

A pair of hands wearing blue nitrile gloves is shown holding a red, 3D-printed model of a DNA double helix. The hands are positioned on either side of the model, with fingers gently gripping it. The background is a soft-focus laboratory setting.

## ROLE OF PREIMPLANTATION GENETIC TESTING (PGT) IN HELPING PREGNANCY OUTCOMES

**Preimplantation Genetic Testing (PGT) plays a crucial role in helping improve pregnancy outcomes in several ways:**

**Screening for Genetic Disorders:** PGT allows the screening of embryos for genetic abnormalities before implantation. This helps identify embryos with genetic disorders, reducing the risk of passing on hereditary diseases to the child.

**Improved IVF Success Rates:** PGT can help select the healthiest embryos for implantation during in vitro fertilization (IVF), increasing the chances of a successful pregnancy and reducing the likelihood of miscarriage.

**Parent related genetic abnormalities:** It can result in various conditions in their offspring, including Down syndrome caused by an extra chromosome 21, or cystic fibrosis.

**Reducing the Risk of Multiple Pregnancies:** By selecting the healthiest embryos, PGT can reduce the need to implant multiple embryos during IVF, decreasing the risk of multiple pregnancies and associated complications.

**Family Balancing:** PGT can assist couples in family balancing by selecting embryos of a desired gender, which can be important for some families.

**Reducing Emotional and Financial Burden:** PGT can spare couples the emotional and financial burden of going through multiple unsuccessful IVF cycles, as it helps select the most viable embryos for implantation.

**Reducing the Need for Selective Abortion:** PGT can reduce the need for selective abortion in cases where genetic abnormalities are detected after traditional conception. This can be emotionally challenging for couples.

**Overall, PGT plays a pivotal role in enhancing the chances of a successful pregnancy and the birth of a healthy child in cases where genetic factors may pose risks to the pregnancy and future child's health. However, it's essential to consider the ethical, social, and legal aspects associated with PGT as well.**