Harvesting bone marrow stem cells

The type of transplant that your child will have depends on who donates the bone marrow stem cells. For children who will receive an autologous (“donated from self”) transplant, their own stem cells will be harvested. For children who will receive an allogenic (donor) transplant, stem cells from one of their siblings may be harvested and donated to the patient.

The harvest of bone marrow stem cells is very similar to a bone marrow aspiration. The donor will receive anesthesia so no pain will be felt, and the donor will have no memory of the procedure. During the harvest procedure, 2 sites, 1 on each hip, are accessed with the collection needle. The needle is inserted several times through these 2 sites until enough marrow is collected. The harvest is done in the operating room under sterile conditions. The marrow is saved for your child to use at a later time as indicated by your child’s treatment plan.

A clinic nurse or the surgery clinic nurse will give you with the time that the donor’s bone marrow harvest is scheduled. The nurse will also provide the donor any teaching that is needed before the harvest is done. The donor is usually allowed to leave the hospital on the day that the harvest is done.

Before the surgery

- The donor must have lab work and a physical exam the day before the bone marrow harvest is performed. The donor (or a guardian if the donor is a minor) will sign a consent form before the procedure.
- The donor must take a povidone-iodine bath before going to bed. A povidone-iodine packet to add to the bath water will be provided.
- The donor must follow the NPO (“nothing by mouth”) instructions given by the nurse. It is important that the NPO instructions be followed for the safety of the donor.
- The donor should arrive at the Day Surgery unit on the third floor of the Patient Care Center at the scheduled time.
- The donor’s temperature will need to be monitored after the procedure. Please make sure that a working digital thermometer is available for the donor’s use.

After the donor wakes up from the harvest

- The donor will have a large dressing on the lower back called a pressure dressing. The purpose of this dressing is to reduce swelling and bruising.
- Monitor the donor's temperature and return to the hospital if the temperature is 100.4°F (38.0°C) or greater.
• Return to the hospital if there is:
  ➢ Drainage from the sites where the needle was inserted;
  ➢ Increased pain that is not relieved by the pain medication that is prescribed;
  ➢ Nausea, vomiting; or
  ➢ Any other change in the donor’s condition.

The day after the surgery

• The donor will need to come to the clinic.
• Lab work will be done.
• A nurse will remove the dressing from the donor’s lower back. The nurse will check the sites where the needle was inserted for any signs of infection, and teach care of these sites.

Care of the sites where the needle was inserted

• Use 3 povidone-iodine swabs to clean each site 2 times a day for 7 days. Use a circular motion to clean each site. Begin cleaning at the center of the Steri-Strips and then move outward.
• Allow the povidone-iodine to dry completely.
• The Steri-Strips will eventually fall off on their own. This usually takes 1 to 2 weeks.
• While cleaning the sites look for bleeding, swelling, redness, drainage, increased pain, or fever. If any of these symptoms are seen, bring the donor back to the hospital.
• The donor is not allowed to take any tub baths or go swimming for at least 1 week after the harvest. Showers are OK.
• The donor should take the pain medications as the doctor or nurse prescribed.

If you have questions or concerns, please call the donor’s outpatient stem cell transplant nurse in B clinic at 901-595-2138 or call the assigned transplant doctor. Outside the Memphis area, dial toll-free 1-866-2STJUDE (1-866-278-5833) and press 0 once you are connected.