

## Multiple pregnancies and preterm birth

**Multiple pregnancies, especially twins, have been rising in number over the past 30 years.**



Professor Jan Dickinson

There has been a 60 per cent increase in twins and a 400 per cent increase in triplets in Australia since the 1980s.

Twins make up about 1.5 per cent of births in Australia (4600 sets each year), whilst triplets and higher are much less common – about 60 each year, or 2 per cent of all multiple pregnancies.

### Why has there been an increase in multiple births in Australia?

There are two reasons:

- Women are having babies at an older age. In the 1980s, only 5 per cent of women having a baby were older than 35 years, while now it is about 22 per cent. As women become older there are hormone changes that increase the

chance of releasing more than one egg at ovulation and, therefore, the opportunity for more than one baby.

- Increasing use of fertility treatments such as ovulation induction medications and in-vitro fertilisation techniques. While fertility treatments have enabled many women to have a pregnancy that they may never otherwise have

had, such medical therapies are associated with an increased chance of a multiple pregnancy. About 60 per cent of triplets and 90 per cent of quadruplets occur due to fertility treatments.

Although most parents are excited to be having a twin pregnancy, there is an increased chance of a problem occurring during the pregnancy and birth.

Twin pregnancies are much more likely to be complicated by preterm birth than single ones and for the babies to be of low birth weight.

One in every 10 twin pregnancies are born at less than 32 weeks gestation and more than half deliver preterm (less than 37 weeks gestation).



Ultrasound of a twin placenta with arrow indicating the "twin peak" appearance characteristic of a dichorionic placenta.



Ultrasound of a twin placenta with arrows showing thin dividing membrane of a monochorionic placenta.

Being born preterm places the twins at increased risk of lung problems, infection, brain development problems and death.

Most pregnancy complications are increased in twins, compared with a single.

If the twins share one placenta (monochorionic) the risks are extremely high, compared with those twins with two placentas (dichorionic).

Fortunately, early ultrasound is very good at sorting out the placental types and the obstetrician can then create a pregnancy care plan specific to the form of twinning.

Review of the medical evidence for interventions to decrease preterm birth in twins has not shown that current prevention treatment strategies used in single pregnancies translates to multiple pregnancies.

These include:

- Bed rest - Placing the mother on bed rest does not decrease preterm birth rates in twins – in fact there is evidence it may actually lead to psychological harm in women.
- Cervical cerclage (stitch) - This method does not reduce preterm birth for most twin pregnancies, although the number of women in trials has been much smaller than for other treatment options.
- Mechanical cervical pessary (a plastic ring placed around the cervix) – There are now more than 2000 twin pregnancies in trials using the mechanical cervical pessary and, apart from one trial in Spain, this treatment option has not been effective in preterm birth reduction.
- Vaginal progesterone treatment - Overall, this method does not appear to significantly reduce preterm birth rates in twins, although some recent analyses of the published data suggests an improvement in some important outcomes, such as very low birth weight and need for mechanical ventilation.

At this point, the routine use of progesterone, either by injectable or

vaginal administration, cervical cerclage or the mechanical cervical pessary, cannot be recommended in multiple pregnancies.

In women with additional risk factors such as a previous preterm birth or a short cervix on ultrasound, these treatments may be an option.

There is much research currently in this area and we hope for major advances in the near future.

But why do the treatment options available for preterm birth prevention in single pregnancies not appear to be effective in multiple pregnancies?

It is most likely that the mechanism of preterm birth in multiple pregnancies is often different to that in singletons.

Further research is needed to investigate the mechanisms of preterm birth in multiple pregnancies before new medical treatments can be developed.

The judicious use of fertility treatments to reduce the number of multiple pregnancies is an important preventative intervention.

In Australia and New Zealand the use of a single embryo transfer rather than dual/multiple embryo transfer in younger women having IVF has been championed.

Careful monitoring of ovulation stimulation is another strategy adopted by fertility treatment centres to reduce multiple pregnancies.

Twins are also at increased risk of other pregnancy complications that may require a preterm delivery, such as poor fetal growth of one or both babies.

Therefore, both medically indicated and spontaneous preterm deliveries are very common. Indeed, 20 per cent of all preterm births result from multiple pregnancies and more than half of all twins are born preterm.

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