



## **Sperm Washing for Intrauterine Insemination (IUI)**

### **What is Intrauterine Insemination?**

Intrauterine insemination (IUI) is often the first type of fertility treatment attempted by couples and is a procedure that involves placing sperm inside a woman's uterus to facilitate fertilization. In order to get sperm ready for the IUI procedure, it must first be washed to ensure that only the healthiest sperm are used during the procedure.

### **What is Sperm Washing?**

Sperm washing is a procedure used to prepare sperm for use in IUI. Raw semen cannot be inserted directly into a woman's uterus, because semen contains chemicals called prostaglandins. Prostaglandins cause muscular contractions and are responsible for cramps during menstruation and pregnancy. If raw semen is inserted directly into your uterus, rather than going through the cervix first, it could cause severe pain and cramping. Sperm is also washed in order to increase your chances of becoming pregnant. Sperm washing can remove dead sperm and those sperm with poor swimming ability. This leaves behind sperm that can swim faster and that are more likely to fertilize your egg. Sperm washing can also get rid of the white blood cells, mucous and seminal fluid surrounding the sperm, which can also interfere with fertility.

### **Who Can Benefit From Sperm Washing and IUI?**

This procedure is commonly used for infertility including patients with:

- unexplained infertility
- male-factor infertility
- women with endometriosis
- to enhance success with ovulation induction

### **Preparing for the Sperm Wash**

It is relatively easy to prepare for the sperm wash procedure. The semen sample is collected in a cup after masturbation. Certain medications may also affect the quality of your sperm, so speak with your doctor if you are taking any medications.

## **Sperm Washing Procedures**

There are two commonly-used sperm washing techniques used at the Kelowna Regional Fertility Centre.

### **Simple Sperm Wash**

The simple sperm wash technique is the most basic way of washing and preparing sperm for IUI. Typically used for frozen donor sperm or patient samples with low counts and low motility, the semen is diluted in a test tube with a special solution of antibiotics and protein supplements. It is then placed in a centrifuge, a machine that spins around at extremely high speeds. As the sperm mixture is spun, sperm cells fall to the bottom of the test tube, producing a mass of dense, highly active sperm. These sperm can then be removed from the test tube and used in IUI. A simple sperm wash takes about 20 to 40 minutes.

### **Density Gradient Sperm Wash**

The density gradient sperm wash is one of the most popular sperm washing methods and is the technique used for the majority of fresh samples at The Kelowna Regional Fertility Centre. This is because it also works to separate dead sperm cells, white blood cells, and other waste products from the sperm.

A test tube is filled with a density gradient. Semen is then placed on top of the gradient and the test tube is spun in a centrifuge. After it is spun, active sperm will make their way to the bottom layer of liquid in the test tube while debris and dead sperm will get caught on top. This top layer can be siphoned off in order to remove the active sperm from the test tube. This sperm is then used in the IUI procedure. Density gradient sperm washes take approximately 120 minutes.

### **Success Rates**

Success rates do increase with sperm washing because it ensures that only the most active sperm are used for fertilization. However, success rates do depend on your partner's overall motile sperm count in addition to other factors. Typically, the lowest sperm count to be used with sperm washing is 1 million; however, success rates are significantly lower if your sperm count falls beneath 5–8 million. The best sperm counts for use with sperm washing are those over 10 million.

### **Cost of the Procedure**

Sperm washes are not covered by British Columbia MSP. Please see The Kelowna Regional Fertility Centre's fee schedule for current pricing.