

# Having trouble conceiving?

Preimplantation genetic screening (PGS)  
may improve IVF success



# PGS may improve your chance of a successful pregnancy

If you've struggled to get pregnant or experienced an early miscarriage following *in vitro* fertilization (IVF), our preimplantation genetic screening (PGS) solution may be able to help. With PGS, your embryos are screened before transfer to make sure they have the correct number of chromosomes—a crucial factor in the success of a pregnancy.<sup>1-4</sup> PGS also allows you to transfer a single embryo with higher confidence instead of multiple embryos, reducing the likelihood of complications associated with multiple pregnancy.<sup>5,6</sup> In fact, using PGS as part of the IVF process has shown to increase implantation success rates.<sup>4,7,8</sup> Talk to your doctor to see if PGS is right for you.

## How can PGS help improve IVF success?

During the IVF process, PGS screens embryos to find those most likely to have the correct number of chromosomes. This may help to increase the chances of successful implantation and an ongoing pregnancy—while decreasing the chance of miscarriage.<sup>4,6-8</sup> PGS can also help you and your doctor decide about single embryo transfer, which reduces the chance of a high-risk multiple pregnancy.<sup>5,6</sup>



## **What are chromosomes?**

Chromosomes are the structures inside our cells that carry our genetic makeup, or DNA. Human cells typically have a total of 46 chromosomes—23 chromosomes come from the mother, and 23 chromosomes come from the father.<sup>1</sup>

## **What is aneuploidy?**

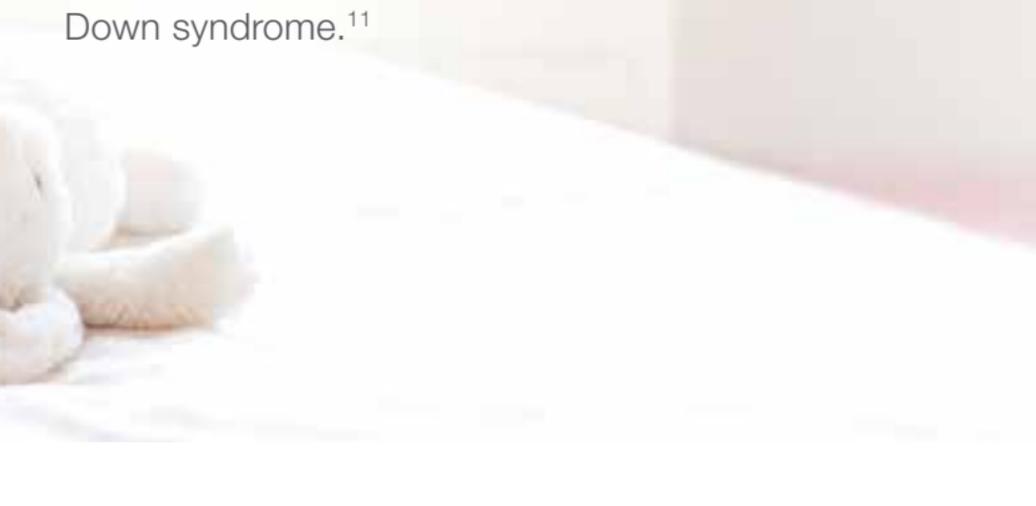
When an embryo has an incorrect number of chromosomes, it is referred to as aneuploidy (an-yu-ploy-dee). An extra copy of a chromosome is called a trisomy (tri-so-mee), and a missing copy of a chromosome is called a monosomy (mon-o-so-mee).<sup>1</sup>

## **Who is at risk for having embryos with aneuploidy?**

Aneuploidy can occur in embryos in women of any age. However, the chances of aneuploidy increase as the mother's age increases. On average, approximately half of embryos in an IVF cycle are aneuploid, although this number may be higher in women of increased maternal age.<sup>2-4</sup>

## **Why should I worry about aneuploidy?**

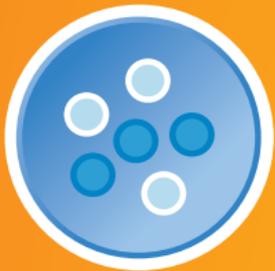
Embryos with aneuploidy often fail to implant, and those that do implant often result in miscarriage.<sup>9,10</sup> A pregnancy with aneuploidy can sometimes lead to a live birth.<sup>2</sup> However, in most cases, these babies will have physical abnormalities and/or intellectual disabilities.<sup>11</sup> The most common aneuploidy in live born babies is trisomy 21, also known as Down syndrome.<sup>11</sup>



# How PGS works



Following ovarian stimulation, egg retrieval, and fertilization, a single or a few cells are biopsied from the embryo.



Embryos are screened for aneuploidy.



The embryos most likely to be euploid (ie, having the correct number of chromosomes) are either transferred to the uterus or frozen for future use.



The chances of IVF success may be improved.<sup>1-4</sup>

Discover how the Illumina PGS solution helped a family struggling with infertility at [www.illumina.com/PGSsuccess](http://www.illumina.com/PGSsuccess).

# Ask your doctor about PGS

For more information on PGS, visit:  
[www.illumina.com/patientPGS](http://www.illumina.com/patientPGS)

## References

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Names have been changed to protect the family.

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