

## RESEARCH TODAY

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Researcher:  
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# Can sleep fight the big C

UWA student looks for 45 women to take part in a key study, writes **Lisa Calautti**

**W**e all know the benefits of a good night's sleep but few would suspect it could play a vital role in the fight against breast cancer.

University of WA PhD student Jennifer Girschik says she is conducting a world-first study into whether sleeping habits can decrease or increase the risk of breast cancer.

In conjunction with the WA Institute of Medical Research, Ms Girschik needs 45 women aged between 18 and 80 to have their sleeping habits analysed 24 hours a day, over eight days.

To do so, participants must wear an Actiwatch, which Ms Girschik describes as a "retro digital watch from the 1980s".

It is made up of two components — an accelerometer which detects activity and an algorithm — software which analyses how much a person moves and whether it can be considered sleep.

Ms Girschik said her Sleep Validity Study would differ from previous similar studies, because hers focused on sleep quality, not duration.

"It looks at other things like waking up during the night, how long it takes to fall asleep, to how refreshed participants feel in the morning," she said.

"There's some evidence to suggest that longer sleep patterns might help prevent hormonal cancers such as breast cancers."

The study is an integral part of a larger research project — the Breast Cancer, Environment and Employment Study led by Lin Fritschi, a WAIMR expert in occupational cancers.

It is researching the environmental and occupational risk factors of breast cancer. "There is some evidence to suggest shift workers have more risk with the theory of sleep deprivation. But you don't have to be a shift worker to be sleep deprived," Ms Girschik said.

There are three theories on how sleep can affect breast cancer.

The first is the havoc a lack of sleep plays on the immune system. A bad night's sleep stops it from functioning well, hence increasing susceptibility to breast cancer.

Second, sleep profoundly affects the metabolic system.

"If you are not sleeping very well the body produces hormones to make you hungrier, crave more calories hence contributing to being overweight," Ms Girschik said. "Being overweight is a huge risk factor."

Third, the effect of sleep on melatonin. "It's a hormone we think has anti-cancer properties and it's normally released in the dark. So if you are awake during the night and turning on the lights that may affect the production of melatonin," she said.

Before the eight days of monitoring begins, all study participants will be required to fill in a questionnaire about their sleeping habits.

Participants will be asked to keep a sleep diary.

The answers will be compared with the Actiwatch findings.

Ms Girschik has already completed some pilot testing on her friends, with surprising results. Some fell asleep within one minute, with the worst taking about 40 minutes.

To take part in the Sleep Validity Study, phone Jennifer Girschik on 9346 3464 or email [Jennifer.girschik@uwa.edu.au](mailto:Jennifer.girschik@uwa.edu.au)