

### What is an adjuvant therapy?

Adjuvant therapy, also known as adjunct therapy, or 'add-ons', comprises a group of medical interventions that are given alone or in combination in addition to the standard IVF treatment. It is important to note that for many of these add-ons there is little or no evidence of their effectiveness to improve live birth rates. Nevertheless, your fertility specialist may decide to offer these treatments to individualise the care of your IVF treatment.

Monash IVF has made several fact sheets on add-ons to help you make a fully informed decision. Before you agree, you will need to weigh the evidence that this add-on may help you against the side effects it may cause, the known risks to mother and baby, as well as the extra costs.

### Who may recommend an adjuvant therapy to you?

Your Fertility Specialist will discuss and recommend any adjuvant therapies they feel may be appropriate for the treatment you are going to undertake. If recommended, these therapies will be individualised to compliment your fertility treatment cycle.

## Dexamethasone

### What is Dexamethasone normally used for?

Dexamethasone is a glucocorticoid steroid that is similar to but has a longer half life and is more potent than prednisolone. Glucocorticoids act as a anti-inflammatory and immunosuppressant. Dexamethasone is used to treat many different inflammatory conditions including severe allergic disorders, skin conditions, arthritis, and breathing disorders.

### Why is Dexamethasone used in IVF?

Some clinicians and researchers believe that a woman's immune system can be overactive and make it less likely for an embryo to implant. Often natural killer cells are mentioned as the underlying cause of implantation failure but there is currently very little good evidence to support this. Dexamethasone is used to suppress the immune system and it has been suggested that it may improve the pregnancy rate.

### Will using Dexamethasone increase my chance of success?

A thorough review of 14 randomised controlled trials has found no effect of glucocorticoids on live birth rates or miscarriage rates when used in an unselected IVF/ICSI population (Boomsma et al., 2012). The authors noted that there was a small positive effect in women who were undergoing IVF (not ICSI) but they warned this finding needs to be noted with great caution, as there is no plausible explanation for this. It is still unclear whether prednisolone or dexamethasone may be of benefit to improve implantation rates in patients with an autoimmune disease.

It is worth noting that Monash IVF published a study in 2015 that showed a significant drop in pregnancy rates in women undergoing a frozen embryo transfer while they were on a combination of corticosteroids and ant-clotting agents such as aspirin and/or heparin. There was no improvement in pregnancy rates in women undergoing a fresh transfer.

### Is the use of Dexamethasone in IVF an off-label prescription?

Yes.

### Are there any side effects and risks with using Dexamethasone?

Common side effects can include:

- headache

Common side effects continued:

- dizziness
- trouble sleeping
- mood change such as euphoria or depression
- heartburn

With prolonged and high dose use side effects include:

- acne
- thin, fragile skin
- red or purple blotches or lines under the skin
- slowed healing of cuts and bruises
- increased body hair growth
- changes in the way fat is distributed in the body
- extreme tiredness
- weak muscles

Glucocorticoids are powerful drugs that adversely affect a wide variety of body functions and reduce your ability to fight a stressful situation. There are a large number of medical conditions where corticosteroid treatment is contraindicated, including diabetes, glaucoma, gastric ulcers, and osteoporosis. If you suffer from medical conditions, it is important you check with your fertility specialist that you do not have a contra-indication.

Corticosteroid use during pregnancy is associated with an increased risk of gestational diabetes and maternal hypertension.

Prolonged steroid use delays wound healing and increases the risk of infection. There is a risk of a rare but serious complication called 'avascular necrosis of the head of the femur' in which the top of the hip bone becomes eroded and is permanently damaged.

### **WARNING**

It is dangerous to suddenly stop corticosteroid treatment, especially if the treatment has lasted for 4 or more weeks. This type of medication needs to be withdrawn slowly under medical supervision.

### **Are there any risks to the safety of a baby by using Dexamethasone during pregnancy?**

Dexamethasone is a Category A drug. Category A drugs have been taken by a large number of pregnant women and women of childbearing age without any proven increase in the frequency of malformations or other direct or indirect harmful effects on the fetus having been observed.

Nevertheless, there is possibly a slightly increased risk of congenital heart defects, cleft lip/palate (reported to be 6 times higher than normal) and incomplete formation of the anus in babies born to women who have taken steroids during pregnancy, particularly in the first trimester.

### **What are the costs?**

Your Fertility Specialist will provide you with a prescription to obtain any medications which have been prescribed to you. The cost of these medications may vary from pharmacy to pharmacy, however these costs are in addition to your treatment cycle.

### **What do I do if I have more questions?**

If you have any questions or require further information, please contact your Fertility Specialist.