

Reproductive Facts

Patient fact sheet developed by the American Society for Reproductive Medicine



Fertility Options for Men with Spinal Cord Injury

Why can men with a spinal cord injury (SCI) have infertility?

There are several reasons a man with SCI might have infertility. He may not be able to keep an erection long enough to have intercourse or to ejaculate (release semen) during orgasm. Abnormal retrograde (backwards) ejaculation can also happen, sending the sperm into the bladder. Men with SCI can also have inflammation or infection that can interfere with sperm health and function. Some men with SCI make less sperm because of abnormal nerve signals going to the testicles.

What treatments are available for infertile men with SCI?

Unfortunately, not all causes of infertility in men with SCI are treatable. However, when men with SCI can't ejaculate, there are several ways sperm can be collected for creating a pregnancy.

How can sperm be obtained from men with SCI?

Sperm can be collected in one of three ways.

Vibratory stimulation:

This is like a vibrator for men. It works best in men with spinal cord injury around the mid-back and does not usually work if the injury is lower in the spine. A small machine that vibrates is placed on the penis to cause release of semen. The semen can be used with intrauterine insemination (IUI or sperm can be put into the uterus with a syringe) or in vitro fertilization (IVF or test tube baby), depending on how much is made and the quality of it. Sometimes, the semen can be put directly into the woman's vagina to allow natural conception.

Testicular biopsy:

Testicular biopsy is a procedure where some tissue is removed from the testicle. This procedure can be done using a needle inserted into the testicle or by surgically opening the testicle to remove a small piece (biopsy). Sperm obtained this way can only be used in IVF (or test tube baby) and then each sperm directly injected into an egg to create an embryo (ICSI).

Once sperm is collected, how is it used to create a pregnancy?

Sperm can be put into the uterus with a syringe (IUI) or can be used with IVF.

During IVF, a woman's eggs are collected and placed together with the sperm in a laboratory to fertilize. The fertilized eggs are then returned to the woman's uterus. In some cases, sperm is injected directly into each egg (ICSI) to achieve fertilization. Pregnancy is more likely after IVF (with or without ICSI) than with IUI, but IVF is more invasive and costs more.

For more information, see the ASRM booklet titled "Assisted reproductive technologies" and the factsheet titled "Intracytoplasmic sperm injection."

How do I know which method is right for us?

You should discuss your spinal cord injury and fertility goals with your doctor to find out which method is most appropriate for you.

Revised 2023