



# **BONE MARROW ASPIRATE CONCENTRATE** INJECTIONS AT CDI



# ABOUT THE PROCEDURE

Bone Marrow Aspirate Concentrate is a promising, nonsurgical regenerative treatment for various orthopedic injuries, including mild to moderate osteoarthritis, disc degeneration and soft tissue injuries. This therapy uses concentrated regenerative cells that are harvested from your own bone marrow to help the body heal itself. These cells, when injected directly into an injury site, prompt a rapid and efficient restoration of the tissue, returning it to a more healthy state by stimulating the body's natural healing response.

#### **HOW DOES IT WORK?**

Bone marrow aspirate concentrate contains cells that are responsible for regenerating and rebuilding tissues and organs. These cells play a critical role in the body's natural healing process. When the body is injured, these cells mobilize to the injury site to help it heal. With injuries or areas of degeneration that may be caused by aging or wear and tear, there may not be enough regenerative cells present for optimal healing. Bone Marrow Aspirate Concentrate helps to overcome this problem by directly supplying regenerative cells to the injured or degenerated area through an injection of concentrate healing agents and cells. When these cells are introduced to the injured area, they initiate the body's natural healing process, generating new, stronger tissue.

The regenerative cells are harvested from your own bone marrow by a board-certified radiologist with advanced training in this procedure.

The site of extraction is locally numbed to minimize discomfort. Bone marrow is removed via needle aspiration from the back of your pelvis from an area called the iliac crest.

The sample is placed in a centrifuge, which separates the platelets and the regenerative cells from the other components in order to generate a powerful concentrate to promote healing. The concentrated regenerative cells and healing components contained within bone marrow concentrate is introduced into the injured area using imaging guidance to ensure proper placement.

Immediately following the injection, the regenerative cells cause a release of cellular growth factors that trigger the body's healing response and rejuvenate the diseased cells. They also exchange RNA with the abnormal cells to restore their vitality, and differentiate into cells required for repair of the ambient tissue. You may experience inflammation and soreness as the body's healing process begins. In fact, there may be no symptom relief for a period of four to eight weeks. You will want to treat the injected area with care, like you would with a new injury, and avoid taking anti-inflammatory medications. Depending on the area that is injured, crutches or a sling may be recommended to minimize the use of the area as healing begins.

In the months that follow, new tissue will begin to develop. As this tissue matures, there is repair and strengthening of the tendons, ligaments and muscles of the injury site. In joints or discs, decreased inflammation and formation of new cartilage or disc material contributes to the healing process.

## WHAT TO EXPECT FROM YOUR PROCEDURE

- The entire process takes approximately 90 minutes to collect, concentrate and inject into an injury site and you will go home the same day.
- You will need someone to drive you home following the procedure.
- You may experience an "achy" soreness at the site of the injury in the hours and days following the injection. The effect can last for several days, gradually decreasing as healing and tissue repair occurs.
- Avoid taking anti-inflammatory medications, such as ibuprofen, Naproxen and aspirin, for 2 weeks prior to the procedure and 3 months post procedure. These medications block the intended healing response facilitated by the post-injection inflammation.
- Do not take any oral or injected steroids for 8 weeks prior to and 3 months post injection.

- Avoid icing the treated area for 2 weeks.
- If you have an active infection and are taking antibiotics, the procedure should be postponed until the infection is treated.
- To maximize the healing process, no strenuous activity is advised for 2 weeks following your procedure. Activity may be increased as tolerated.
- Following this period of rest, you may resume normal day-to-day activities and light exercise.
- A physical therapy program will enhance the success of the treatment.
- Most patients begin noticing improvement 4 to 8 weeks following the procedure. Increased stability and strength are typically reported along with a decrease in pain.
- You will need to schedule a follow-up appointment 8 weeks after your procedure. We will continue to check in with you at regular intervals for the next 12 months to evaluate your response to therapy.

- Most patients require only a single Bone Marrow Aspirate Concentrate injection, depending on the degree of injury. However, in challenging cases, if you experience significant relief that plateaus, a second injection may be indicated.
- Payment for your procedure is due in full at the time of service. Regenerative medicine procedures are not covered by insurance and do not count toward your deductible. Some health savings accounts and health reimbursement accounts may cover the cost of the procedures – check with your HSA or HRA administrator to learn more about your specific plan allowances.

## Are Bone Marrow Aspirate Concentrate Injections Safe?

Research and clinical data show that Bone Marrow Aspirate Concentrate injections are extremely safe, with minimal risk for any adverse reaction or complication. Because the regenerative cells are harvested from your own bone marrow, there is no concern for rejection or disease transmission. There is a small risk of infection from any injection into the body, but this is rare.