Department of Clinical Genetics

Risk-reducing surgery: Bilateral Salpingo Oophorectomy (BSO)

Who is the leaflet for? What is its aim?
This leaflet is designed to be read by women who have a \textit{BRCA1} or \textit{BRCA2} gene change, or a significant family history of ovarian cancer and who have been told that a risk-reducing BSO may be a therapeutic option.

What is a Bilateral Salpingo Oophorectomy (BSO)?
A Bilateral Salpingo Oophorectomy (BSO) is a surgical procedure to remove the ovaries and Fallopian tubes. It can usually, but not always, be performed by laparoscopic (keyhole) surgery. A laparoscopic BSO typically takes about an hour. It is a procedure performed under general anaesthetic and you will usually spend most of the day at the hospital.

If you are having a BSO, then your uterus (womb), cervix and vagina will not be removed. However, sometimes a BSO is done as part of a larger operation called a total hysterectomy, where the uterus and cervix are also removed. A total hysterectomy may be considered if a patient has other gynaecological problems, such as fibroids or endometriosis.
Who is a risk-reducing BSO suitable for?

Your doctor, gynaecologist or genetic counsellor may have discussed having a risk-reducing BSO with you. This will usually be considered if you are at increased risk of ovarian cancer, for example, if you are known to have a BRCA1 or BRCA2 gene change or if you have a significant family history of ovarian cancer. There is currently no effective screening for ovarian cancer, so risk-reducing surgery is an option that all at risk women are currently asked to consider.

At what age should I consider a risk-reducing BSO?

A BSO is not usually recommended in women under forty, as ovarian cancer risk is still low up to this age, and having a BSO will immediately bring on menopause. You will be able to discuss the best timing of having a BSO with your doctor.

What are the benefits of having a risk-reducing BSO?

These include:

- Significantly reducing your risk of ovarian cancer. However it is important to note that a very small risk of ovarian cancer remains.
- There is evidence that lifetime risk of breast cancer is reduced in women who undergo a risk-reducing BSO prior to their natural menopause.

What are the potential risks?

It is rare to have problems and the vast majority of patients having this procedure have no difficulties. However, there are complications in a minority of cases and these can include:

- excessive bleeding
- potential damage to the bladder, ureters or bowel
- risk of catching an infection
- risk of thrombosis
- having to convert from a laparoscopic (keyhole) procedure to open (non keyhole) surgery, because of findings or complications during the procedure.
- finding an early cancer or pre cancer that is not yet causing you any symptoms
- long term risks may include an increased risk in heart disease

Your gynaecologist will discuss all these with you in advance.

Menopause

Once both ovaries are removed, this will make a woman infertile. It will also immediately bring on the menopause, if it has not started already. Symptoms of menopause may include hot flushes, vaginal dryness, mood changes, memory or concentration changes and vaginal discomfort with intercourse. If these symptoms cause you discomfort, please talk with your doctor, who may be able to recommend medication such as hormone replacement therapy (HRT).
There is sometimes a greater risk of thinning and broken bones (osteoporosis) after your ovaries are removed. This is more likely to be a concern if your ovaries are removed before your natural menopause or if you are of a slight build. It is important to get the right amount of calcium and vitamin D from your diet or a supplement and there are also medications to help with this. Additionally, regular weight-bearing exercise can help you maintain bone strength. Your doctor may also want you to have a bone density scan to evaluate your bone health.

**What happens during a laparoscopic BSO?**

Usually, you will be asked not to eat or drink for several hours before your surgery (no food for six hours but clear fluid, such as water, can be drunk until two hours prior to surgery). You will be given a general anaesthetic so you will be asleep during the procedure. Your gynaecologist will use a thin telescope with an attached camera and several small surgical tools placed through small incisions, to remove both of your ovaries and fallopian tubes. Scars from these small wounds usually fade quickly in the coming months.

**What should I expect after the surgery?**

You will feel groggy and tired after you wake post surgery. You may experience some vaginal spotting and/or have abdominal cramping or feel bloated. It is common to have some pain in your shoulder for a few days after surgery. You can expect to feel discomfort for a week or so. Tenderness at the belly button may last a little longer because of pressure from clothing.

**When can I go home?**

In almost all cases, you can go home the same day as your operation. In the rare event that your operation has to be converted into an open (non keyhole) procedure, you may need to spend several days in hospital.

**After I get home**

It is normal to feel tired after surgery. You will be given advice on when you can drive and return to work. Most patients can return to work within a week of surgery. Smoking may delay healing, so please refrain from this. A longer period off work will usually be required if you undergo the open procedure.

**How can I find out more?**

Your surgical team will be able to answer any questions you may have. You should also let the medical team know if you have any allergies or problems with anaesthetics or other medications.

**BRCA-related or cancer-related research studies**

There will sometimes be research studies in progress which you may wish to participate in. Any relevant research will usually be discussed with you in clinic, but please do feel free to ask your doctor about current studies.
Support Group
Patients with a BRCA gene change may find the FORCE website helpful at http://www.facingourrisk.org/get-support/local-groups/int-united-kingdom-essex.php

We are now a smoke-free site: smoking will not be allowed anywhere on the hospital site. For advice and support in quitting, contact your GP or the free NHS stop smoking helpline on 0800 169 0 169.

Help with this leaflet:
If you would like this information in another language, large print or audio format, please ask the department to contact Patient Information: 01223 216032 or patient.information@addenbrookes.nhs.uk

Document history
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Contact number: 01223 245151
Publish/Review date: January 2016/January 2019
File name: Bilateral_salpingo_oophorectomy.doc
Version number/Ref: 1/PIN3808