

Bone Marrow Aspiration Iliac Crest-Posterior Approach



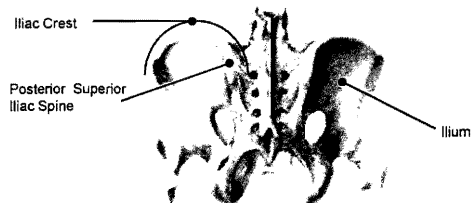
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Bone Marrow Aspiration Iliac Crest-Posterior Approach Disclaimer

The aspiration technique described is utilized by Michael Murphy, M.D. Biomet Biologics, LLC, does not practice medicine and does not recommend this technique for any specific patient.

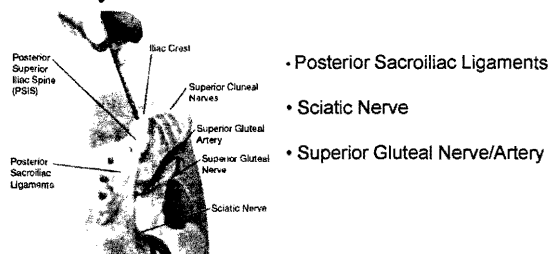
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Bone Marrow Aspiration Iliac Crest-Posterior Approach Anatomic Landmarks



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Bone Marrow Aspiration Iliac Crest-Posterior Approach Anatomy to avoid



- Posterior Sacroiliac Ligaments
- Sciatic Nerve
- Superior Gluteal Nerve/Artery

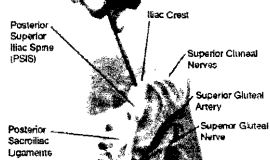
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Bone Marrow Aspiration Iliac Crest-Posterior Approach Needle Insertion

Insertion point is along posterior iliac crest within 8cm of PSIS

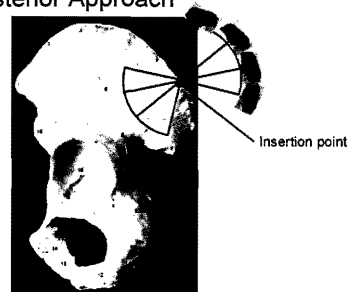
Needle angle is approximately:
40 degrees lateral to the para-sagittal plane

35-40 degrees inferior to the transverse plane



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Bone Marrow Aspiration Iliac Crest-Posterior Approach



Surgeon can adjust angle of needle within the ilium to make multiple passes

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Bone Marrow Aspiration Calcaneus



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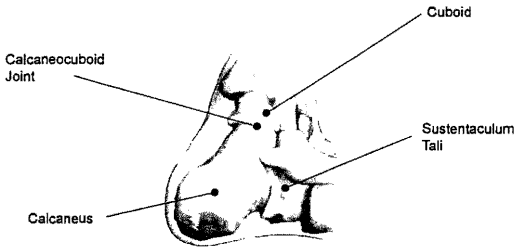
Bone Marrow Aspiration-Calcaneus Disclaimer

The aspiration technique described is utilized by Lew Schon, M.D. Biomet Biologics, LLC, does not practice medicine and does not recommend this technique for any specific patient.

A printed version of this technique is available at www.biomet.com/biologics

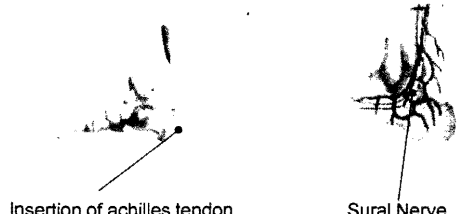
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Bone Marrow Aspiration-Calcaneus Anatomical Landmarks



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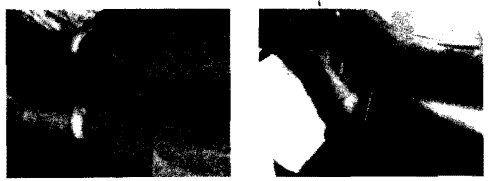
Bone Marrow Aspiration-Calcaneus Anatomy to avoid



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Bone Marrow Aspiration-Calcaneus Needle Insertion

Aspiration should be performed **before** using a tourniquet



Make a small incision on the lateral side of the ankle, anterior to the insertion of the achilles tendon


Insert BMA needle anterior to the achilles tendon and posterior to the sural nerve

Actual insertion point may vary based on a individual patient's anatomy

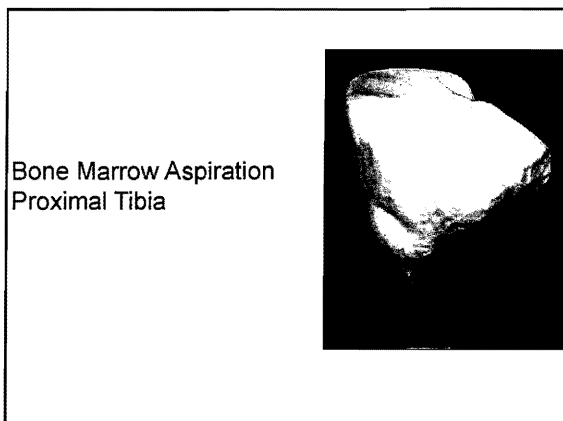
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Bone Marrow Aspiration-Calcaneus Aspiration passages

- Only one insertion through the cortical bone is necessary.
- 3 passages through the bone marrow cavity can be made from single insertion point.
- 5-10ml of BMA can be obtained for each passage



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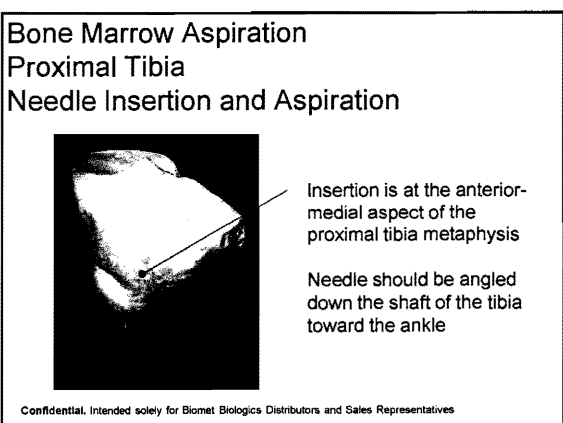
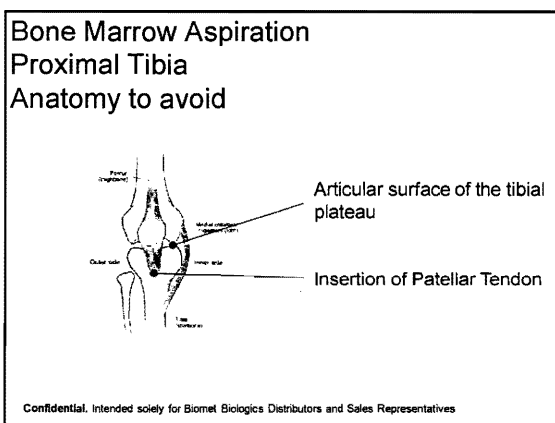
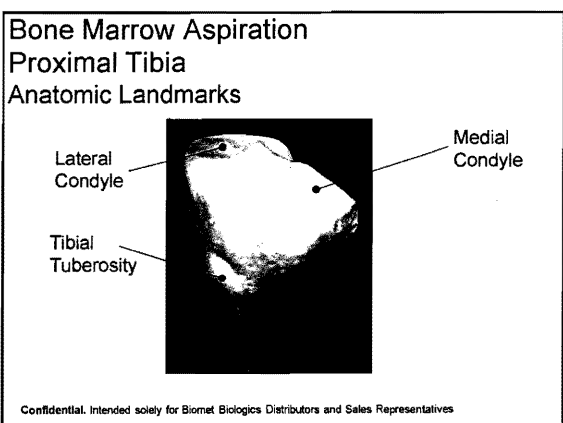


**Bone Marrow Aspiration
Proximal Tibia
Disclaimer**

The aspiration technique described is utilized by Monica H. Schweinberger and Thomas Roukis, DPMs. This technique is described in a peer-reviewed journal, Biomet Biologics was not involved in the description of this technique. Biomet Biologics LLC, does not practice medicine and does not recommend this technique for any specific patient.

Schweinberger MH, et al. J Foot Ankle Surg 2007;46(5):411-414.

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Disclaimer on Aspiration Techniques

Surgeons using the BioCUE™ System should be familiar with bone marrow aspiration techniques and are responsible for choosing the aspiration location(s) and method(s) appropriate for each individual patient. The surgical techniques described today and/or available at www.biomet.com/biologics are provided for general reference only. These techniques are not meant to be utilized as a substitute for aspiration training in the practice of medicine.