

International Federation of Fertility Societies

Global Standards of Infertility Care

Standard 8

Reducing the incidence of multiple pregnancy following treatment for infertility

Guidance for practitioners

Name	Reducing the incidence of multiple pregnancy following treatments for infertility
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Introduction

Multiple pregnancy is a well recognised adverse consequence of treatment for infertility.^{1,2,3} Whilst efforts in a number of states have been successful in reducing the incidence of high order multiple pregnancies, the incidence of twins continues to be high^{4,5,6}. The numbers of multiple pregnancies resulting from ovulation induction,⁷ intra uterine insemination with ovarian stimulation and IVF/ICSI is a major public health concern placing significant burdens on health resources^{8,9,1}. Multiple pregnancy increases the likelihood of pre-term labour and significantly increases the risk of maternal and infant morbidity and mortality^{10,11,12}. These risks are increased in poor resource settings.¹³

Scope of this guidance

This guidance covers all forms of assisted conception including IVF and related treatments, including the use of donor gametes, intra uterine insemination in combination with ovarian stimulation and ovulation induction for anovulatory infertility.

Recommendation for Practice

a. **Pre-treatment advice**

All patients should be given verbal and written information about the likelihood of multiple pregnancy following infertility treatment, what the risks of multiple pregnancy are to both mother and baby and how treatment can be modified to reduce the incidence of multiple pregnancy.

b. **Ovulation induction**¹⁴ (meaning the induction of ovulation for the treatment of anovulatory infertility)

1. Optimum response is the development of a single mature ovarian follicle.
2. Women prescribed clomiphene, other anti oestrogens and gonadotrophins, should be advised of the possibility of multiple pregnancy resulting from this treatment.
3. Because of the unpredictability of response and consequent risk of multiple pregnancy, optimum monitoring is by transvaginal ultrasound.
4. Ovulation induction using gonadotrophins should always be monitored by ultrasonography to assess follicular development.
5. Practitioners should be aware of the possibility of intermediate sized follicles releasing competent oocytes and increasing the risk of multiple pregnancy.

c. **Intrauterine insemination**¹⁵(IUI) with ovarian stimulation (also known as IUI/Controlled ovarian stimulation or IUI/superovulation)

1. Women and their partners undergoing IUI with ovarian stimulation should be informed about the possibility of multiple pregnancy, including high order multiples.

2. Monitoring of follicular response with ultrasound is essential in this treatment.
3. Practitioners should be aware of the possibility of intermediate sized follicles (13-16mm) as they may release competent oocytes and increase the risk of multiple pregnancy.

d. **IVF, ICSI, with or without donor eggs and including fresh and frozen embryos**
1,16,17,18,19,20

1. Strategies should be used that reduce multiple pregnancy whilst maintaining pregnancy rates. This applies equally to the replacement of fresh and frozen embryos.
2. Elective single embryo transfer (eSET) should be encouraged in all patients and should be used in good prognosis patients and where maternal history increases the risk to the mother if a multiple pregnancy was to occur.
3. Transfer of a blastocyst embryo increases the chance of implantation compared to transfer of cleavage stage embryos. Ideally only a single blastocyst should be transferred because of the increased implantation rate and risk of multiple pregnancy.
4. When euploid embryos are transferred (PGDa/PGS/PGTa), eSET is recommended.
5. When donor oocytes are used to create embryos elective single embryo transfer should be used.
6. Embryo cryopreservation forms an essential part of the ART programme as this enables the sequential replacement of a single embryo generated from the same fresh stimulation cycle.

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