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**Does embryo aneuploidy really significantly  
increase with increasing gonadotropin dosages?**

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Women in the industrialized world increasingly defer family building. To overcome the age-related decline in female fecundity, higher gonadotrophin dosages are commonly utilized to optimize oocyte yield in women of advanced reproductive age.

Faultless completion of meiosis I and II is crucial for chromosomal integrity and, hence, oocyte diploidy. Whether supraphysiological gonadotrophin concentrations impair euploidy rates of gametes obtained in the course of assisted reproduction, remains a matter of debate. While some reproductive endocrinologists claim high dosage stimulation as beneficial for women with diminished ovarian function, others recommend minimal stimulation to maximize embryonic competence.

If meiosis - a process extremely sensitive to disruption - were to be influenced by gonadotrophins, pregnancy potential should be influenced by dosage and composition (i.e. recombinant FSH versus hMG) of gonadotrophins used in the course of assisted reproduction.

The present lecture gives an overview of current literature on the subject and presents new insights on the impact of gonadotrophin dosage and composition on oocyte diploidy and embryonic competence in the course of fertility treatment.