Who is this information for?

This information is only of relevance to women on fertility drugs to stimulate ovary production.

What is OHSS?

Ovarian hyperstimulation syndrome (OHSS) is a potentially serious complication of fertility treatment, particularly of in vitro fertilisation (IVF) treatment.

What are the symptoms of OHSS?

The symptoms are abdominal swelling or bloating because of enlarged ovaries, nausea and, as the condition gets worse, vomiting.

- **Mild OHSS** - mild abdominal swelling or bloating, abdominal discomfort and nausea.
- **Moderate OHSS** - symptoms of mild OHSS but the swelling and bloating is worse because fluid is building up in the abdomen. There is abdominal pain and vomiting.
- **Severe OHSS** - symptoms of moderate OHSS plus extreme thirst and dehydration because so much fluid is building up in the abdomen, passing very small amounts of urine which is very dark in colour (concentrated), difficulty breathing because of build-up of fluid in the chest and a red, hot, swollen and tender leg due to a clot in the leg or lungs (thrombosis). If you develop any of the symptoms, seek medical help immediately.

What causes it?

Fertility drugs stimulate the ovaries to produce many egg sacs (follicles). Sometimes there is an excessive response to fertility drugs and this causes OHSS.
Overstimulated ovaries enlarge and release chemicals into the bloodstream that make blood vessels leak fluid into the body. Fluid leaks into your abdomen and, in severe cases, into the space around the heart and lungs. OHSS can affect the kidneys, liver and lungs. A serious, but rare, complication is a blood clot (thrombosis). A very small number of deaths have been reported.

Who gets it?

Mild symptoms are common in women having IVF treatment. As many as one in three (33%) women develop mild OHSS. About one in 20 (5%) women develop moderate or severe OHSS.

The risk of OHSS is increased in women who:

● have polycystic ovaries
● are under 30 years
● have had OHSS previously
● get pregnant, particularly if this is a multiple pregnancy (twins or more).

How long does OHSS last?

Most of your symptoms should usually resolve in a few days. If you have mild OHSS, you can be looked after at home.

● If your fertility treatment does not result in a pregnancy, OHSS will get better by the time your period comes.
● If your fertility treatment results in a pregnancy, OHSS can get worse and last up to a few weeks or longer.

What should I do if I have mild OHSS?

● Make sure you drink clear fluids at regular intervals. Make sure you do not drink in excess. If you have pain, take ordinary paracetamol or codeine (no more than the maximum dose). You should avoid anti-inflammatory drugs (aspirin or aspirin-like drugs such as ibuprofen), which can affect how the kidneys are working.
● Even if you feel tired, make sure you continue to move your legs.

When should I call for medical help?

Call for medical help if you develop any of the symptoms of severe OHSS, particularly if you are not getting any pain relief.
• If you start to vomit, have urinary problems, chest pain or any difficulty breathing contact your fertility clinic immediately.

• If you are unable to contact your fertility clinic, contact:
  - your general practice
  - the A&E department at your local hospital
  - NHS Direct on 0845 4647 (if you are in England or Wales)
  - NHS 24 on 0845 24 24 24 (if you are in Scotland).

When will I need to stay in hospital?

If your symptoms get worse, or if you have the symptoms of severe OHSS, your doctor may advise you to be admitted to hospital.

At the hospital, the doctor will carry out the tests for mild OHSS such as blood tests and ultrasound.

If you are vomiting, you may need a drip to replace the fluids you have lost. The fluid will help to keep you hydrated and may contain sugar and carbohydrates (for energy), minerals and chemical elements (for regulating and maintaining the organs in your body).

What should happen at the hospital?

There is no specific test that can diagnose OHSS. A diagnosis is made on the basis of your symptoms.

Your doctor will ask you to describe your symptoms and will examine you. In addition, your doctor may:
  - ask about how much urine you are passing and whether it is darker than normal
  - take an initial measurement of your waistline to see if the fluid is building up or reducing
  - check your weight to confirm if fluid is building up or reducing
  - scan your ovaries to measure how big they are and whether there is any fluid build-up in your abdomen
  - take a blood test to measure how concentrated your blood is and how well your kidneys are working.

Your doctor should also think about other problems that can cause similar symptoms of pain and abdominal swelling. This might include pelvic infection, ovarian cysts, internal bleeding, ectopic pregnancy and appendicitis.

If you are well enough to stay at home, regular check-ups are usually performed.
What is the treatment for OHSS?

There is no treatment that can reverse OHSS. OHSS will get better with time, so treatment is to help symptoms and prevent problems. This includes:

- pain relief such as paracetamol or codeine
- anti-sickness drugs to help reduce nausea and vomiting
- an intravenous drip to rehydrate you
- support stockings and heparin injections to prevent a clot in the leg or lungs (thrombosis)
- a procedure known as a paracentesis may be offered if your abdomen is tense and swollen because of fluid build-up. This is when a thin needle or tube is inserted into the abdomen to remove fluid.

Is my baby at risk if I have OHSS?

There is no evidence of problems in the baby as a result of OHSS.

Is there anything else I should know?

- Your fertility clinic should provide you with full written information about your fertility treatment, including the risk of OHSS and a 24-hour helpline number.
- If you develop OHSS, your fertility clinic will advise changing from hCG (human chorionic gonadotrophic) injections to progesterone injections or suppositories. The hCG injections can make OHSS worse.
- If you have mild to moderate OHSS, your ovaries are enlarged and painful. You should avoid having sex or doing strenuous exercise to avoid injury to the ovaries.
- In hospital you will be under the care of a specialist.
- A few women develop OHSS as an after-effect of other fertility treatment.

Useful organisations

Human Fertilisation and Embryology Authority (HFEA)
21 Bloomsbury Street
London WC1B 3HF
Tel: 020 7291 8200
Website: www.hfea.org.uk
Sources and acknowledgements

This information is based on the Royal College of Obstetricians and Gynaecologists (RCOG) guideline on Ovarian hyperstimulation (which was published in September 2006 and is due to reviewed in September 2009). This information will also be reviewed, and updated if necessary, once the guideline has been reviewed. The guideline contains a full list of the sources of evidence we have used at: www.rcog.org.uk/resources/Public/pdf/green_top_5_management_ohss.pdf

Clinical guidelines are intended to improve care for patients. They are drawn up by teams of medical professionals and consumer representatives who look at the best research evidence available and make recommendations based on this evidence.

This information has been developed by the Patient Information Subgroup of the RCOG Guidelines and Audit Committee, with input from the Consumers' Forum and the authors of the clinical guideline. It was reviewed before publication by women attending clinics in London and Bristol. The final version is the responsibility of the RCOG Guidelines and Audit Committee.

A final note

The Royal College of Obstetricians and Gynaecologists produces patient information for the public. This is based on guidelines which present recognised methods and techniques of clinical practice, based on published evidence. The ultimate judgement regarding a particular clinical procedure or treatment plan must be made by the doctor or other attendant in the light of the clinical data presented and the diagnostic and treatment options available.

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