

Information for women with pituitary adenomas before, during and after pregnancy



This patient leaflet is based on the European Society of Endocrinology Clinical Guideline on pituitary adenomas in pregnancy, written by an expert pan-European Endocrine team. The aim of this guideline is to help clinicians managing women with a pituitary adenoma before, during and after pregnancy, and is published in the *European Journal of Endocrinology* (2021) 185:G1–G33. The information in this leaflet is not intended to replace your doctor's advice.

Background

You are diagnosed with a pituitary adenoma (a benign pituitary tumour). The course and treatment of a pituitary adenoma depends on the size of the adenoma and whether or not it is producing too much of a hormone that can affect the body. In some women, the adenoma or its treatment may affect the way the pituitary gland works, resulting in a shortage of hormones that the pituitary gland is normally able to produce and that are essential for good health. This requires starting medication to replace the missing hormones. When you are of reproductive age, having a pituitary adenoma might impact your fertility and subsequent pregnancy. Your endocrinologist (hormone doctor) can counsel you about this. Sometimes, treatment to assist with fertility may be advised. This patient leaflet is specifically designed to inform you about pituitary adenoma and pregnancy.

Before pregnancy

Hormone replacement therapy, if needed, should be initiated and/or optimised in consultation with your endocrinologist before you get pregnant. Regarding hormone-producing pituitary adenomas, prolactinomas are the most common. While even a slightly raised prolactin level might impair fertility, treatment with medication to lower prolactin to normal levels is in general very successful, and a healthy pregnancy can usually occur. Medical therapy that has been started before pregnancy (called dopamine agonists such as cabergoline or bromocriptine) can be safely stopped at the diagnosis of pregnancy in most women with prolactinomas.

In case of women desiring pregnancy who have large adenomas or residual tumours, as well as in women with

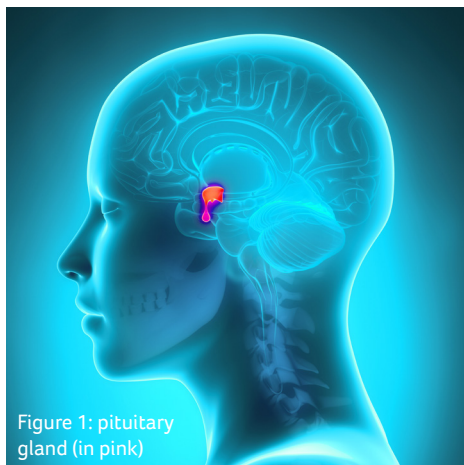


Figure 1: pituitary gland (in pink)

adenomas resulting in high levels of cortisol (Cushing's disease) or growth hormone (acromegaly), follow up in expert centres with involvement of a multidisciplinary team (MDT) including endocrinologists, neurosurgeons, radiologists, gynaecologists and obstetricians is recommended. The MDT will evaluate and advise if any treatment changes

are necessary during pregnancy. In acromegaly, medical therapy (short- and long-acting somatostatin analogues such as octreotide and lanreotide or dopamine agonists) can usually be stopped during pregnancy. When you have Cushing's disease, you are advised not to become pregnant until cortisol secretion is controlled by surgery.

During pregnancy

During pregnancy, hormones produced by the placenta influence most hormone concentrations that are controlled by the pituitary gland. In addition to careful evaluation of signs and symptoms you experience, your doctor will perform blood tests to check your hormone levels on a regular basis. The hormone replacement treatment doses you took before pregnancy, including thyroid hormone (L-thyroxine), glucocorticoids (e.g. hydrocortisone, cortisone, prednisolone, plenadren) or vasopressin analogue (desmopressin, DDAVP) may need to be increased during pregnancy. If you are on growth hormone (GH) replacement therapy, this can be suspended at the time of confirmation of your pregnancy since the placenta produces large amounts of GH starting during the first trimester.

It is normal for the size of the pituitary gland to increase by up to

200% during pregnancy in women without pituitary adenomas. Only a small proportion of pituitary microadenomas (tumours with a diameter of less than 10 mm) increase in size during pregnancy, whether they produce hormones or not. If you have a large adenoma (macro-adenoma, tumour of at least 10 mm or larger in diameter) or residual tumour near the optic nerves (nerves that control the vision), follow-up examinations by an eye doctor might be indicated during pregnancy to assess possible growth. Although magnetic resonance imaging (MRI) is considered safe in pregnancy, its use should be avoided, especially during the first trimester. In rare cases, it might be considered when your vision or nerves near the pituitary gland are affected or when you have severe headaches. Restarting medical therapy or surgery is not usually needed during pregnancy, but may sometimes be advised. Although treatment with dopamine agonist (for prolactinomas), or somatostatin analogue (for acromegaly) appears to be safe during pregnancy for you and your baby, as a safety principle, they should only be introduced by an endocrine expert.

Vaginal delivery is usually possible; whether a Caesarian section is advised should be discussed with your gynaecologist and obstetrician.

After pregnancy

In most women, hormonal activity and the size of the pituitary adenoma should be checked 2–6 months after pregnancy. Medical therapy that has been stopped during pregnancy will usually be restarted. However, some prolactinomas are in remission after pregnancy. In contrast, rebound of

disease activity shortly after delivery is frequent in acromegaly. (Re)starting contraception should be discussed with your endocrinologist/gynaecologist.

In summary, with careful supervision from an expert multidisciplinary team, most women with pituitary adenomas are able to have a successful pregnancy.

Q & A

Q1: Will I be able to breast feed my baby?

A1: Breast feeding is often possible for women with pituitary adenomas, but will not be possible if you are taking dopamine agonists (such as cabergoline, bromocriptine). Also, when you need to resume somatostatin analogues (octreotide, lanreotide) or other drugs to control the size of the tumour or hormonal activity during or after pregnancy, you are advised not to nurse.

Q2: Where can I get more information and support about pituitary adenomas?

A2: You can find more information through the following website:
www.ese-hormones.org/for-patients/patient-advocacy-groups



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