INFORMATION BROCHURE

FOR

SPERM CRYOPRESERVATION

Atlantic Assisted

Reproductive Therapies
1535 Dresden Row, Suite 213
Halifax, Nova Scotia
B3H 3T1

Phone : (902) 404-8600
Fax No: (902) 404-8601

Website: www.aart.ca
e-mail: info@aart.ca

SPERM CRYOPRESERVATION

WHAT IS SPERM CRYOPRESERVATION?

Sperm cryopreservation (sperm banking) is a method used to preserve sperm by cooling and storing sperm at a low temperature (-196 degrees Centigrade or "-196°C"). The sperm can be thawed at a future date when insemination or fertilization is required.

WHO QUALIFIES FOR SPERM CRYOPRESERVATION?

Patients who might be interested in sperm cryopreservation include those who:

a) are undergoing surgery, radiation, and/or chemotherapy that has an effect on sperm quality;

b) are having difficulty producing a sperm sample on demand;

c) are having gender affirming surgery;

d) might not be present during treatment;

e) have blockage of the sperm transport system who require surgical extraction of sperm; or

f) have variable semen quality.

WHAT ARE THE BENEFITS OF SPERM CRYOPRESERVATION?

Cryopreservation of sperm is a potential way to preserve fertility. Patients preparing to undergo chemotherapy or radiation therapy or gender affirming surgery can have samples of their semen frozen and stored in a cryo bank. The sperm can be used later to attempt a pregnancy through a variety of methods, including intrauterine or uterine insemination and in-vitro fertilization (possibly with sperm microinjection or "ICSI"). The approach used will depend upon the amount and quality of sperm stored, but often in-vitro fertilization with ICSI is the only feasible approach when there is concern about sperm quality or the amount that can be stored.

WHAT ARE THE RISKS OF SPERM CRYOPRESERVATION?

Semen from a patient with cancer often has reduced fertility potential, e.g. a decreased sperm count (number), reduced sperm motility (movement), abnormal sperm morphology (different shaped sperm) or DNA fragmentation. These changes can reduce, or even eliminate, the sperm's ability to fertilize an egg.

A post-thaw analysis will be performed on all semen/sperm specimens to determine if they are suitable for long-term storage.

Both the initial semen quality and the post-thaw sperm quality can affect the chances of obtaining a pregnancy.

HOW IS SPERM FROZEN?

Usually a minimum of three semen specimens is suggested with 2-5 day abstinence between sperm collections. The specimen is usually collected in a private room near the laboratory. If semen is not produced at AART it should be kept warm (close to your body) and delivered to the AART staff. The specimen will be taken to the laboratory where an analysis will be performed and the semen diluted with a protective medium and frozen in special straws for storage in liquid nitrogen at -196°C.

IS THE INCIDENCE OF BIRTH DEFECTS INCREASED AFTER FERTILIZATION WITH THAWED SPERM?

No. It appears that if a sperm survives freezing and thawing the incidence of birth defects is no higher than it would be with fresh sperm.

HOW MUCH DOES IT COST?

There are costs for the actual freezing of semen or sperm samples as well as an annual fee for their storage in the AART cryobank. These costs are **not** covered by MSI or most private insurance plans.

Please contact AART for a current schedule of fees.

HOW LONG CAN SPERM BE KEPT FROZEN?

Sperm can remain “alive” for at least 40 years under cryogenic storage conditions.

WHAT SCREENING TESTS ARE NECESSARY?

Blood will have to be taken to screen for human immuno-deficiency virus (HIV1 and HIV2), Hepatitis B (surface antigen HBsAg), Hepatitis C, Syphilis, and other viruses including HTLV-I and -II. In addition, a patient who wishes to have sperm cryopreserved will also be screened for both Chlamydia and Gonorrhea.

WHAT HAPPENS TO THE SPERM IN THE EVENT OF DEATH OF THE DONOR?

Normally, in the event of death of the patient whose sperm was frozen, the sperm will be discarded immediately upon written confirmation from the family or estate of their death.

If special consent was provided at the time of freezing, and proper provision was made in the patient’s Will, then it is (currently) possible for sperm to be used by his partner after their death. However, we cannot guarantee that this will be possible in the future as Canadian law could change and forbid or restrict such *post mortem* use.