

## ORTHOBIOLGICS/REGENERATIVE MEDICINE

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### **WHAT IS REGENERATIVE MEDICINE?**

The American Medical Society of Sports Medicine (AMSSM) defines regenerative medicine as an “interdisciplinary therapeutic approach that aims to repair, replace, regenerate, and/or rejuvenate lost, damaged, or diseased cells, tissues, organs to restore or establish normal form and function.”

### **WHAT ARE ORTHOBIOLGICS?**

The American Medical Society of Sports Medicine (AMSSM) defines orthobiologics as the “use of biological substances to enhance biological healing of orthopedic injuries or alter the natural course of an orthopedic disease.”

**Orthobiologic treatments have not been authorized by the FDA and are considered experimental by the FDA.**

### **WHAT ARE COMMON SUBSTANCES USED IN REGENERATIVE MEDICINE AND ORTHOBIOLGICS?**

Platelet rich plasma (PRP) is plasma obtained from the patient’s own blood that has a higher platelet concentration than whole blood.

Lipoaspirate (MFAT) is obtained from the patient’s adipose tissue which contains a high concentration of mesenchymal signaling cells (MSCs) which are believed to have anti-inflammatory, proangiogenic, and proliferative effects, though their mechanism is poorly understood.

Alpha-2 Macroglobulin (A2M) is a protein that is found in your blood that can help stop the inflammatory and cartilage degradation pathways that cause joint pain and progression of arthritis. A2M can be isolated from your blood through a blood draw and then is injected at higher concentrations into your painful joint.

Perinatal products are often what people think of when a person says they have received a “stem cell” injection. These products are usually derived from umbilical cord blood, amniotic tissues, and Wharton jelly. These are currently not legally available in the United States outside of FDA approved trials.



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### **ARE ORTHOBIOLGIC TREATMENTS COVERED BY MY INSURANCE?**

These treatments are currently considered experimental and are not covered by insurance.

### **WHAT CONDITIONS ARE ORTHOBIOLGICS USED TO TREAT?**

There are a variety of acute and chronic musculoskeletal conditions that orthobiologics are being used to treat. They are often used to treat osteoarthritis, tendon problems and acute muscle injuries. Ask your physician if your condition or injury could potentially benefit from an orthobiologic treatment.

### **WHAT EXPERIENCE DOES DR. NEGAARD HAVE WITH ORTHOBIOLGICS?**

Dr. Negaard developed an interest in regenerative medicine early in his medical training and further developed his skills and experience with orthobiologics during his Sports Medicine Fellowship. Since fellowship, he has continued to look for ways to use orthobiologics to help treat his patients. He believes that patients should fully understand the potential benefits, limitations and the scientific studies for these products on various conditions.

Dr. Negaard believes in the basic science, future of the technology and promise these products have shown to help patients. This is why he remains engaged with up-to-date information in the field by being a member of the American Medical Society for Sports Medicine (AMSSM) subcommittee on regenerative medicine and orthobiologics, in addition to being a member of the Biologics Association. Additionally, Dr. Negaard is actively engaged in research in regenerative medicine and collaborates with colleagues across the country.



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"Thanks to Dr. Negaard and his amazing team for enabling me to play golf again! I went from being completely sidelined to back in the winner's circle."

- SCOTT LUC, PRP PATIENT



## ORTHOBIOLIGICS OFFERINGS

PRODUCT	DESCRIPTION	WHAT IS IT USED FOR?	COST
<b>Platelet Rich Plasma (PRP)</b>	Blood plasma with higher concentration of platelets, which have cytokines and growth factors, than in the serum of the blood	Joints/Arthritis, Tendons, Ligaments & Spine	\$\$
<b>Platelet Poor Plasma (PPP)</b>	Blood plasma thought to contain growth factors that differentiate into more muscle cells than PRP	Muscle Injury	\$\$
<b>Alpha-2-Macroglobulin (A2M)</b>	A protein inhibitor produced in the liver that blocks proteases and other pathways that contribute to cartilage degradation and the inflammatory cascade	Joints/Arthritis, Spine	\$\$\$
<b>Microfragmented Fat Aspirate (MFAT)</b>	Lipoaspirate mechanically sized, shaped and cleansed for therapeutic use that contain Mesenchymal Signaling Cells (MSCs)	Joints/Arthritis, Some Tendons	\$\$\$\$\$
<b>Bone Marrow Aspirate Concentrate (BMAC)</b>	A concentrate of bone marrow aspirate containing multiple cell types including MSCs	Joints/Arthritis, Some Tendons	\$\$\$\$\$

### WE ARE TRACKING PATIENT CLINICAL OUTCOMES. WHAT DOES THIS MEAN?

We use a secure data tracking system called Data Biologics. You'll receive an email to complete a survey the day of the treatment and a few months post treatment. This data allows us to compare our patient outcomes to other providers across the country to help us better modify our protocols and individualized treatment plans.



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Learn more about our Carmel, Greenwood and  
Noblesville Forté Fast locations and hours here



For procedure questions or concerns, please call Andrea Sulavik at 317.419.6035 or Tara Lindley at 317.708.6856.