When a woman receives the diagnosis of molar pregnancy, it often feels like one more thing to worry about when you are already upset about losing the pregnancy. However, this fact sheet should help to reassure you that almost all molar pregnancies can be safely and effectively treated and your chance of a normal pregnancy in the future (if you want one) is very high.

This fact sheet will also help you understand what the diagnosis means, and what treatment and follow up are needed.

**Molar pregnancy** is also called hydatidiform mole. It is part of a larger group of conditions with the medical name of gestational trophoblastic disease (GTD). Molar pregnancy is by far the commonest type of GTD and is the only one dealt with in this fact sheet. The other forms of GTD are very rare and need individual care.

**What is a molar pregnancy?**
A molar pregnancy is an uncommon type of miscarriage where there is no embryo, or a very abnormal embryo (very early baby), and a fairly large amount of abnormal placental tissue (the afterbirth which feeds the baby during pregnancy). Molar pregnancies are due to a mistake of nature that occurs at the moment the pregnancy begins.

Molar pregnancy happens in about 1 - 2 per 1000 pregnancies overall and about 2% of miscarriages. Most people won’t have heard of it until it happens to them or someone they care about. It is estimated that each year in Australia there are over 500 molar pregnancies. If a woman has had a molar pregnancy before, she has just over 1% chance of having one again and almost 99% chance of not having another one.

**Why does a molar pregnancy occur?**
Molar pregnancy mostly occurs by chance. While it is a bit more common in women under 20 years and over 40 years, and in women from some world regions such as Asia, the fact is it can happen to any woman.

At the beginning of a normal pregnancy, the sperm and egg join together to form a normal embryo and a normal placenta. A sperm has 23 chromosomes and an egg has 23 chromosomes, so after they join together the pregnancy has 46 chromosomes with half coming from each parent. Chromosomes are that part of our cells which carry our genetic material (genes and DNA).

In a molar pregnancy, the joining together of the sperm and egg don’t happen in the usual way.

**There are two types of molar pregnancy:**

**Complete molar pregnancy**
This type of pregnancy happens when a sperm joins with an egg that has lost its own chromosomes (genes). We do not know why some eggs have no chromosomes. Once the sperm is inside the egg it doubles (duplicates) its own genes making 46 chromosomes. Complete molar pregnancies have no embryo but do have much more placenta than usual. This is because DNA from the egg is needed to make an embryo and DNA from the sperm is important in making the placenta.

**Partial molar pregnancy**
Here two sperm join with one egg and form a pregnancy with a very large number of chromosomes. In partial molar pregnancies an embryo does develop but it is very abnormal and cannot survive. In these pregnancies the placenta is also larger than usual. Partial molar pregnancies are 2 – 3 times more common than complete molar pregnancies and tend to cause fewer problems.
As a result of the abnormal chromosome number and type, the placenta in molar pregnancies is abnormal.

- Over time, it begins to look like a bunch of tiny fluid-filled grapes called vesicles - this explains the name hydatidiform which comes from the Greek word hydatid meaning vesicle or blister.

- Sometimes the vesicles are inclined to grow (burrow) into the wall of the uterus (womb) - this explains the name ‘mole’ which is a burrowing animal.

There is also generally a lot more placental tissue than usual. This tissue produces the pregnancy hormone, bHCG, which is used for pregnancy tests. The level of bHCG in the blood is followed closely after treatment of molar pregnancies to make sure the molar tissue is going away completely.

Why is a molar pregnancy important?
Most molar pregnancies are cured by a simple day-surgery operation which empties the uterus using a small instrument passed up the vagina (suction curettage, D&C). After this treatment over 98% of partial molar pregnancies and over 80% of complete molar pregnancies don’t need any further treatment.

However, the reason molar pregnancies need to be diagnosed and followed up, is because in a small number of cases they can turn into cancer and need treatment with chemotherapy.

The two most important types cancer developing after molar pregnancy are called:
- Persistent molar pregnancy (persistent GTD, sometimes called invasive mole)
- Choriocarcinoma

Persistent molar pregnancy
This is when, even after a very careful and complete removal of the pregnancy tissue via a suction curettage, some of the molar tissue won’t come away and stays behind in the uterus and continues to expand. This tissue may also grow into (invade) the wall of the uterus. The reassuring news is that persistent molar pregnancy can nearly always be successfully cured with chemotherapy (anti-cancer treatment). Persistent molar pregnancy occurs in:

- about 15 - 20% of complete molar pregnancies
- about 1- 2% of partial molar pregnancies.

Choriocarcinoma
Very rarely a molar pregnancy can form a more aggressive type of cancer called a choriocarcinoma which can spread around the body. Like persistent molar pregnancy, this can also usually be successfully treated with with the cure rate close to 100%.

- only 2-3% of complete molar pregnancies become choriocarcinoma
- only rarely do partial molar pregnancies become choriocarcinoma.
How is the diagnosis of a molar pregnancy usually made?
Usually a molar pregnancy ends in a miscarriage within the first three months of the pregnancy. So the usual symptoms are bleeding in early pregnancy and an ultrasound which does not show a normally-developing pregnancy.

- Before the modern age of home pregnancy tests and early ultrasound, diagnosis and suction curettage often happened much later in pregnancy. In those cases, women with molar pregnancies could develop quite a lot of symptoms such as severe vomiting, abdominal swelling, overactive thyroid problems like heart palpitations, and blood pressure problems. Such complications are rare now.

These days, most women don’t find out they have a molar pregnancy until after the pregnancy tissue has been examined under a microscope by a specialist doctor called a pathologist. This is because the ultrasound diagnosis of molar pregnancy before 12 weeks is not very accurate.

- A molar pregnancy often looks just like an ordinary miscarriage on ultrasound. This is especially so with partial mole but sometimes also with complete mole

- Alternatively, sometimes when an ultrasound predicts the pregnancy may be molar, it turns out to be just a normal miscarriage.

We know that accurate diagnosis of molar pregnancies needs the tissue to be looked at under a microscope. This is why we ask all women who have a miscarriage at home to try and collect the tissue and bring it in to us as soon as possible and always within 12 hours (it should be kept in the fridge until then). All pregnancy tissue collected during curettage in hospital is checked by the pathologist.

How is Molar Pregnancy treated?
If an ultrasound suggests molar pregnancy is likely, the pregnancy is treated by curettage. This is a short (10-15 min) and simple procedure done under full anaesthetic which means you are asleep in the operating theatre [please see our fact sheet on curettage for miscarriage].

Rarely molar pregnancies can bleed more heavily during surgery than other miscarriages, and precautions are taken in theatre to prevent this.

- Before surgery we test your pregnancy hormone levels (bHCG), your blood count (to make sure you are not anaemic) and your blood group (as we do for all pregnancies and miscarriages). Other tests are only done if needed for a special reason.

- If your blood group is Rh negative we will give you an injection of Anti D before you leave hospital. This prevents you from developing antibodies in your blood which could affect future pregnancies.
Follow up after treatment for molar pregnancy
Because a small number of molar pregnancies can become persistent, or develop choriocarcinoma, you will need to have follow up pregnancy hormone bHCG blood tests after a molar pregnancy.

It is very important that your bHCG tests are done by the same laboratory each time as every laboratory uses its own technique of measuring bHCG. This can give differing results and may confuse your management plan.

Follow up bHCG after Partial Molar pregnancy
A blood bHCG level every week until the level is normal (<5IU/L) for three weeks in a row.

- If the bHCG is normal within 8 weeks of your curette then you do not need further tests and you can try getting pregnant again if you want to.
- If the levels are not normal after 8 weeks from your curette, then you will have follow up tests as for a complete molar pregnancy.

Follow up bHCG after Complete Molar pregnancy:
A blood bHCG level every week until the level is normal (<5IU/L) for three weeks in a row. THEN

- A blood bHCG level every month for 6 months. If it remains normal after 6 months you can try getting pregnant again if you wish.
- Note that if the bHCG becomes negative within 8 weeks, the 6 months is counted from the time of your curette (or passing of tissue if you miscarried at home). However, if the bHCG takes longer than 8 weeks to become negative, then the 6 months is counted from the time it becomes negative.

Contraception and preventing pregnancy during follow up
You should avoid pregnancy during the period of bHCG follow up - until our staff say getting pregnant is okay. This is because a new pregnancy will produce its own bHCG and then we will not be able to tell if the molar pregnancy has gone away completely.

The oral contraceptive pill has a low failure rate and is a good option especially after a complete mole since follow up is always at least 6 months. The pill can be commenced before the bHCG level has dropped to negative.

An intrauterine contraceptive device (IUCD) can be inserted 6 weeks after the curette (or passing of the pregnancy if you miscarried at home). It also has a low failure rate.

Barrier methods such as condoms can be used but have a higher failure rate and are not generally advised after complete mole for this reason. They may be suitable after partial mole if the bHCG is dropping quickly and you want to get pregnant again soon. They must be used reliably.

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What if my bHCG levels don’t fall to < 5 IU/L? Sometimes the bHCG levels:

- do not go down as fast as we would like (weekly fall of less than 10% over 4 results)
- go up instead of down (weekly rise of more 10% over 3 results)

This could mean you are developing a persistent molar pregnancy or, much less commonly, choriocarcinoma. In this situation we will organise these tests and follow up for you:

- a pelvic ultrasound
- a chest X ray and a CT scan your chest and abdomen
- referral to an expert in persistent molar pregnancy as you may need some chemotherapy.

If this happens, try not to worry. You can be confident that treatment of persistent molar pregnancy or choriocarcinoma with chemotherapy means you will be cured in almost 100% of cases. In addition, this chemotherapy should not affect your chances of having another baby and will not cause abnormalities in future pregnancies.

What care should I take in the next pregnancy? There is almost 99% chance you won’t have another molar pregnancy. However, in any future pregnancy you should:

- have an ultrasound at about 8 weeks to make sure the baby is growing well and the pregnancy looks normal
- make sure to tell your doctor that you have had a molar pregnancy in the past
- always have a bHCG test 6 weeks after any future pregnancy no matter how many normal pregnancies you have. Persistent molar pregnancy or choriocarcinoma can very rarely happen again after a future normal pregnancy.