ROSM
REGENERATIVE ORTHOPEDICS & SPORTS MEDICINE

Bone Marrow Aspiration and Injection Frequently Asked Questions:

Q: **What is Bone Marrow Aspiration and Injection?**
A: Bone Marrow Aspiration involves removing a small portion of a person's own bone marrow and injecting it elsewhere. Injections are ultrasound guided into the painful tissue (joint, tendon, or ligament) and activate the body's natural healing cascade.

Q: **How do Bone Marrow Injections work?**
A: Bone Marrow contains many cell lines, including Mesenchymal and Hematopoietic Stem Cells, platelets, megakaryocytes, and others. Mesenchymal stem cells and platelets are known to help stimulate and coordinate the body's natural healing response. In many case reports and animal studies, they are safe and effective in osteoarthritis, ligament, tendon and muscle problems.

Q: **Why should I get Bone Marrow Aspiration & Injections?**
A: Bone Marrow injections are a type of Regenerative Injection therapy, and are intended to help heal a body part that has failed to heal. They are an alternative to symptom-control measures such as pain medications and anti-inflammatory injections such as cortisone. While well-controlled scientific studies are limited, they show promise in healing tendon, fibrocartilage, muscle and ligament injuries and osteoarthritis.

Q: **What do Bone Marrow Injections treat?**
A: Musculoskeletal injuries of tendons, ligaments, muscles, and joint hyaline and fibro-cartilage.
Examples include: Osteoarthritis, fibrocartilage, ligament, muscle, and tendon strains and partial tears.

Q: **Do I need to do anything before my injection?**
A: Avoid anti-inflammatories and steroid medications for 1 week before and 2 weeks after the injection. You may pre-medicate if needed for expected pain with over the counter Tylenol about 2 hours prior to your appointment. Blood thinners are prohibited as bleeding in the bone marrow cannot be well controlled by compression.

Q: **When can I resume physical activity?**
A: This depends on the severity of your injury, but as a general rule no physical activity should be done at least 2 days following the injection. Physical therapy guided activity, gentle range of motion (stretching), and non-weight bearing activity may be done 4 days to up to 2 weeks after your injection. After about 2 weeks, progressive activity is initiated, as dictated by your doctor.

Q: **How many times do I have to get the injections? How often do I get them?**
A: On average, patients will only need 1 injection per anatomical structure (joints, meniscus, labrum, ligaments, tendon, muscles, or fascia/connective tissue, etc.). The treatments may take 4-6 months to see optimal healing. Repeat injections can be performed.

Q. **What should I expect after the procedure? Any limitations?**
A: You may experience redness, swelling and discomfort after the procedure. You may apply ice or heat to the area for 15 minutes every 1-2 hours for the first 48 hours. By day 3-5, symptoms will begin to resolve significantly. Rarely, flares can last up to 2 weeks. The day of and day after the procedure you should limit the activity related to the injection site to activities of daily living, but can do gentle range of motion exercises. Impact activity will be restricted based on the issue being treated and can range from 2-8 weeks. In most cases, your physician may recommend physical therapy to aid in the return to activity.

Q: **Will insurance cover the cost of the procedure?**
A: Unfortunately, most insurance companies consider Bone Marrow Injections too new of a treatment to be covered. Feel free to check with your insurance provider for more information, but at this time we have not found insurers are covering this treatment.

Q: **How do I know I am responding to treatment?**
A: There are a variety of measures that can be used to measure progress. While pain relief is the ultimate goal, it is not the best way to measure early progress. Strength and improved function are the first changes we see.

Q: **What is in the injection?**
A: Bone marrow can be removed either with a special needle without centrifugation or with a generic needle followed by centrifugation to concentrate the desired cells and remove some of the less desired cells.