

## 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 procedures, two sites—one on each hip—are accessed with the collection needle. The needle is inserted several times through these two sites until enough marrow is collected. The harvest is done in the operating room under sterile conditions. The marrow may be used right away or saved for your child to use at a later time, as indicated by your child's treatment plan.

The nurse coordinator will arrange the date for your harvest. The afternoon before the procedure, you will receive a call from an operating room nurse to confirm arrival time and give instructions about special preparation (like when to stop eating). The nurse will also provide the donor any additional information that is needed before the harvest is done. The donor is usually allowed to leave the hospital on the day the harvest is done.

### Before the surgery

- The donor must have lab work and a physical exam 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 may be asked to donate a unit of blood about one month before the procedure; it will be infused following harvest.
- The donor must follow the NPO (nothing by mouth) instructions given by the operating room staff. It is important that the NPO instructions be followed for the safety of the donor.
- The donor should arrive at UC Davis Children's Surgery Center or UC Davis University Surgical 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 100.40 F (38.00 C), or greater.

- If the donor experiences pain, he or she should take pain medicine as recommended by the doctor performing the harvest.
- Call the nurse coordinator (if after hours, call the on-call Hematology-Oncology M.D.) 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**

You may remove the dressing from the donor's lower back. Check the sites where the needle was inserted for any signs of infection. Report to the nurse coordinator any concerns.

### **Care of the sites where the needle was inserted**

- Keep areas clean and dry.
- The donor should take the pain medications as the doctor or nurse prescribed.
- Observe daily for redness, swelling, discharge or pain. Report any symptoms that develop.

If you have questions or concerns, please call the donor's outpatient stem cell transplant nurse.