

Guidelines for Management of Amputated Parts

American College of Surgeons
Committee on Trauma
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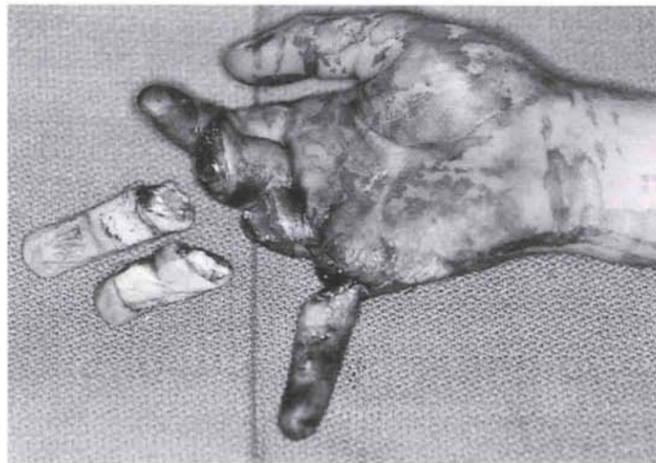
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by Alan E. Seyfer, MD, FACS
Member, ACS Committee on Trauma

Patient Selection

Candidates for replantation include victims of amputation of the scalp, hand, digit, penis, and selected portions of distal-most extremities. In general, the younger the patient is, the more potential lifetime benefit replantation has to offer. The patient should be in sufficiently good health to undergo a prolonged operation and extensive rehabilitation.



Strong Indication for Replantation of Digits

- A clean guillotine amputation
- Amputations through the middle phalanx of the digit
- Bilateral amputations of the hand
- Amputations of multiple digits
- Amputation of the dominant hand
- Amputation of the thumb
- Additional circumstances, such as occupation or associated disability (such as contralateral paralysis)

Contraindications to Replantation

- Severe crushing injury
- Avulsion
- Multiple level amputations of the same extremity

Initial Care of the Patient

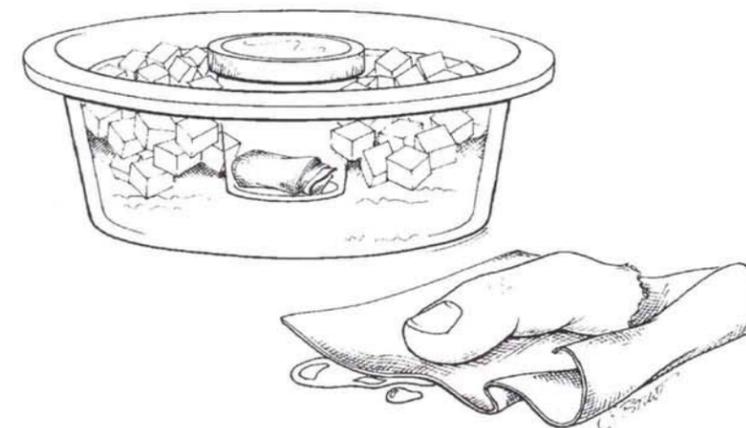
- **It is important to examine the patient for associated injuries that may be of higher priority.** Hemostasis must be ensured, and the possibility of shock must be noted, especially with more proximal extremity amputations. Intravenous fluids should be initiated and the need for tetanus prophylaxis assessed.
- Direct pressure and evaluation of the affected extremity are the best methods for controlling hemorrhage. If possible, a tourniquet should be avoided. Blind clamping is to be avoided due to the possibility of nerve injury.
- In the case of incomplete amputation, splint the entire digit in a physiologic position.
- The proximal stump may be gently examined, but a thorough cleansing should be accomplished in the operating room, where high magnification, lighting, tourniquet control, and anesthesia are optimal.



An X ray of the digits may be helpful to assess the fractures.

Preservation of the Amputated Part DOs

- The amputated part is gently examined and physically cleaned of gross debris by gentle rinsing with lactated Ringer's solution.



- Wrap the part(s) in sterile gauze moistened with lactated Ringer's solution and place in a plastic bag or container.
- Transport the bag or container in an outer container filled with crushed ice. **Be sure to label the container and send it with the patient.**

DON'Ts

- **Never** freeze the part by placing it directly on the ice or by adding any other coolant, such as dry ice, which could irreversibly damage the tissue.
- **Do not** attempt debridement or exploration of the part in the emergency room. This procedure should be accomplished in the operating room by the replantation team.

The Time Factor

- Cooling may increase the prospect of successful replantation, because it decreases the metabolic rate and inhibits bacterial growth.
- Immediate institution of hypothermia can extend the ischemic period to 24 hours or more.
- The more proximal the amputation, the more critical the ischemic interval, because the larger muscle mass begins degenerating immediately, accounting for the decreased success of replantation in these cases.

Later Care of the Patient

Replantation of an amputated digit often involves long and complex operations that require a *surgical team experienced in replantation*.

Referral to Surgical Team for Replantation

Institution _____

Surgeon _____

Phone # _____