

# The hunt for answers

## Study to shed light on ovarian cancer

Little is known about what causes this deadly disease, or what can be done to help those who are diagnosed, writes **Paula Goodyer**.

If you're a woman diagnosed with ovarian cancer, what can you do to increase your odds of survival? Will getting fitter make a difference, or a change of diet? Or even a prescription for the diabetes drug metformin, which, according to some research, might prolong survival?

Long-time ovarian cancer researcher Penny Webb, an associate professor at the Queensland Institute of Medical Research (QIMR), is looking for answers in a nationwide study into lifestyle factors that might improve survival and quality of life for the 1300 women diagnosed with the disease in Australia each year.

"Women would often ring me up and say 'Should I change my diet?' and I realised that we don't really know, so that's what I'm trying to do now – find out if there's anything that can prevent a recurrence or slow down the progress of the disease," Webb says.

What makes the Ovarian Cancer Prognosis and Lifestyle (OPAL) study so important is that survival rates for ovarian cancer aren't great. While about 88 per cent of women diagnosed with breast cancer survive beyond five years, the five-year survival rate for ovarian cancer is about 42 per cent.

A frustrating aspect of this disease is that its causes are elusive, making it hard to find tactics for prevention – or preventing a recurrence. What's known so far is that the less a woman ovulates in her lifetime, the less likely she is to develop ovarian cancer. That's why anything that puts ovulation on hold – pregnancy, breastfeeding or taking the contraceptive pill – helps lower the risk, while not having children can increase it. Use of HRT is another possible risk factor, although the risk is small and appears to drop fairly quickly after a woman stops taking it, Webb says.

Then there's the role of genes, thrust into the spotlight recently when actress Angelina



Talcum powder: A suspect in the lifestyle factors that may cause ovarian cancer. Photo: iStock

something most of us would consider harmless: talcum powder. The theory is that when talc is dusted around the genital area, it can work its way up to the ovaries via the Fallopian tubes – while not a huge risk, it's been a consistent finding in studies around the world, Webb says.

As for diet, some reports link a high intake of animal fat to the disease and others suggest green tea might be protective, but the evidence isn't strong.

"Everyone believes diet is important and I think it may be – we just don't know what aspects of it might make a difference," Webb says. "The strongest evidence for the influence of diet is with obesity. But one thing we've learnt about ovarian cancer is that it's not one single disease – there are many different types and while obesity seems to

affect some, it may not affect the most aggressive type.

"We're going to look at whether levels of vitamin D make a difference – it's been shown to inhibit the proliferation of cells and to induce cell death in ovarian cancer cells in the lab, so there's good reason to think vitamin D may play a role in the development of ovarian cancer or its progression. We're looking at Omega-3 fats, too – laboratory studies suggest that they may reduce the



Taken too early: (Clockwise from above) Pierce Brosnan's wife Cassandra Harris with the actor in 1985; daughter Charlotte Brosnan has died from ovarian cancer; Angelina Jolie. Photos: WireImage, Getty Images



### Keeping an eye on the gene pool

The death in June from ovarian cancer of Charlotte Brosnan, 41, daughter of actor Pierce Brosnan was doubly tragic. Charlotte's mother, Australian actress Cassandra Harris, died of the same disease in 1991 aged 43.

Charlotte's death prompted Australian experts to highlight updated genetic testing guidelines for ovarian cancer. It is likely a rare gene mutation was responsible for the cancer that killed both mother and daughter but it would have been almost impossible for doctors to detect it before Charlotte became sick.

The director of the Peter MacCallum Familial Cancer Centre, Gillian Mitchell, says testing for a rare mutation of the BRCA1 and BRCA2 genes, known to increase breast and ovarian cancer risk, was not available until 1997.

"Each family with ovarian cancer has their own unique gene mutation," she says. "To find out what that mutation is, we test the person who has the cancer. But, unfortunately, Charlotte's mother died before that test was available."

But if Charlotte Brosnan was tested after developing cancer herself and a gene mutation was identified, Mitchell adds, her blood relatives would now be able to be tested.

risk or the progression of several types of cancer, including ovarian cancer, but data from human studies are still inconclusive.

"There's more evidence that physical activity may be good, although this comes mostly from studies of other hormone-related cancers like prostate and breast cancer, but some research suggests that staying physically active is associated with better quality of life among women with ovarian cancer. We're looking at what helps women cope with the side-effects of chemotherapy so that they can keep going with it, and there's some evidence that physical activity helps."

If she remains cancer-free until December, Merran Williams will have joined that 42 per cent of women who survive past five years. When you ask her what's improved her quality of life, she tells you it's mindfulness meditation and staying fit.

"Research shows that the fear of a recurrence is on a woman's mind all the time ... I think a strategy like mindfulness meditation really helps you cope – you don't think about the future or the past, you just

think of now," says Williams, a nurse working with Bloomhill Cancer Help, a centre for cancer survivors in Queensland.

Her advice to anyone faced with a diagnosis of ovarian cancer is to take the "weedkiller", as she calls chemotherapy, keep up the mindfulness and walk as much as possible to build up your fitness.

"I think being physically active is important for survival," she says. "Even if you're nauseous from the chemo, try and keep walking around the house and garden."

“Fear of recurrence is on a woman's mind all the time.”

Jolie revealed she carries a fault on the BRCA1 gene, which confers a very high (40 per cent) risk of ovarian cancer along with a high risk of breast cancer. Although faults in other genes can also increase a woman's risk, most women who develop ovarian cancer do not have any known genetic risk factors.

But regarding lifestyle factors we might have some control over, the research is inconclusive. The most persistent suspect is

### Are you able to help with the OPAL study?

The Queensland Institute of Medical Research needs women aged 18 to 79 from around Australia who have been diagnosed with ovarian cancer in the past six months to join the study. For more details, visit [opalstudy.qimr.edu.au](http://opalstudy.qimr.edu.au), contact the OPAL helpline on 1800 222 600, or email [opalstudy@qimr.edu.au](mailto:opalstudy@qimr.edu.au).