



## Cryostorage

Cryopreservation techniques allow for gametes (eggs or sperm) and embryos to be frozen and survive processes of freezing and thawing. Pregnancy and live birth rates after treatments with frozen gametes and embryos contribute significantly to successful treatment cycles.

We use the most advanced freezing techniques and equipment in our state-of-the-art lab, which has a fully secured back-up and alarm system with monitoring which safeguards cryopreserved gametes and embryos.

### **Consent & keeping in contact with the clinic**

Freezing, storage and the subsequent use of gametes or embryos is only possible if written consent is provided and maintained by those persons who have provided their gametes for storage or treatment.

The consent forms provide us with vital information such as:

- How long you want to store your gametes or embryos;
- If you wish your gametes or embryos to be used in your own treatment, someone else's treatment (donation or surrogacy) or for training and research purposes;
- What should happen to your gametes or embryos if you were to die or lose the ability to decide for yourself (become mentally incapacitated).

It is essential that:

1. Before providing consent, you discuss the options for storing and using gametes or embryos if something was to happen to you. This is exceptionally important as there are many conditions which relate to different scenarios and additional consent forms may require completion depending upon these (see below);
2. You are aware that it may be possible to register a deceased partner as the parent of a child (posthumous consent) resulting from treatment using their frozen gametes or embryos;
3. You are aware it is possible to make changes to or withdraw consent at any time in with regards to the storage or treatment uses of the frozen gametes or embryos;
4. You keep in touch and inform the clinic of any changes to your contact details or address during the time your gametes or embryos are in storage. It is unlawful for us to store gametes or embryos beyond the storage period provided on the appropriate consent form. If you do not renew your consent when prompted, the lab has a legal obligation to dispose of the frozen gametes or embryos once the consent has expired;
5. You are aware that the clinic will only continue to store gametes or embryos for the period you have specified on the consent form and as long as continue to pay the storage fees.

You should also consider counselling to discuss the implications of treatment and storage.

### **Storing frozen gametes & embryos**

The law permits for the storage of gametes or embryos for any period up to a maximum of 55 years from the date that the gametes first placed in storage. However, this is only possible if the necessary consent is provided, maintained, and not withdrawn. The consent requirements for storing gametes and embryos for up to a maximum of 55 years varies upon the intended purpose for storage and subsequent treatment use:

#### **Treatment for yourself or a partner:**

You may wish to store your gametes or embryos so they can be used for treatment for yourself or a partner in the



future. Before doing this, you should think about how far in the future you might want or be able to use stored gametes or embryos and the potential costs of storing.

You should be aware that embryos can only be stored if both gamete providers (partner or donor) have both also given consent, which remains valid and has not been withdrawn.

The law permits you to store your gametes or embryos for use in your own treatment for any period up to a maximum of 55 years from the date that the gametes or embryos were first placed in storage. However, you will need to renew your consent every 10 years and you will be contacted by the clinic regarding an additional period of storage or, renewal of your consent to storage, at the appropriate time.

**On this basis the clinic will need to contact you about your consent to storage, you should always inform your clinic if your contact details change or if your circumstances change (e.g. in the event of separation from your named partner). If your clinic is unable to contact you to obtain your consent, then your gametes or embryos will be removed from storage and disposed of when they can no longer be lawfully stored.**

#### **Storing gametes or embryos for someone else's treatment**

You may wish to store your gametes or embryos so they can be used for someone else's treatment.

You may want to think about how far in the future you want your stored gametes or embryos to be available for someone else's treatment. This has significant implications for you and any person born because of your donation. You should discuss this with the clinic so we can provide you with the necessary information and opportunity to discuss these implications with a counsellor.

You should be aware that embryos can only be stored if both the egg and sperm provider have given consent.

The law permits the storage of gametes or embryos for use in someone else's treatment for any period up to 55 years from the date(s) that the gametes or embryos are first placed in storage.

If your circumstances change after you have donated your gametes or embryos or if you wish to withdraw or change your consent, you will need to contact the clinic as soon as possible to complete further forms.

#### **What other uses are there for my gametes & embryos if I no longer wish to keep them?**

If you no longer wish to keep your gametes or embryos in storage for your own treatment, you can withdraw your consent to storage, and they will be disposed of. Your clinic will provide you with the necessary form to do this.

Your other options when withdrawing your consent to use and storage for your own treatment can also include giving your consent to your unused gametes or embryos being used for:

- 1. Donation**

This is for use in someone else's treatment. Before doing this, there many issues to consider, which you should discuss with the clinic. This would involve further screening tests, counselling, and further consent.

- 2. Training**

These allow designated healthcare professionals to learn about, and practice, the techniques involved in fertility treatment.



### 3. Research

These are intended to help increase knowledge about diseases and serious illnesses and potentially develop new treatments. Research projects take place at HFEA licenced research facilities. Please ask the clinic for more information about this.

#### **What will happen to your samples if you were to die or become mentally incapacitated?**

While this is perhaps not something you have considered, if you do not record your consent before you die or become mentally incapacitated, the clinic would not be able to store your gametes or embryos according to your potential wishes. It is therefore vitally important that you and your clinic discuss posthumous use and the different treatment options in those circumstances.

As part of your consent to storage you will be asked to decide what you would like to happen to your gametes or embryos if you die or become mentally incapacitated.

The consent forms allow you to consent to your gametes or embryos to be used for:

#### **1. Treatment of a named partner**

If you would like your partner or another named individual to be able to use your gametes or embryos in their own treatment or in treatment with a surrogate they must be named on the appropriate consent form.

The person named on your consent forms will be the only person able to use your stored gametes or embryos for treatment after your death. If you do not name a person on the forms, then no one will be permitted to use your gametes or embryos for treatment after your death or in the event of mental incapacity. If your circumstances change after you have completed the consent forms (for example, if you separate from the partner you have named on this form), or if you wish to withdraw your consent, you will need to contact your clinic to complete further forms.

If a surrogacy arrangement would be required, or if you are in a same sex female relationship and you wish to donate your eggs to your partner you will need to receive relevant information, be offered counselling, undergo further screening tests before you die or become mentally incapacitated. Depending on your circumstances you will also be required to complete one or more of the following consent forms:

- 'Your consent to providing eggs or embryos for surrogacy' (HFEA WSG)
- 'Your consent to providing sperm or embryos for surrogacy' (HFEA MSG)
- 'Your consent to providing eggs or embryos created with your eggs for your partner's treatment' (HFEA WPT form)

#### **Storage conditions**

If you consent to the use and storage of your gametes or embryos after your death or becoming mentally incapacitated, the law permits your gametes or embryos to be stored for your named partner's use for 10 years from the date of your death or being certified as lacking capacity. It is important that you understand this storage period cannot be extended, however the conditions for storage and use vary for gametes and embryos:

- Gametes (eggs or sperm)  
If your named partner does not use your gametes within the 10 year period, then 10 years after your death, the clinic will be required to remove all your gametes from storage and dispose of them.
- Embryos  
If your named partner does not use your embryos, whether created before or after your death, within this 10



year period, then 10 years and six months after your death, the clinic will be required to remove all your embryos from storage and dispose of them.

Your embryos can only be used and stored during this 10 year period if there is also effective consent for use and storage from other gamete provider (your partner or donor).

## **2. Treatment for someone else**

If you wish your gametes or embryos to be used in the treatment of someone else if you die or become mentally incapacitated, please speak to the clinic for more information.

Depending on the circumstances, you will need to undergo additional screening, receive relevant information, be offered counselling and complete one or more of the following consent forms:

- 'Your consent to donating your eggs or sperm' (HFEA WD or MD form)
- 'Your consent to donating embryos' (HFEA ED form)

You can specify on these forms if you wish to impose any restrictions for use of the frozen gametes or embryos such as naming a particular individual.

## **3. Training purposes**

In the event of your death or mental incapacity, you may have gametes or embryos that your named partner does not want to use (for example, because the gametes or embryos are not needed, or are not suitable, for treatment).

In this circumstance you can consent to your gametes or embryos being used or stored after your death or loss of capacity for potential use by designated healthcare professionals to practice the techniques involved in fertility treatment.

If you are unsure of anything in relation to your own circumstances, please ask the clinic

## **Long Term Cryostorage - Fertility Preservation**

Fertility preservation is a treatment for individuals who are either not yet in a position to start or grow a family, but also for others who may be experiencing medical complications such as cancer. Both circumstances may risk long-term fertility becoming compromised and a lower chance of pregnancy in the future. Some medical treatments may risk prematurely compromising their fertility, for example, patients genetically predisposed to premature ovarian failure or those undergoing chemotherapy or surgery for non-cancer diseases or wishing to store gametes before gender reassignment treatment, should consider fertility preservation options.

### **Fertility preservation options for women**

#### **Egg cryopreservation (egg freezing)**

If a woman does not have a long term partner, she may attempt to store eggs. Following a cycle of ovarian stimulation and egg recovery (similar to an IVF cycle), all retrieved mature eggs are cryopreserved by the process of vitrification. Vitrification freezes eggs extremely rapidly and appears to be the optimal method. Mature eggs are very large cells and the chromosomes within them are not held within a nucleus. These properties make eggs very sensitive to disruption from the freezing process. When a woman returns after completion of her treatment, the frozen eggs are thawed and each surviving egg is injected with a single sperm using ICSI (intra-cytoplasmic sperm injection). Approximately 80% of eggs survive the freezing process and fertilisation rates are similar to those seen with 'fresh' eggs.



### **Embryo cryopreservation (embryo freezing)**

If the woman is in a stable relationship, the couple may wish to freeze embryos instead of eggs. The woman undergoes a cycle of ovarian stimulation and egg retrieval as in conventional IVF. On the day of egg collection, fertilisation of the mature oocytes is attempted by IVF or ICSI. All fertilised oocytes are left to develop into embryos and subsequently frozen at the blastocyst stage of development. Embryo freezing is a relatively successful procedure, and the chance of conceiving following embryo freezing is similar to a fresh embryo. Although more successful than egg freezing, embryo storage should only be carried out for couples in a stable relationship as, if the couple separate, the male partner may withdraw his consent for continued storage and treatment. As a result, the embryos would have to perish.

### **Fertility preservation options for men**

Cancer is the most common condition seen in young men, the treatment of which may cause infertility. Treatments may involve significant surgery (for testicular malignancies), chemotherapy and radiotherapy, which can lead to testicular failure, meaning that the testes are unable to produce sperm in the future. However, some men may wish to freeze their sperm due to reducing sperm counts or before gender reassignment treatment.

### **Sperm Cryopreservation (sperm freezing)**

Men facing potentially sterilising treatments should be offered the opportunity to freeze their sperm before they start treatment. A semen sample is produced, the sperm quantity and quality assessed before being frozen for the future. When the patient returns to use the samples, they may be used within insemination treatment or, if there are additional female factors or the semen sample is of poorer quality, within IVF and/or ICSI treatments.