SUBJECT: Replantation Guidelines for Referring Hospitals	**Chapter:** 2. Trauma
	Item: 2.5
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DISTRIBUTION: All Emergency Medical Services and Hospitals

PURPOSE: To provide guidance to referring hospitals on the management of amputations of the extremities and other body parts that can be replanted.

I. STEP One

This protocol is focused on management of amputations of the extremities (i.e. digits, upper and lower extremities) and other body parts that can be replanted (e.g. scalp, ear, penis). **Appropriate transport of the patient to a facility that is capable of performing replantation is essential. Knowledge of such facilities and direct communication between the out-of-hospital provider and the receiving facility and confirmation of candidacy for replant and transfer by the receiving surgeon and additional instructions from the receiving surgeon BEFORE transport is mandatory.**

II. STEP TWO: Referral Hospital Communication

Only the receiving surgeon should make the determination of whether an amputation can be replanted or not; therefore, no one else should counsel the patient as to the likelihood of replantation.

In communicating with the receiving surgical team, the following information should be relayed to the would-be replantation team:

a. Patient age
b. Hand dominance (if hand/upper extremity injury)
c. Occupation
d. Current tobacco use
e. Amputation site(s)
f. Mechanism of injury
g. Time of injury
h. Location/Setting (at home, factory, farm, etc.) of injury

i. Condition of the patient, including associated injuries and medical co-morbidities if known
j. Condition of the amputated part(s)
k. Estimated transport time to the facility

III. STEP THREE: Management of the Patient

a. Standard ATLS protocol should be applied to ensure that Airway, Breathing, and Circulation are addressed.
b. If the amputation stump is bleeding, pressure should be applied with gauze bandages. The extremity should be elevated.
c. Tourniquets should be avoided if at all possible unless hemorrhage is life-threatening.
d. Blind attempts to control bleeding using hemostats or other instruments should be avoided, given the potential for damage to nerves or other important structures in the vicinity of the bleeding vessel.
e. If possible, two large-bore IVs should be placed, in extremities other than that which is injured.

IV. STEP FOUR: Management of the Amputated Part

a. **Always** retrieve and transport the amputated part if it can be found.
b. Briefly irrigate the part with normal saline or lactated Ringer's solution.
c. Wrap the part in a moist (not soaking wet) saline or Ringer's-soaked gauze and then put into a Ziploc bag or other similar container that can be sealed. This bag or container should then be put into a separate larger container of ice or an ice-saline slush. **The part should never be placed directly on ice or in ice water.**
d. Expediently transport the patient and part to a facility that can provide definitive care. This is essential as ischemia time is very limited, which is especially true for amputations that involve a significant amount of muscle tissue (e.g. arm, leg).

Note: Adapted from original protocol developed by Muzaffar A. and Colbert, S., University of Missouri-Columbia Hospitals and Clinics, 2008 by Trauma Task Force Protocol Work Group, 2009.