

Sperm washing

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Sperm washing is a process which has been developed for couples who wish to have a child, where the man is HIV positive and the woman HIV negative. The procedure reduces the risk of HIV transmission to the female partner and subsequently to the unborn child. It is the safest way for an HIV-positive man to biologically father a child with his HIV-negative partner. It can also be used where both partners are HIV positive, to avoid reinfection.

Sperm washing rests on the premise that HIV-infected material is carried primarily in the seminal fluid rather than in the sperm itself. The technique involves separating sperm from seminal fluid. The sperm is then used for insemination directly into the female partner's womb, when she is ovulating and most likely to become pregnant (called intra-uterine insemination or IUI).

Couples using sperm washing because of the man's HIV status may well not have any other fertility problems, so IUI without any fertility drugs will be tried first, potentially followed by IUI in combination with drugs used to stimulate ovulation.

If there are other issues with the couple's fertility, other fertility procedures may be used, such as *in vitro* fertilisation (IVF, where the eggs are inseminated with washed sperm in a laboratory), or intra-cytoplasmic sperm injection (ICSI, where the sperm are injected directly into the ovum [egg]).

The success rate of conception after sperm washing in the UK is about the same as it is for the methods used to implant it.

This technique was pioneered in Milan. It is now used across Europe and in north America. A study has shown that, in over a thousand women who have had IVF with 'washed' sperm, so far none of the women has seroconverted and all of the children born have tested HIV-negative. A study has found the risk of HIV transmission from sperm washing to be zero.

Sperm washing services are available at a number of reproductive health clinics in the UK. The Assisted Conception Unit at the Chelsea & Westminster (C&W) Hospital in London has the longest history of offering this service, but it is also available at some other centres, including the Hewitt Centre for Reproductive Medicine, Liverpool Women's Hospital, and at King's College Hospital in London.

What does sperm washing involve?

The exact process will vary depending on which unit you attend. Generally, couples will have a consultation with a doctor and other healthcare staff, such as specialist nurses, as well as with a counsellor. These consultations enable people to get further information and support, and to explore some of the issues involved.

Deciding to embark on this treatment may not be an easy decision. Although the risk of the female partner becoming infected is minimal, it still exists, and for one or both partners it may be felt that this risk is too much.

The couple may also want to continue counselling to discuss issues relating to their fertility and the treatment, or if there are complex health or social issues to address. This is an opportunity to discuss issues concerning parenting itself, coping with a child when one parent is HIV-positive and facing the reality that treatment does not guarantee pregnancy. They may be required to have counselling if there are concerns about the potential welfare of the child.

Early in the process, couples will usually have a sexual health screen, including an HIV test, and tests to assess each of the partners' fertility. Tests may include various blood tests, an ultrasound scan and an X-ray for the female partner, and a semen analysis for the male partner. These tests indicate whether insemination would be a realistic option.

The preliminary investigations and appointments can take two to three months.

Acceptance criteria

Couples will need to provide a referral letter from their doctor (usually a GP or HIV doctor), and current information concerning viral load and CD4 count. There may also be additional eligibility criteria depending on which unit is providing the service.

Couples are asked to sign a consent form which states that both partners understand the procedure, agree to any requirements (such as treatment regimens) and are prepared to accept the minimal risk involved. The female partner will need to have an HIV test before and after the treatment.

Couples are advised not to have unprotected sexual intercourse during the period of the treatment, and in some cases for some months beforehand. Both partners must also abstain from any other high-risk activities that could put them at risk of HIV or any other blood-borne infections.

Costs

There is a cost attached to sperm washing, which as yet is not available on the NHS. Individual health authorities may agree to fund the service on the basis that it reduces the risk of onward HIV transmission. Some health authorities are sympathetic and may agree to fund one or several cycles of IUI with sperm washing. Each cycle of IUI with sperm washing can cost somewhere between £950 and £1500, excluding the cost of any drugs used. A PCT may not pay for any additional fertility treatments such as IVF, even if it has funded the sperm washing treatment, or funding for this may have to be negotiated separately.

Other options for conception

Couples where the woman is HIV negative and the man HIV positive, or both are HIV positive, may choose to have insemination using donor sperm. This is completely safe.

HIV-positive women can conceive through a simple self-insemination technique, using semen from their HIV-negative male partner.

There is now significant evidence that HIV treatment can be an effective prevention method. If the positive partner is on effective HIV treatment, and has an undetectable viral load, in some situations it may be considered safe to have unprotected sex in order to conceive. New NICE fertility guidelines, due out this year, will provide guidance on this.

A short course of anti-HIV drugs (pre-exposure prophylaxis, or PrEP) can also be used to protect a negative partner from HIV transmission.

Staff at your HIV clinic can give you more advice about these options so you can decide if they might work for you.