

References

HFEA - Human Fertilisation and Embryology Authority
www.hfea.gov.uk

Patient Advise and Liaison Service (PALS)

PALS will act on your behalf when handling patient and family concerns, they can also help you get support from other local or national agencies. PALS, is a confidential service.

Royal Shrewsbury Hospital, Tel: 0800 783 0057 or 01743 261691
Princess Royal Hospital, Tel: 01952 282888

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www.sath.nhs.uk

The Shrewsbury and Telford Hospital 
NHS Trust

The Shropshire and Mid Wales Fertility Centre

Multiple Pregnancy Information For Patients (extracted from HFEA guidance)

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Multiple births - what are the risks?

Multiple pregnancy and birth is the most serious risk of in vitro fertilisation (IVF) to children's health and wellbeing. For twins and triplets, the health risks are mainly associated with the increased rate of premature birth.

Perinatal mortality, neonatal morbidity, and long-term health implications are all higher for twins and triplets. Multiple pregnancy and birth also results in increased health risks for mothers.

The psychosocial impact of the birth of multiples can affect many areas of life: emotional, practical and financial. Some evidence suggests that parents of IVF multiples experience greater difficulties in parenting and more problems with child behaviour than parents of naturally conceived children.

Risks to the mother

For mothers, risks arising from multiple pregnancies range from those that are less serious to those that are life-threatening.

Pregnancy complications

Pregnancy complications including hypertension, pre-eclampsia and gestational diabetes may require an early admission to hospital for the last weeks of pregnancy, and that the birth may have to be induced early. These complications, whilst they can occur in singleton pregnancies, are much more common in multiple pregnancies:

- Higher rates of miscarriage.
- Higher chance of pregnancy induced hypertension: 20% in women pregnant with twins compared with 1–5% in women pregnant with a singleton.
- Higher risk of pre-eclampsia: up to 30% for twin pregnancies compared with 2–10% in singleton pregnancies.
- Higher risk of gestational diabetes: up to 12% in twin pregnancies compared with around 4% for singleton pregnancies.
- Higher chance of intervention in delivery: elective and emergency caesarean section rates are higher for mothers of twins.

Maternal mortality Maternal mortality associated with multiple births is 2.5 times greater than with singletons.

- Almost 20% of mothers of twins experience depression and marital difficulties, with first-time parents of twins and those who have had fertility treatment at even greater risk.
- Twins demonstrate significantly lower levels of cognitive development than their singleton counterparts.
- Parents of twins experience greater difficulties in parenting and more problems with child behaviour.
- For first time parents with a history of infertility, these factors add to parenting stress and have an adverse effect on psychosocial wellbeing.
- Mothers of low birth weight infants who require prolonged neonatal care experience greater levels of anxiety, and feel lower levels of attachment to their babies, than mothers of full-term, healthy infants.

Impact on children's services

Twin and triplet births result in increased pressure on neonatal, paediatric and social services:

- Because they are born early, 40–60% of twins are admitted to neonatal intensive care when they are born, with over 10% requiring more than 4 weeks care. This is almost a ten-fold increase over the incidence in singletons.
- Neonatal units have sufficient staff and resources to care for a given number of babies who need special, high dependency or intensive care. Therefore, an unpredictable increase in emergency admissions of multiples, as a result of ART, creates situations which are considered clinically unsafe. In practice, more than 70% of units in the UK have had to close their doors to admissions with emergency transfer of women in labour outside their health authority or catchment area.
- This further impacts on finite resources, with prioritisation of funding resulting in mothers and babies receiving care in three separate hospitals.
- The NHS expenditure on one set of IVF triplets in the first year of their lives would equate to the cost of almost 2000 cycles of IVF treatment.

Additional health complications

Numerous other health complications have been linked to multiple births, including:

Respiratory distress: 8% of twins require assisted ventilation and 6% suffer from respiratory distress syndrome compared to 1.5% and 0.8% for singletons respectively.

Cerebral palsy: Twins are between four and six times more likely to suffer from cerebral palsy than singletons. 12.6:1000 twins have cerebral palsy, compared with 2.3:1000 singletons. A European multi-centre study reported that the risk of cerebral palsy is increased by low gestational age and birth weight.

Delay in language development: 6.4% of IVF twins need speech therapy compared with 3.2% of IVF singletons.

Disability: Because twins are far more likely to be born preterm and of low birth weight, they are at much greater risk of disability. One study found that in 7.4% of twin pregnancies, at least one child has a disability.

Congenital malformations: One study found congenital malformations in 6.3% of twins compared with 4.7% of singletons.

Psychosocial impact

Many people struggle with the emotional, practical and financial repercussions of a multiple birth, with parents far more susceptible to mental health problems such as extreme stress and depression.

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Some evidence also suggests that parents of IVF multiples experience greater difficulties with parenting and more problems with child behaviour than parents of naturally conceived children.

The literature suggests that, parents of multiples have often gone through a lengthy and difficult process addressing and treating their fertility problems, which impacts on their longer-term experience of parenthood.

Research shows that:

- Mothers and families with twins are more likely to:
 - ⇒ experience severe parenting stress
 - ⇒ have increased maternal depression
 - ⇒ have a reduced ability to work outside the home; and
 - ⇒ have an increased rate of divorce

Risks to the child

For children, the highest risk from being one of a number of multiples is prematurity, with all its attendant problems.

Premature birth

The greatest risk associated with multiple pregnancies is premature birth:

- The average gestation for twins is 37 weeks, compared to 40 weeks for singletons.
- 10% of twin births take place before 32 weeks of gestation compared to just 1.6% of singleton births. The risk of delivery before 28 weeks of gestation is 6 times higher for twins than for singletons.
- Guidelines from NICE show that the risk of preterm birth is considerably higher in multiple pregnancies than in singleton pregnancies, occurring in 50% of twin pregnancies.
- Studies have shown that almost 50% of twins have low or very low birth weight compared with 8% of singletons.
- Research has estimated that on average IVF twins are born three weeks earlier, and weigh between 800g and 1000g less, than IVF singletons.

Perinatal mortality

- Twins are six times more likely to die in the first year of life than singletons (24.1:1000 compared with 4.4:1000).
- In 2013 the rate of neonatal mortality for twins was almost five times higher than for singletons.

Neonatal care

- Between 40 to 60% of IVF twins are transferred to neonatal care units when they are born, compared with 20% of IVF singletons. In addition, research has shown that 12% of IVF twins require neonatal intensive care for more than four weeks compared with only 1.6% of IVF singletons.
- Of babies born before 26 weeks, 75% die very soon after birth and before admission to neonatal care. Those who are admitted have a 39% chance of survival, and 62% of those that survive have significant brain damage, retinopathy of prematurity, and/or on-going oxygen dependence at their predicted due date.