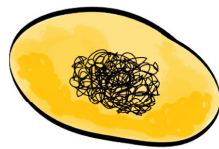


# Pre-Implantation Genetic Diagnosis

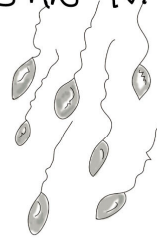


WHEN FAMILIES KNOW THEY MIGHT PASS ON A GENETIC CONDITION TO THEIR CHILD...

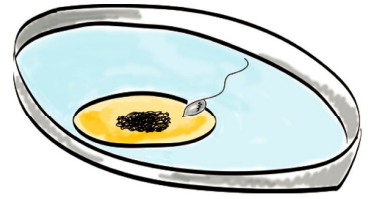
THEY CAN GO TO AN IVF CLINIC...



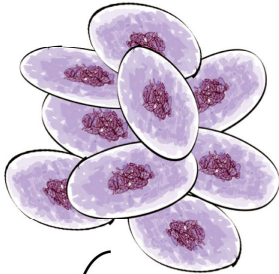
+



=



... TO CONCEIVE THEIR BABY IN THE LAB



AFTER THE EMBRYO HAS GROWN FOR 2-3 DAYS, IT HAS ABOUT 64 CELLS. IT WOULD FIT ON THE HEAD OF A PIN.



ONE CELL FROM THE EMBRYO IS TESTED FOR THE GENETIC CONDITION THAT AFFECTS THE FAMILY...



... IF THE EMBRYO IS FREE FROM THE CONDITION, IT CAN BE IMPLANTED IN ITS MOTHER TO CONTINUE TO DEVELOP NATURALLY



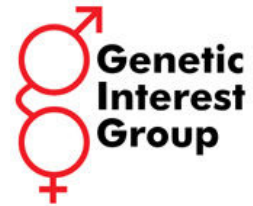
LEADING TO A HEALTHY BABY AND HAPPY FAMILY!

NO TEST FOR THE FAMILY'S CONDITION IS NEEDED DURING PREGNANCY, SO THERE IS NO NEED FOR THE MOTHER TO CONSIDER TERMINATING HER PREGNANCY



FURTHER INFORMATION IS AVAILABLE OVERLEAF →

# Pre-Implantation Genetic Diagnosis



Unit 4D, Leroy House  
436 Essex Road  
London N1 3QP  
Tel: 020 7704 3141  
Fax: 020 7359 1447

- Some couples who wish to have a child know that there is a risk that their child might have a **serious genetic condition**. For example, they may already have a child with a condition, or the couple might be 'carriers' of a condition that affects another close relative.
- **Preimplantation genetic diagnosis** (PGD) is a technology that allows embryos to be tested for serious genetic conditions, so that only an embryo without a specific condition is implanted into a woman. This can provide an important alternative to couples who wish to avoid testing in early pregnancy, followed by a possible termination of pregnancy.
- However, even though the couple might not have any fertility problems, if they wish to use PGD they have to go through **IVF treatment**, as illustrated overleaf. IVF carries certain risks for the woman, and can be an emotionally draining experience.
- The use of PGD is tightly regulated by the **Human Fertilisation and Embryology Authority** (HFEA). The HFEA Code of Practice (7<sup>th</sup> edition) states that "The use of PGD should be considered only where there is **a significant risk of a serious genetic condition being present in the embryo**." Therefore PGD will not be licensed for the selection of 'socially' desirable traits.
- Any clinic wishing to perform PGD must be licensed by the HFEA for the condition in question. The HFEA will consider many factors before issuing a licence, including the view of the people seeking the treatment, the likely degree of suffering associated with the condition, the availability of effective therapy, and the family circumstances of the people seeking treatment.
- Licences have previously been issued by the HFEA for conditions that can affect children from birth (such as **cystic fibrosis**, **beta thalassaemia** and **Duchenne muscular dystrophy**), and for 'late onset' conditions such as **Huntington's disease** and some **cancers** that run in families.
- The new HFE Bill sanctions the HFEA licensing process, and makes explicit the limits to the use of PGD. For example, embryos known to be at risk of "developing a serious mental or physical disability" or "serious illness" must not be preferred to embryos where there is no such risk.

*Illustrated by Rebecca Kent: [rebecca@rebeccakent.com](mailto:rebecca@rebeccakent.com)*