

Platelet-Rich Plasma (PRP) Intra-Uterine Infusion (IUI)

The health of the uterine lining (endometrium) has an important role in implantation and clinical pregnancy success. PRP IUI procedure is a new treatment option for Assisted Reproduction patients. Through a complex series of cellular events, PRP's bio-active growth factors initiate intensive endometrial regeneration leading to improved endometrial health and thickness.

Published research has demonstrated that PRP may improve implantation rate and clinical pregnancy rate for the following clinical presentations:

- Patients with a thin or history of a thin endometrium.
- Patients with an endometrium that hasn't responded sufficiently to medical therapies.
- Patients who have repeated implantation failures.
- Patients with surgically corrected Asherman's syndrome.

What is PRP?

PRP is an extract of your own blood that contains a high concentration of platelets, growth factors, and bio-active proteins essential for tissue regeneration and healing. Doctors have used PRP for many years to accelerate surgical healing; repair tendon, ligament and joint damage; heal skin wounds; and help regrow muscle and bone. The same physiological process that aids tissue regeneration and healing in other areas of the body occurs when PRP is used to improve endometrial thickness.

Why use PRP to improve the endometrium?

When PRP is infused within the uterine cavity, platelets release their growth factors, which exert a local regenerative effect on the endometrial tissue. These growth factors stimulate cellular processes within the endometrium that lead to increased blood flow and cellular growth - resulting in improved endometrial thickness.

Benefits of PRP IUI procedure

For most patients, PRP IUI will improve endometrial thickness leading to a reduction in Frozen Embryo Transfer (FET) or Artificial Insemination (AI) procedure cancellation, with a subsequent decrease in psychological and financial stress for patients. Published research has also shown that PRP initiated endometrial improvement provides an increase in pregnancy rate and live birth rate.

How is the PRP is extracted from patient's blood?

At least 10mLs of the patient's blood is collected in the same way as a standard blood test. Using a special separating device and a centrifuge, the platelets are separated from the whole blood and are collected in 1ml of plasma. This small volume of plasma with a high platelet concentration is known as Platelet-Rich Plasma. Using this TGA approved technology it is possible to extract a very 'pure' PRP sample with over 90% platelet collection efficiency, so that maximum growth factors can be introduced to the uterine cavity.

How is the PRP intra-uterine infusion procedure performed?

The initial part of this procedure, the blood collection, is performed at either the Ballarat IVF consulting rooms or the Ballarat Day Procedure Centre by a Ballarat IVF nurse. The blood is then taken to the Ballarat IVF laboratory to extract the PRP. The infusion is performed at Ballarat Day Procedure Centre.

The infusion is provided under stringent guidelines to provide a medical procedure with minimal risk of complications and will be similar to a pap smear in terms of patient position and discomfort. After the PRP has been extracted, the patient will be positioned on the treatment bed and a speculum will be used so that a fine outer tube can be placed through the cervix into the uterine cavity. The insertion of the tube through the cervix may be uncomfortable. Once the tube is in position, a fine inner tube containing the PRP will be inserted through the outer tube and the ~1mL PRP will be infused.

Post procedure

There may be some light spotting from use of the speculum and the tube penetrating the cervix. The PRP that is infused is concentrated platelets within a small volume of plasma. If you should notice some of this fluid leaking from your vagina, please do not be concerned as the plasma is only 'the vehicle' to carry the platelets, so it does not matter if a small amount leaks through the cervix into the vagina.

Are there any side effects?

As the product that is being injected is a portion of the patient's blood, PRP is considered to be low risk, with very minimal chance of an allergic reaction or adverse outcome. However, like all medical procedures where a tube is inserted through the cervix, there is always a small risk.

What to expect post injection?

The PRP's growth factors improve tissue regeneration by stimulating the body's normal healing response to an injury. However, as the growth factors are highly concentrated, the regenerative response and biological activity is amplified, which can create local symptoms for the first 24 hours. There may be a feeling of subtle uterine fullness, throbbing, warmth.

Questions

It is important that patients have the opportunity to ask questions about the PRP procedure. Please feel free to contact us to discuss your questions prior to PRP appointment.

