

Prosthetist's Column: Don't Sweat It!

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Many amputees complain of being allergic to plastic, and often wonder how much of this is a result of a skin-allergy or some other cause. Some visit dermatologists who run patch tests on an area of skin to determine which products are causing the problems. Another possibility is that excessive sweating inside the socket is causing skin irritation.

Two years ago, I was approached by a group of five above knee amputees who were active golfers. All had recently been fitted with new prostheses using several different kinds of socket materials. All of the golfers experienced skin irritation, particularly in hot weather.

Since the use of natural products in health care, food, beverages, and personal hygiene has increased, I decided to check out what was available in the way of natural remedies for skin problems.

There are chemical drugs to minimize sweating, but they also make a person feel more thirsty. Other skin-drying products, which are only available with a doctor's prescription, are Drysol or Hydrosol. The lotion is applied to the residual limb several minutes prior to donning the prosthesis. Though effective for several amputees, after repeated use, these lotions left the skin dry and flaky, and in some cases, itchy.

The Drionic® device was a last resort for some amputees, but it had limited success for most patients. The electronic control pads attached to the residual limb create an ion-transfer, preventing the sweat glands from producing sweat for a period of time. Both the cost of the device and the time involved in using it, created low acceptance among amputees. A further consideration is that sweating cools the skin's temperature and is a normal function of the body. Most amputees will sweat more from other areas of the body, depending on their level of amputation and the type of prosthesis they wear.

The only substance I found that dried the skin like an antiperspirant is alum. A natural crystal, alum is found in the earth and mined like rock-salt. It is used medicinally as a topical astringent and styptic. Originally, alum was marketed in irregular shapes similar to that of certain gemstones. It's understandable that rubbing something that rough under one's arms isn't very "user-friendly."

As of 1995, alum has been sold in a cylindrical form inside a plastic holder, appearing like most commonly-produced deodorants and anti-perspirants. With normal use, one stick lasts several years. Considering its benefits, it is a most economical solution. Many above-knee amputees with suction socket prostheses have found alum to be helpful in minimizing the negative side effects of sweating. This is especially true when wearing the prosthesis in hot weather or during strenuous activity, when the residual limb is more likely to slip or rotate inside the socket, causing skin breakdown, bruising, or inadvertent loss of suspension.

The amputees who had reported skin problems such as excema, contact dermatitis, or heat blisters noted significant relief after applying alum to their residual limbs. Though not all individuals experienced relief, 75% said that they would continue to use the product routinely. Since my prosthetic assignments have taken me to various parts of the United States and Canada, I have supplied Alum-Sticks routinely to amputees. The same positive results have been repeated as experienced by the original test group of five amputee golfers.

Alum is available in drug or health food stores.

Editor's Note: There are a variety of products and treatments for excessive sweating. Consult your doctor and/or prosthetist for additional recommendations.

About the Author...

A certified prosthetist for 25 years, Tony van der Waarde has been involved in various design-innovations in high-level, lower limb prostheses. He is presently self-employed as a consultant for other prosthetists and amputees.

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