

# Should obese, smoking and alcohol-consuming women receive assisted reproduction treatment?

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The European Society of Human Reproduction and Embryology (ESHRE) has published a position statement on the impact of the life style factors obesity, smoking and alcohol consumption on natural and medically assisted reproduction.

In a literature study the ESHRE Task Force on Ethics and Law summarised the negative effects of obesity, smoking and drinking on the natural reproductive potential of patients, on IVF results, [pregnancy complications](#) and outcomes and finally on the health of the future child. The paper is published online today (19 January 2010) in Europe's leading [reproductive medicine](#) journal [Human Reproduction](#). The group made five recommendations.

1) In view of the risks for the future child, fertility doctors should refuse treatment to women used to more than [moderate drinking](#) and who are not willing or able to minimize their [alcohol consumption](#).

2) Treating women with severe or morbid obesity required special justification. The available data suggested that weight loss would incur in a positive reproductive effect, although more data was needed to establish whether assisted reproduction should be made conditional upon prior [life-style](#) changes for obese and smoking females.

3) Assisted reproduction should only be conditional upon life style

changes, if there was strong evidence that without behavioural modifications there was a risk of serious harm to the child or that the treatment became disproportional in terms of cost-effectiveness or obstetric risks.

4) When making assisted reproduction conditional upon life style modifications, fertility doctors should help patients to achieve the necessary results.

5) More data on obesity, smoking and alcohol consumption as well as other life style factors were necessary to assess reproductive effects. Fertility doctors should continue research in this area.

ESHRE acknowledged that this was a complex issue due to personal, patient, professional and societal responsibilities and also in terms of what these responsibilities meant with regard to safety of mother and child and fair and equitable access to treatment. The respect for patient autonomy needed to be balanced with the moral weight of the interests of society and the future child.

## **Obesity**

According to the group obesity negatively affected reproductive potential through interference with hormonal and metabolic mechanisms leading to lower ovulation frequency and reduced chances of conception. The risk of gestational diabetes increased from twofold in overweight women to eightfold for morbidly obese women. The infants of obese mothers were at risk of perinatal death, congenital abnormalities such as neural tube defects (80% increase) and cardiovascular anomalies (30% increase).

## **Smoking**

The risk of infertility was thought to be twice as high in smokers compared to non-smokers. Female smokers needed more time to become pregnant, were less likely to do so spontaneously and had a higher risk of miscarriage. Having an accelerating effect on oocyte depletion, smoking was suggested to lead to an increase in 10 years with regards to IVF outcome. Lower birth weight, a higher risk of oral facial clefts and Sudden Infant Death Syndrome were associated with maternal smoking. Male smokers were at risk of producing sperm of reduced quality and concentration.

## Alcohol Consumption

Reduced conception, lower pregnancy rates and higher miscarriage rates were suggested as adverse effects of alcohol consumption. The known effects of alcohol consumption were summarised under Foetal Alcohol Spectrum Disorders (FASD) such as physical anomalies and behavioural and cognitive deficits. Other risks associated with prenatal alcohol consumption were foetal death, preterm labour and compromised foetal growth.

**More information:** ESHRE Task Force on Ethics and Law 17: Life style related factors and access to medically-assisted reproduction. *Human Reproduction Journal*, [doi:10.1093/humrep/dep458](https://doi.org/10.1093/humrep/dep458)

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