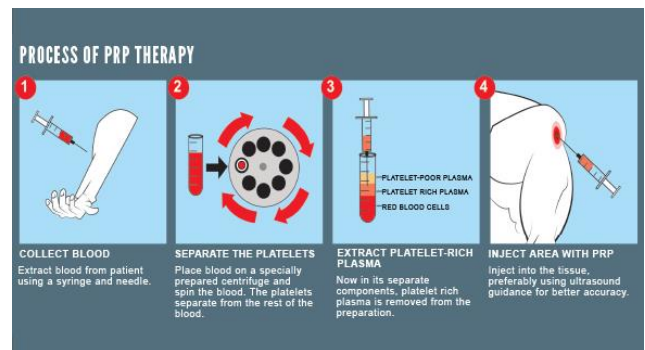


Biologic Injections (PRP, BMAC)

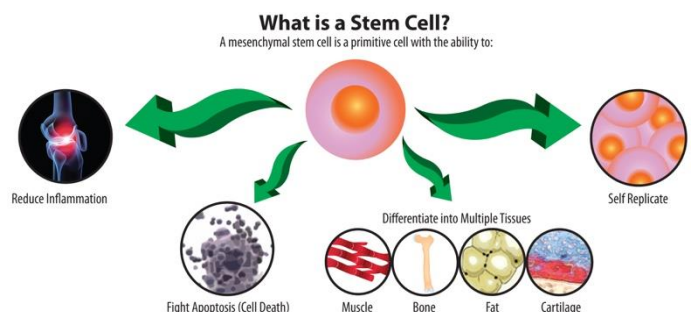
Injections such as Platelet Rich Plasma (PRP) and Bone Marrow Aspirate Concentrate (BMAC) are known as “biologic injections.” This particular type of regenerative medicine has grown over the last decade and offers patients the ability to harness their own intrinsic healing power. There is little to no risk of rejection as we are simply concentrating your own healing factors and injecting them into the affected area. Unfortunately, while these injections have growing medical data to support their safe and effective use, many insurance companies still consider them investigational, and therefore are not routinely covered by insurance.

- Platelet Rich Plasma (PRP)
 - Whole blood in our body is made up of a number of different cells and layers. We can separate out these components using a centrifuge. This centrifugal force allows us to isolate the plasma portion of blood which has a high concentration of platelets. This concentrated PRP is then injected back into the affected area. We know platelets are involved in healing throughout the body using healing co factors such as VEGF, PDGF, IG, etc..
 - PRP has been studied extensively and is perhaps the fastest growing area of medical literature in the Sports Medicine world.
 - It has been shown to improve patient reported outcomes in entities such as osteoarthritis, tendinitis, tennis elbow, and injury recovery.



- Bone Marrow Aspirate Concentrate (BMAC)
 - True STEM cells are what we describe as “pluripotent.” This means they have the capability of differentiating into different cell types.
 - Our bone marrow is a rich source of these mesenchymal STEM cells.
 - This procedure is done by harvesting bone marrow from the pelvis, placing it in a centrifuge to concentrate, and injecting the BMAC into the affected area.
 - These mesenchymal stem cells are the richest source of growth factors and anti-inflammatory cytokines in the body.
 - There are many studies supporting the use of BMAC in osteoarthritis and the healing of different musculoskeletal injuries.

Pricing:
 PRP: \$750 per injection (recommend 2 or 3 injections)
 BMAC: \$3000 (typically 1 injection)



Biologic Injections (PRP, BMAC)

Patient Instructions for after your PRP or BMAC Injection

1. To obtain maximum benefit from your injection, please stop all anti-inflammatory medications at least 2 weeks prior to the scheduled injection.
 - a. These include: Advil, Aleve, Naproxen, Toradol, Meloxicam, Celebrex, etc..)
 - b. Also, you should not restart these medications for at least 6 weeks following your injection.
 - c. These medications in theory could work against the “pro-inflammatory” physiologic process we are trying to achieve with the injection.
2. Please drink plenty of water the day before your injection and stay well-nourished with a high protein, low carbohydrate diet.
3. For PRP injections, we will draw 30-60 ml of your whole blood.
4. For BMAC: Dr. Ghattas will harvest approximately 60ml of bone marrow from the posterior pelvis under sterile technique using local anesthetic to numb the harvest site.
5. Avoid high impact, strenuous activity to the affected joint for at least 2 weeks following the injection.
6. There is a chance you will experience increased swelling and discomfort for up to 2 weeks following the injection. This is normal.
7. It may take up to 6 weeks after your injection before you begin feeling any symptom relief.
8. Immediately after the injection at home we recommend rest, ice, and compression to the injected area.
9. You can take extra strength Tylenol for any post injection pain you may feel.
10. PRP and BMAC injections are considered very safe with little to no risk. Please be aware if you have extreme, unrelenting pain, fevers, or progressive redness, please call us immediately or present to your local urgent care.
11. Injections with PRP are typically done 7-10 days apart for a series of 2 or 3 injections.
12. BMAC is a single injection and can be done either in office or in a local surgery center.