

Title: Platelet rich plasma injections for treatment of chronic lateral epicondylitis (Tennis Elbow)

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Plain Language Summary:

Lateral Epicondylitis is the medical term for **Tennis Elbow** or **Archer's Elbow**. Tennis elbow is a painful condition caused by overuse of the tendons in your forearm. Tendons are made of thick, rope-like material and connect the muscles to the bones in your elbow. When you use them too much, the tendons can become sore or injured. Injury to the tendon is often caused by repetitive actions of the arm and wrist, such as a backhand in tennis. The outside part of your elbow may be tender to touch and the pain may shoot down your forearm. Your arms may feel weak or hurt when you try to do things like open a door, pour coffee, or shake hands.

Tennis elbow usually gets better on its own. Things that you can do to help your elbow heal include:

- **Rest your elbow –**
 - Avoid tasks or sports that cause repeated movement of your elbow.
- **Use ice –**
 - Ice can prevent your elbow from swelling by decreasing blood flow to the area.
- **Over the counter pain medicine –**
 - You can take acetaminophen (Tylenol), ibuprofen (Advil) or naproxen (Aleve) to temporarily relieve the pain in your elbow.
- **Use an arm brace or strap -**
 - You can get a brace or strap that goes around your forearm for work or sports. This can relieve the pain by lowering the pressure on the injured tendons.

If your elbow doesn't get better on its own, your doctor may suggest:

- **Physical therapy –**
 - Stretches and exercises can strengthen your elbow and help it heal.
- **Corticosteroid injection –**
 - Corticosteroid injections can be used to treat the pain but may not help with healing. This is an option if rest, ice, and pain medicines don't help.

If the injury to your tendon lasts for a long time, the tendon may have trouble healing itself. Tennis elbow that lasts for longer than 6 months is called chronic. **Platelet Rich Plasma** is an option to surgery for the treatment of chronic tennis elbow.

What is platelet rich plasma?

Platelet Rich Plasma is made from your own blood and contains natural substances that promote healing and growth. Our blood is made up of red blood cells which carry oxygen, white blood cells that fight infections, platelets and plasma. Platelets are small, cell fragments that contain things like growth factors which promote cell growth to help your body heal itself. Plasma is the liquid part of your blood that the blood cells float in. It's mainly water but also has hormones, sugar, carbon dioxide, and other substances in it. Platelet rich plasma is plasma that has a concentrated amount of platelets in it.

The platelet rich plasma injection jump starts the healing process in your elbow. You elbow may feel a little worse initially. The irritation from the shot activates special cells in your body. These activated cells will try to repair the injured tendons.

How is platelet rich plasma injection done?

The platelet rich plasma used for your injection is specially made for you from your own blood. First, a sample of your blood will be taken. Then a machine called a centrifuge will spin your blood to increase the concentration of platelets in blood. The sample is then ready to be injected into your elbow.

Before the injection, the doctor will numb the elbow with lidocaine. The elbow area will then be sterilized with iodine. A cold freeze spray may be used to numb the skin. The doctor may use ultrasound to guide the needle into the correct spot in your elbow. He will then inject the platelet rich plasma solution into the space around the tendon.

After the injection, your doctor will give you exercises that will help your tendons heal and grow stronger. Your elbow may continue to heal for up to 2 years. Over 75% of patients experience relief within 2 years of receiving a platelet rich plasma injection.

Additional Resources:

http://www.hss.edu/conditions_platelet-rich-plasma-prp.asp - HSS overview of platelet rich plasma therapy.

<http://www.youtube.com/watch?v=RsT6SB1q2vA> - Video showing platelet rich plasma injection for tennis elbow from the Orthohealing Center in LA.

<http://www.newyorkpaincare.com/prp/149-platelet-rich-plasma-prp-injection-overview.html> - Animated overview of the process and theory behind it from New York Pain Care.

Key Words:

Tennis elbow, lateral epicondylitis, platelet rich plasma, corticosteroid, pain

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