hazardous task, and (d) be susceptible to frostbite in areas with nerve damage or decreased circulation. Farmers throughout the United States who have experienced upper-extremity amputations provided the information below that may help others avoid secondary injuries.

1. A custom-made, padded glove can prevent skin breakage and reduce the potential for infections in an injured finger and hand that has decreased tissue or padding around the bony prominence.
2. Pocket hand-warmers can be used to prevent injured fingers and hands that have decreased circulation from becoming frostbitten.
3. Although nails can be started using one hand, doing so may result in a smashed finger or a blood-blister. One-handed nail starters could be good alternative. These starters include the Ted Hammer, the Auto Hammer, or a hammer that has been adapted with magnets attached to the inside of the claw that hold the nail in place while it is being started. One farmer who used a Dorrance Hook found a simple solution—he grasped a comb in the jaws of the terminal device and placed nails between the teeth of the comb. The comb held several nails in place so he was able to start them all very quickly.
4. Climbing a ladder with a prosthetic device can be dangerous. It is important not to rely on the terminal device when grasping an overhead rung on a ladder. A safer solution can be to wrap the forearm of the prosthesis around the outside of the ladder.
5. Care should be taken when working around livestock. The terminal device can easily catch in the mane of or on chains, collars, ropes, halters, or other materials attached to the livestock and, as one farmer put it, "you can get an awful ride". If a Prehensile hand is used, the far-most grip on the terminal device should be used when grasping a cow's chain to enable easier release of the animal.
6. A quick-release chest harness can be useful in a situation where a prosthetic device catches onto something like a tree branch, a bale of hay, or a chain around a cow's neck. Using a chest harness with a quick release Velcro strap could be a good remedy. Pulling on the Velcro strap can quickly release the prosthesis from the stump in an emergency situation. A chest harness may not be appropriate for everyone; therefore a prosthetist should be consulted.
7. When using an upper-extremity prosthetic device with an internal elbow lock, caution should be taken in lifting and carrying objects that exceed the strength of the elbow lock. A prosthetist should be consulted on appropriate weight limits for carrying objects. An external elbow lock made out of durable material, such as stainless steel, might be considered for someone who does heavy lifting and carrying. Keep in mind that a heavy-duty external elbow lock will add more weight to the prosthesis.
8. Care should be taken to not touch electric fences with the terminal device of the prosthesis. The electrical current may travel up the terminal device through the metal cable resulting in a shock to the back or shoulder.

9. During winter months in colder climates, the stump can be susceptible to frostbite. An additional stump sock could be added to provide more insulation. Obtain stump socks that lift perspiration away from the skin. Tube socks can be added to the outside of the socket to provide more insulation. Frequent work breaks should be considered to make sure the stump stays warm. A heater with proper ventilation or electric hair dryer may be useful in the farm shop to warm the stump in emergencies. Due to decreased sensation in the stump, caution should be taken to avoid applying excessive heat that may result in burns. A muff might also be used to keep the stump warm when the prosthesis is not being worn.
10. The non-affected hand or arm is at risk of a repetitive stress injury due to over use in compensating for the loss of the opposite hand or arm. Jigs, fixtures, clamps, and vice grips could be used to compensate for the loss of strength or ability. The Quick Grip and Robo Grip are just two tools that benefit individuals who only have the use of one hand.
11. Tools designed for one-handed use and other laborsaving devices can assist in preventing secondary injuries to both the affected limb and the non-affected limb.
12. Several farmers with bilateral arm amputations have reported a loss of balance when walking or climbing. Additional steps made out of non-slip material, wider steps, and handholds could be added to farm machinery to make mounting and dismounting the machinery safer for those who have decreased balance and grasping ability.
13. Special caution should be taken when performing tasks that could result in the prosthesis getting entangled in any way. These tasks include throwing bales of hay, climbing ladders, handling livestock, and working around power machinery.

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