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## Anti-Mullerian Hormone

Anti-Mullerian Hormone (AMH; also known as Mullerian Inhibiting Substance or Mullerian Inhibiting Factor) is well known to those studying fetal anatomy as the factor that leads to the suppression of the development of the Mullerian duct in the presence of the developing testes in a male fetus. After puberty in boys, AMH drops to a very low level, whereas in women it increases as puberty approaches and is an excellent marker of the number of small follicles in the ovary.

In an adult female, AMH is secreted by the granulosa cells of the developing follicles within the ovary (so-called pre-antral and small antral follicles), and consequently can act as a surrogate marker of "ovarian reserve".

The reserve of the ovary is a term used to describe how well a woman may respond as part of an IVF cycle in terms of follicle development, and it is also a marker of a woman's proximity to the menopause.

Consequently, it has been dubbed an "egg-timer" and many patients are now requesting the test to attempt to determine their fertility. This can lead to a degree of panic about fertility in some, and a level of complacency in others, as it does not predict the subsequent rate of decline of the "ovarian reserve". Furthermore, in an older woman it may suggest she is several years from the menopause but it does not reflect the quality of her eggs, which unfortunately still follow the normal age-related decline.

A young woman with a low ovarian reserve may consider the option of freezing her eggs as part of her fertility plan for the future. Unfortunately, this is not a very reliable way for her to preserve her fertility, and involves an IVF cycle that has potential complications. Worse still, she may aim to generate some embryos with her current partner who may not be the partner she ultimately settles down with, leading to problems later in life.

A young woman with low AMH suggestive of low ovarian reserve is best advised to speak at length to her GP, and to discuss her options with a fertility specialist and a trained fertility counsellor before she rushes into anything she may regret in the future.

The most acceptable indications for measuring AMH in a young woman is following chemotherapy or ovarian surgery, or where there is a family history of premature menopause. Women in these circumstances may be at risk of premature ovarian failure and may benefit from appropriate counselling about fertility preservation options.

### Key Points

- AMH is produced by ovarian follicles and as such, is a surrogate marker of "ovarian reserve".
- However, it does not predict the rate of ovarian decline or the quality of eggs, so its use as a fertility predictor is limited.
- Indications for AMH measurement are post chemotherapy or ovarian surgery, or where there is a family history of premature menopause. ■



■ This woman with bilateral polycystic ovaries, seen at laparoscopy, will have a very high AMH serum concentration.

## workers' comp matters

By Michelle Reynolds  
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## Proactive Approach Helpful for Workers' Compensation Cases

*Regular readers may remember my last column quoting research showing the alarming health impact of being out of work long term*

In workers' compensation cases, an effective relationship between the treating practitioner, the GP, the injured worker and their employer, and specialist medical and allied health providers is one of the best indicators of a successful return to the workforce.

Even where a GP feels that they don't have the time or the background to manage a workers' compensation case, we often see excellent results.

Take Simon. After twisting his knee at work, he visited the GP. The knee was swollen and Simon was in pain. Unable to determine the extent of the injury, the GP prescribed painkillers and gave Simon a 3-day medical certificate stating he was "totally unfit".

On the third day, swelling had increased and pain hadn't subsided. Still unable to diagnose the extent of the injury, the GP referred Simon for a MRI scan. It revealed damage that looked as if it might require surgery and so the GP referred Simon to a specialist. The specialist examined the injury – a tendon tear – and felt that it probably wouldn't require surgery.

Simon was keen to return to work – at least to some degree – to take the pressure off his colleagues. Not quite sure whether this would be a good idea, the GP contacted the employer who arranged for a Workplace Rehabilitation Provider (WRP) to start working with Simon.

The WRP developed a return to work program and six-weeks later, Simon was back to full-time work.

**Early diagnosis and appropriate treatment plans lead to early recovery and return to work outcomes.**

**WorkCover WA** is the government agency responsible for overseeing the workers' compensation and injury management system in Western Australia.

The case study above has been fictionalised, but is based on a number of similar real cases. Find more information for GPs, including past Medical Forum articles, on our website at [www.workcover.wa.gov.au](http://www.workcover.wa.gov.au)

