Like organ donation, tissue donation is an end-of-life gift that can save or enhance the lives of 50 people, often many more. Donated human tissue, also called allografts, can be used in a variety of replacement, reconstructive, or regenerative surgical procedures. Beginning with an individual’s decision to donate, each step in the process of recovering, preparing, and distributing tissue is intended to ensure its safety for the recipient. Perioperative nurses are often involved with both sides of tissue donation—first, as tissue donation occurs in the operating room and then as tissue is transplanted.

**What can be donated?**

Bone, corneas, hearts for valves, ligaments and tendons, skin, and veins and arteries can be donated after death. Many organ donors may also be cornea and tissue donors; in these circumstances, tissue and eye recovery is performed immediately following organ recovery. Unlike organs, which must be transplanted within hours of donation, most tissue is prepared and preserved for later use.

**The tissue donation process**

Federal regulations require hospitals to report all deaths to their local Organ Procurement Organization (OPO) and to have an agreement with at least one eye and tissue bank. In most states, the OPO also serves as the tissue recovery agency, although tissue banks also provide these services. Once a referral is received, preliminary screening occurs, and a preliminary determination of donor eligibility is made. Factors such as age; cause of death; evidence of systemic infection; or evidence of risk factors for diseases such as HIV, hepatitis, syphilis and Creutzfeldt-Jakob disease (CJD) are considered (diagram).

Each state has an Anatomic Gift Act that governs how donation may occur and who may make a gift of an organ or tissue. More than 86 million Americans have registered to be donors after their death (www.donatelife.net). In cases where the potential donor has not registered, the next of kin or other authorized person may give permission for donation.

In either situation, a trained individual obtains information from a potential donor family about their loved one’s medical and social history.

The American Association of Tissue Banks (AATB) has standards for obtaining authorization for donation as well as for properly screening potential donors and for processing and distributing donated tissues. The standards emphasize the importance of compassionate care for family members as well as the need to eliminate any possibility of transmission of infectious diseases from donated tissue.

Although the Food and Drug Administration and AATB have estab-
lished donor screening guidelines, each tissue processor or tissue bank establishes its own donor criteria standards. It is important for perioperative nurses to be aware of the criteria used by the tissue bank that provides their facility with tissue.

**Tissue recovery**

Tissue recovery is performed using aseptic technique according to AORN recommended practices. The recovery takes place in an operating room or an OR-like environment such as a recovery suite at the local OPO or tissue bank. On occasion, recovery may take place in a medical examiner’s or coroner’s office or a funeral home.

Quality assurance protocols are built into recovery procedures to avoid cross-contamination of tissues. All tissue is cultured, labeled with a unique identifier, and packaged separately before being transported to the tissue processor.

An essential part of the recovery process is the reconstruction of the donor. All donors are reconstructed with great care utilizing customized prosthetics and with great consideration of the family’s wishes.

**Final review of suitability**

When tissue arrives at the tissue processing facility, it is held in quarantine until the final suitability review occurs. This final review consists
of an evaluation of the pertinent medical information, records, serology tests, autopsy reports, and tissue and blood cultures as well as an examination of the medical and social history of the donor. All information is reviewed by the medical director of the tissue bank, and final suitability is determined. Once the review is completed, the preparation of the tissue occurs.

**Tissue distribution**

After tissue is prepared and packaged, it is distributed to hospitals and ambulatory surgical centers. In many cases, it is the practice of the tissue bank to return donated tissues to the community that provided the donation.

It is always a good practice to know where the tissue recovered in your institution will be sent for processing and to learn as much as possible about the donor criteria, processing protocols, and whether the supplier provides priority access to tissues from your hospital or region.

**The gift of life**

Donation affects everyone. OR managers are directly aware that families often offer donation—the gift of life—at a painful time in their lives. The donor family remains at the heart and soul of the entire process of recovery, preparation, and distribution of tissue, and OR personnel need to be educated about all aspects of donation.

—Martha Anderson
Executive Vice President, Donor Services, Musculoskeletal Transplant Foundation

**References**

