

Patient information factsheet

Risk-reducing bilateral salpingo-oophorectomy (RRBSO)

We have given you this factsheet because we would like to offer you a preventative surgical procedure called a risk-reducing bilateral salpingo-oophorectomy (RRBSO). It explains what a RRBSO is, what the procedure involves, and what the potential advantages and disadvantages of the procedure are.

This factsheet aims to support the discussions you will have with your gynaecologist. It is important that you take time to consider your options and ask any questions you may have before you decide whether or not having a RRBSO is the right choice for you.

What is a risk-reducing bilateral salpingo-oophorectomy (RRBSO)?

A RRBSO is a surgical procedure that involves removing both of your ovaries and both of your fallopian tubes to reduce your risk of developing ovarian cancer in the future. The reason your fallopian tubes are also removed is because some ovarian cancers originate from the fallopian tubes.

Why am I being offered this procedure?

We are offering you this preventative surgery because we have identified you as being at high risk of developing ovarian cancer. This is because you have inherited (been passed on from a parent) one of the following gene mutations:

- a BRCA gene mutation
- Lynch syndrome

A BRCA gene mutation

BRCA1 and BRCA2 are genes that play an important role in repairing our DNA (genetic material). A BRCA1 and BRCA2 gene mutation affects the function of the gene and increases the chance of breast, ovarian or prostate cancer development. Individuals who carry a mutation in BRCA1 or BRCA2 are also more likely to develop cancer at a younger age.

Lynch syndrome

Lynch syndrome is a rare condition that can run in families. It used to be called hereditary non-polyposis colorectal cancer (HNPCC). People affected by Lynch syndrome have a higher risk of developing some types of cancer, including cancer of the:

- bowel
- womb (endometrial cancer)
- ovary
- stomach
- pancreas
- small bowel
- ureter and renal pelvis

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As women with Lynch syndrome also have a higher risk of developing cancer of the womb, we may offer to perform a hysterectomy (surgery to remove your womb) at the same time as the RRBSO.

The table below shows the increased risk a woman with one of these gene mutations has of developing certain types of cancer:

Inherited genetic mutation	Risk of breast cancer	Risk of ovarian cancer	Risk of bowel cancer	Risk of womb cancer	Risk of pancreas cancer
None (general population)	11.7%	1.1%	6.3%	2.3%	1.1%
BRCA1	72%	44%	-	-	Increased
BRCA2	69%	17%	-	-	Increased
Lynch syndrome (MLH1)	-	20%	41%	18%	7.5%
Lynch syndrome (MSH2)	-	24%	48%	30%	10.9%
Lynch syndrome (MSH6)	-	1%	12%	26%	Not enough data available

When should I consider having the procedure?

The age at which a woman's risk of developing ovarian cancer becomes significantly increased varies depending on her family history and which gene fault is present.

Below are the recommended ages for having a RRBSO:

- a **BRCA1 gene mutation**: 40 years old
- a **BRCA2 gene mutation**: 45 years old
- **Lynch syndrome**: between 40 and 50 years old (depending on the type of Lynch syndrome)

It is important that you are aware that your risk of developing cancer increases after the recommended ages listed above.

What are the advantages of the procedure?

A RRBSO will:

- reduce your risk of developing ovarian cancer by 95% (the risk reduction is not 100% as there is a 1 to 4% risk that cancer may develop in the lining which covers your abdominal organs)
- reduce your risk of developing breast cancer by 37% if you are a BRCA1 or a BRCA2 mutation carrier (or by 64% if surgery is performed before you reach the natural menopause)
- reduce any anxiety you may have about getting cancer in the future
- prevent benign (not harmful) disease of the ovaries (for example, cysts)

What are the disadvantages of the procedure?

Surgical menopause

The ovaries are the main source of oestrogen production in the female body. The removal of both of your ovaries will cause you to experience the menopause (when a woman stops having periods and is no longer able to get pregnant naturally) immediately after your operation, regardless of your age. This is known as a surgical menopause.

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Due to the sudden decline in a woman's oestrogen levels, surgical menopause can cause more severe symptoms than a natural menopause. Common symptoms of the menopause include:

- hot flushes
- night sweats
- problems sleeping
- loss of libido (sexual desire)
- vaginal dryness
- mood changes

Loss of fertility

You will not be able to become pregnant once your ovaries have been removed. For this reason, it is important that you consider whether your family is complete before you agree to have the surgery. For more information about this, please speak to your clinician and ask for a referral to the fertility clinic.

Heart disease

If you are less than 45 years old at the time of your surgery, you are at increased risk of developing heart disease in the future if no hormone replacement is used.

Osteoporosis

If you are less than 45 years old at the time of your surgery, you are at increased risk of osteoporosis (a health condition that weakens bones, making them fragile and more likely to break) in the future if no hormone replacement is used. We may offer you a DEXA scan to assess the strength of your bones. This will help us to predict your future risk of fractures.

How are symptoms of surgical menopause managed?

Hormone replacement therapy (HRT)

The main treatment for menopausal symptoms is hormone replacement therapy (HRT). HRT involves taking hormones to replace the decline in your body's own levels around the time of the menopause.

There are three main types of HRT:

- combined HRT (oestrogen and progestogen) – for women with menopausal symptoms who still have their womb (oestrogen taken on its own can otherwise increase your risk of womb cancer)
- oestrogen-only HRT – for women who have had their womb removed in a hysterectomy
- testosterone HRT – this is usually only recommended for women whose low sex drive (libido) does not improve after using HRT

HRT is available as tablets, skin patches, gels, nasal sprays and creams.

It is recommended that HRT should only be used for menopausal symptom management up until the age of 51. This is because HRT has been associated with an increased risk of breast cancer if taken after this. After the age of 51, women are advised to make some lifestyle changes and try non-hormonal alternatives to help manage their symptoms instead.

HRT is not suitable for everyone and your age and medical history may affect whether or not you can take it. Your menopause specialist will discuss this with you.

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Exercise

Exercising regularly can help prevent heart disease and reduce your hot flushes. It can also improve your general wellbeing.

Counselling

Talking to your family and friends, having counselling and cognitive behavioural therapy (CBT) can help you to manage the side effects of the menopause.

Why should I consider having a hysterectomy at the same time as the RRBSO?

We may offer to perform a hysterectomy (surgery to remove your womb) at the same time as the RRBSO. This is because:

- women with Lynch syndrome have a higher risk of developing cancer of the womb.
- women who still have a womb and wish to receive HRT in the future will be prescribed combined HRT, as oestrogen-only HRT can increase your risk of womb cancer. The disadvantage of this is that the progesterone component of combined HRT can increase your risk of breast cancer. Progesterone also causes some women to experience certain side effects, such as headaches, abdominal bloating, mood disturbances and breast tenderness. Depending on the severity of the side effects, this can cause some women to stop taking HRT.

Are there any alternatives to having a RRBSO?

This surgery is the best way of reducing your risk of developing ovarian cancer. Currently, there is no screening test that reliably detects ovarian cancer at an early stage.

Removal of just the fallopian tubes has not yet been proven to prevent ovarian cancer.

Contact us

If you have any questions or concerns, please contact us.

Menopause team secretary

Telephone: **023 8120 6041**

Useful links

Menopause Matters

Website: www.menopausematters.co.uk

The Daisy Network

Website: www.daisynetwork.org

Cancer Research UK

Website: www.cancerresearchuk.org

Macmillan Cancer Support

Website: www.macmillan.org.uk/cancer-information-and-support/worried-about-cancer/causes-and-risk-factors/lynch-syndrome-ls

NHS

Website: www.nhs.uk/conditions/menopause

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