



BONE MARROW ASPIRATION SEARCH

WHAT IS BONE MARROW ASPIRATION?

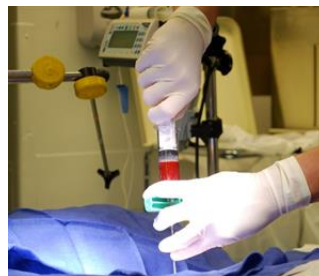
Bone marrow aspirate concentrate (BMAC) is a **biologic** treatment made from fluid taken from your own bone marrow. The bone marrow aspirate contains certain types of stem cells that can play a role in the healing of some bone and joint conditions, including delays or difficulties with fracture healing, cartilage defects, bone changes due to poor blood supply, chronic tendon problems, or chronic wounds.

One advantage of BMAC, compared to traditional open bone grafts, is that it can be obtained with a minimally invasive surgical procedure. Compared to **platelet-rich plasma** (PRP), studies have shown BMAC to have greater levels of the desired cells. The advantage of PRP is that it typically can be performed in the office.

You should avoid this method if you have an infection or cancer. Make an appointment with your **foot and ankle orthopaedic surgeon** to discuss your options.

Treatment

Your surgeon will use a needle to harvest, or aspirate, bone marrow from within the bone. This typically is done under sedation or general anesthesia. Marrow commonly is taken from the pelvis but may also be taken from other sites.



Bone marrow aspiration usually is performed on the same side of the body as the foot or ankle procedure. Your surgeon will remove the sample of bone marrow and prepare it in a centrifuge to separate the cells. A liquid is produced that has a high concentration of stem cells. Your surgeon may then inject the stem cells directly into the surgical site or mix it with additional forms of graft depending on the procedure.

Specific Technique

The pelvis is marked and prepped to keep the site sterile. A hollow needle is inserted into the bone and a syringe is used to withdraw fluid from the bone marrow. After enough fluid has been collected, the needle is removed. Pressure is applied to the needle site to stop the bleeding. A small dressing is then applied.

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Recovery

After aspiration, there usually is pain at the pelvis that goes away within several days. A small dressing or bandage is kept at the aspiration site until it has healed.

Risks and Complications

Complications are rare and may include bleeding, infection, and nerve injury. Intra-abdominal injury is even more rare but may occur because of the needle.

How much pain can I expect after the procedure?

Post-operative pain from aspiration of the pelvis usually is less than the pain from the procedure at the foot or ankle. The pelvic pain may be present for approximately one week. The pain medicine prescribed by your foot and ankle orthopaedic surgeon for the procedure should be sufficient to treat the pain at the pelvis.

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American Orthopaedic Foot & Ankle Society[®]

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