

The logo consists of three stylized, overlapping brushstrokes in red, blue, and orange, positioned above the company name.

ELLIS &
BADENHAUSEN
ORTHOPAEDICS, PSC

SPORTS INSTITUTE

Joint Preservation And Biologic Program

The latest and most innovative treatment options available today for a multitude of orthopaedic injuries and pathologies

Serving the Louisville community since 1954.



Ellis and Badenhausen Sports Institute Joint Preservation & Biologic Program

Purpose

The Joint Preservation and Sports Institute at Ellis and Badenhausen was developed to expand the biologic nonoperative treatment options available for our patients. Being in the forefront of orthopaedics, we give patients the opportunity to receive the latest and most innovative treatment available. The goal of the program is to help patients avoid surgery using biologic natural options. Enclosed in this information packet is an introduction to treatment options available. Topics include the following:

Biologic Treatment Options	1
Treatment Conditions	3
What are they & How do they work	3
Treatment Day - What to expect	5
Aftercare	5
Follow-up	6
Financial Information	7
Frequently Asked Questions	7



Biologic Treatment Options

The options listed can either be administered in the office or under sedation, with the vast majority of patients having this performed in the office. If sedation is received, the injection can be performed at the surgery center. Prior to the injection, the skin is sterilized with alcohol and then anesthetized with a small amount of numbing agent.

VISCOSUPPLEMENTATION

This treatment helps to return some of the normal occurring chemicals back to the joint that are diminished in patients with arthritis. These can range from a single injection to a series of three injections. Insurance only approves these for diagnosis of knee arthritis. Other areas, such as shoulder, hip and elbow, are not approved. Results are variable but can last for up to 6 months and usually depend on the degree of arthritis. While a variety of injection brands are available, this choice is often dictated by your insurance.



PLATELET - RICH PLASMA (PRP)

This is a newer option to address acute injuries and arthritis. More data is being published supporting the use of PRP for arthritis and tendinitis as well as some acute injuries. It involves taking a small amount of a patient's blood and spinning it in a centrifuge. The platelet-rich layer is drawn into a syringe and then injected into the affected site. The PRP layer is rich in several natural chemicals that work to relieve inflammation, reduce swelling and initiate healing. This has become an adjunct for an accelerated return back to activities after acute





injuries. Athletes have been using PRP to help them return back to their sport at an earlier time after injury. PRP has been shown to have beneficial results with arthritis treatment, with better results typically lasting longer than viscosupplementation. This treatment is not covered by insurance.

STEM CELLS

This is the only treatment that administers regenerative cells to an injured area. There are a variety of sources to obtain the stem cells. Most patients that require this treatment are at an age where their own stem cells are not as regenerative as desired, so usually other sources are used. One source is donated tissue, such as amnion or chorion. This is not embryonic tissue. These cells have very high regenerative potential. The cells have the ability to develop into many different cell types. The tissue is sterilely processed and tested for purity and safety. As with PRP, the stem cells can be used for acute injuries as well as chronic conditions, such as arthritis. This is not covered by insurance.





Treatment Conditions – What problems they treat

VISCOSUPPLEMENTATION

Arthritis must be the main diagnosis. The knee is the only body part approved by insurance. It can be used in other areas of the body but is an out-of-pocket expense.

PRP

PRP may be used in any musculoskeletal body part. It can be injected into a joint, muscle, tendon or ligament. Conditions range from acute injuries to chronic conditions that have been unresponsive to other treatments. PRP may be helpful in acute injuries such as ligament sprains or muscle tears/strains. Chronic conditions such as arthritis, tendinitis and fasciitis can be successfully treatment as well.

STEM CELLS

These can be used for both acute and chronic conditions. Stem cells may be used in any musculoskeletal body part. Injections may be performed into a joint, muscle, tendon or ligament. Conditions range from acute injures to chronic conditions that have been unresponsive to other treatments. Stem cells may be helpful in acute injuries such as ligament sprains or muscle tears/strains. Chronic conditions such as arthritis, tendonitis and fasciitis can also be successfully treated.

What are they and how do they work

VISCOSUPPLEMENTATION

This is essentially hyaluronic acid, a natural chemical produced by your body which helps the knee glide smoothly. This treatment returns the natural lubricator back to the knee; therefore can be thought of as a



“lubricating injection.” By physically injecting medicine into the knee, the cartilage and synovial cells can then function more smoothly and with less pain. This treatment does not build new cartilage, nor does it eliminate any arthritis.

PRP

This uses cells from your own blood. By centrifuging, or spinning, blood for a specific time at a specific speed, a platelet-rich layer is able to be separated. This layer is a super-concentrated liquid containing healing factors. When injected back into the injured area, these chemicals or healing factors work with your body’s cells to repair the damage. The inflammatory chemicals in the damaged areas are reduced. In chronic conditions that have had longstanding inflammation and pain, PRP has the potential to help reduce symptoms as well as inflammation, and allow the tissues to heal.



STEM CELLS

The mechanism of action is in the cells themselves. The stem cells are injected into the area of injury and work by inducing repair. As the cells differentiate and change into more mature cells, they have the ability to support the surrounding cells, deliver healing chemicals, as well as replace damaged cells. These cells have very high regenerative potential. By repairing the damaged areas, pain and inflammation is reduced.



Treatment Day

After the initial consultation visit and the type of treatment is selected, a treatment visit will be scheduled at a later date.

PRP

You should not eat or drink anything for three hours prior to the appointment. It is best to be as hydrated as possible so that the blood draw proceeds easily. A small amount of blood (about 6cc) is drawn and spun in a centrifuge. The centrifuge time is approximately six minutes. The skin is sterilized with alcohol and numbed with a small amount of numbing agent. The area is then injected with the platelet-rich plasma. A small dressing or band-aid is applied.

VISCOSUPPLEMENTATION & STEM CELLS

No food or drink requirements are needed for either injection. The skin is sterilized with alcohol and numbed with a small amount of numbing agent. The area is then injected. A small dressing or band-aid is applied.

Aftercare

After any of these treatments, it is very important to reduce activities for the next several days. Daily activities are fine. Avoid exercise for 4-5 days. Patients with very labor-intensive jobs should consider taking 48 hours off work. It is very important to ice the injected area several times the day of injection and for 4-5 days post treatment. Recommended times are for 20 minutes at least 5-6 times per day. Check your skin to make sure it is not too cold to avoid a thermal frostbite burn. After the recommended rest time, increase your activity gradually. It may take several weeks to notice a difference, up to 6-8 weeks in some cases.



Follow-Up

These are general guidelines and may be adjusted by your physician, depending on what body part and type of injury is being treated.

VISCOSUPPLEMENTATION

For those patients that get good relief, you may redo the injection in 6 months if needed. This can be extended if the pain relief lasts longer, and follow-up visits can be scheduled as needed. Some insurances will require a visit again with possibly a repeat x-ray; some insurances will just require a request from the office. You may check with your insurance, or we can check for you. If you have not had any relief in 8 weeks, please inform your physician.

PRP

For acute injuries, your physician may suggest one injection, or an injection series spaced from a few days to a week apart. Follow-up visits will be adjusted to determine improvement. For chronic conditions like arthritis, a follow-up visit is recommended, but not mandatory, at 8 weeks to measure your improvement. For patients with good pain relief, the next visit will be in 6 months. For patients with some improvement but some continued symptoms, another repeat injection can be performed at 8 weeks. The next follow-up will be in 6 months. Repeat injections can be performed at the 6-month visit or can be delayed longer if your symptoms are well controlled.

STEM CELLS

Your physician will recommend a follow-up tailored to the problem being treated. This may be in as short as one week or up to 8 weeks. For acute injuries your physician may recommend 1-2 week follow-up visits and, if needed, repeat injections can be performed. The chronic conditions may be treated and reevaluated at an 8-week visit. For patients that get good pain relief, a follow-up visit at 6-8 months can be scheduled with a repeat injection, if necessary.



Financials

These are approximate costs. The final cost depends on insurance. You will be notified of your financial responsibility*.

VISCOSUPPLEMENTATION

If covered by your insurance, you will be responsible for your deductible. If not covered, you will be responsible for the cost, which can be as much as \$800 for a single injection and \$600 for a three-injection series.

PRP

The cost includes everything, the injection kit, the centrifuge and the material for the blood draw.

STEM CELLS

The cost varies according to the volume of cells. The recommendations are based on size of the joint being injected.

- 0.5cc** (Small joint – finger, toe)
- 1 cc** (Medium joint – wrist, elbow)
- 2 cc** (Large joint – knee, hip, shoulder)
- 4 cc** (Large joint – knee, hip, shoulder)
- 6 cc** (Large joint – knee, hip, shoulder)

Your physician will recommend a treatment volume based on the location and severity of the problem.

* Please see pamphlet insert with the cost breakdown for Biologic injections.





Frequently Asked Questions

WHICH ONE IS THE BEST TREATMENT?

Your physician will work closely with you to determine the best option for your problem. Viscosupplementation has been extensively studied with many studies to support its use. Several studies have been published to support the use of PRP. We have found results with our patients to be very favorable with pain relief and improvement of function. Because stem cells are a new treatment option, there are fewer studies. The limited studies on stem cells are encouraging, and much more research is underway.

WILL I BE ABLE TO DO EVERYTHING I WANT TO AFTER THIS INJECTION?

For treatments regarding acute injuries that are typically treated with PRP, this will depend on the intensity of the activity. Repeat injections may be recommended. Your physician will give you a treatment plan and suggestions regarding which activities will be safe to return to and the expected time frame to resume your activities.

WILL THIS PREVENT ME FROM NEEDING A JOINT REPLACEMENT?

Again, these treatments will not reverse the condition of your arthritis. These treatments (Viscosupplementation and PRP) help to improve function and reduce pain, but they will not “turn back time.” Stem cells are the one treatment that administers new cells that may have some regenerative potential. In general, these treatments delay the need for joint replacement and allow patients to enjoy an active lifestyle.

HOW SAFE ARE STEM CELLS?

The tissue is tested extensively to assure sterility and safety. There is a battery of tests that the tissue has to clear before it is released for use. Companies typically follow these strict criteria during the harvest and the processing of the cells. Despite the best of efforts, this is donor tissue and a small risk of disease transmission exists.



IS THERE A REASON I CAN'T GET THESE TREATMENTS?

Allergies to chicken and eggs may require a different type of viscosupplementation medicine. Most conditions and allergies are not usually a problem, but any medical conditions and allergies should be communicated to your physician.

HOW LONG WILL MY PAIN RELIEF LAST?

For acute injuries, once your problem heals, it will hopefully be a permanent fix. For chronic conditions like arthritis, pain relief can last 6 months for viscosupplementation and 8-12 months for PRP.

CAN I REPEAT THESE INJECTIONS?

Yes. Viscosupplementation can be repeated in 6 months. PRP and Stem Cells can be repeated, and the schedule will be determined by your physician.

HOW CAN I AVOID ANY PROBLEMS AFTER THE INJECTIONS?

Follow your physician's recommendations, but a general guideline is to reduce your activities and ice your injection site 5-6 times a day for the next 4-5 days for 20 minutes at a time. Again, remember to check your skin to make sure it does not get too cold.

CAN I WORK OUT RIGHT AFTER? HOW MUCH CAN I DO AFTER THE INJECTION?

No. You will need to reduce your activity for the next 4 days. It is not recommended to work out for the next 4 days after your injection. Daily activities around your house and at work are usually fine, unless you have a very labor-intensive job. Please communicate this to your physician so they can make the appropriate recommendations.

WHAT PROBLEMS SHOULD I LOOK FOR AFTER MY INJECTION?

It is common to have a little soreness after these treatments. If this continues to get worse over the next few days, please notify the office. This may be accompanied by some swelling. A little swelling is expected,



but if this becomes worse, again, please notify the office. Any drainage from the injection site should be relayed to the office as well. If you have any other questions regarding any severe or worsening symptoms, please call. Many of these problems can be addressed with a phone call.

WHY DO I HAVE TO AVOID EATING OR DRINKING BEFORE MY PRP INJECTION?

The concentration of the healing factors in the fluid is increased.

HOW LONG BEFORE I NOTICE AN IMPROVEMENT?

Many patients notice improvement in a few weeks, but it may take up to 6-8 weeks.

**SCHEDULE AN INJECTION,
PLEASE CONTACT US AT
(502) 585-2411**