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## **SPERM WASHING AND INTRAUTERINE INSEMINATION (IUI)**

**What is sperm washing?** Sperm washing is the process of separating the healthy, motile (swimming) sperm from the rest of the semen specimen. In addition to healthy sperm, a man's semen specimen contains dead or nonmotile sperm, enzymes, proteins, and fluids which are not desirable for direct mixing with eggs or for intrauterine insemination. These healthy, motile sperm are then concentrated into a special sperm media or solution called HTF (Human Tubal Fluid) which nourishes and preserves them for fertilization of the egg. Sperm washing is performed in a series of steps including centrifuging or spinning the semen sample several times to separate the best sperm from the remainder of the specimen. Sperm washing was developed over a number of years of testing to provide the best preparation of sperm for IVF (in vitro fertilization) or the "test-tube baby" process).

**What is IUI?** Intrauterine insemination (IUI) is a fertility treatment for couples with infertility due to low sperm count or motility, poor cervical mucus, low semen volume, antisperm antibodies, endometriosis, or unexplained infertility. IUI has also been shown to significantly increase the chances of pregnancy in women undergoing donor insemination with frozen sperm samples. After sperm washing, the sperm specimen is placed high into the top of the uterus (close to the tubes and egg) through a small, flexible plastic catheter inserted into the cervix.

**How does it work?** This technique concentrates the healthy, active sperm into a small specimen that can be placed closer to the final destination for fertilization of the egg. IUI bypasses the cervical mucus and allows more sperm to get up into the fallopian tubes. The special media improves the length of survival of the sperm and sperm motility, both of which increase the chance of pregnancy. Sperm washing also removes materials from the semen specimen that actually may impair fertility (bacteria, hormones, etc.). IUI was another technique developed through discoveries from IVF research.

**How is IUI done?** The woman is asked to call the office when her period begins for instructions on which day to start the LH kit. The LH kit (OvuKIT) is used to most accurately pick the day of ovulation for the insemination procedure. On the morning after the LH surge, the husband is asked to collect a sperm specimen into a sterile container at home so that the specimen can be brought into the office at 8:30 a.m. or as early as possible. The specimen should arrive at the office within 30 minutes of collection. The sperm washing procedure is then performed and takes about 90 minutes. The woman then returns to the office after the sperm washing is completed for a short visit. A speculum is inserted into the vagina and a tiny plastic catheter is inserted through the cervix into the uterus. The sperm specimen is injected gently into the uterus and the patient may go back to her normal activities 10 minutes later.

**Is IUI painful?** Intrauterine insemination is usually very simple and painless. Occasionally it is necessary to dilate or open the cervix slightly and some women may have mild cramps at that time. Most of our patients tell us that IUI is an easy and comfortable procedure.

**Are there any complications?** Side effects or complications from IUI are rare. Any procedure that requires penetration of the cervix may result in infections of the uterus and/or tubes, although this is very unusual with IUI. You may experience slight cramps or spotting or light bleeding after the procedure; this may last 1-2 days due to minor irritation of the endometrium (lining of the uterus).

**Why is IUI only done once a cycle?** The OvukIT LH kit will correctly pick the day of ovulation 85% of the time. Studies have shown that the chances of pregnancy are not improved by doing more than one insemination per cycle when this system of timing is used. When IUI is combined with other treatment such as ultrasound timing or Pergonal, you will be given specific instructions on when to return for the procedure.

**How successful is IUI?** Studies have shown that the pregnancy rate from IUI over 3-4 well-timed cycles varies from 20 – 60% depending on the cause of infertility. Mucus problems are more successful and male/sperm problems are somewhat less successful. We recommend trying at least 3-4 cycles of IUI in order to give the best result.

**Why is IUI done for donor insemination?** Recent studies have shown that the pregnancy rate for donor insemination is much better (approximately double) when IUI is performed instead of intracervical insemination. Frozen sperm apparently are not good swimmers and benefit from placement inside the uterus. The preparation time for donor IUI is usually 30 – 60 minutes and we ask that you wait at the office during this preparation so that the insemination can be done as soon as the sperm are ready.