

## INFORMATION SHEET FOR:

### Does Warming-Up on a Video Game Improve Laparoscopic Surgical Skills?

'Warming up' before undertaking a skill set or performance will be a familiar part of many people's lives; tennis players exchange gentle shots prior to commencing a match, athletes don't take to the field 'cold', opera singers warm-up their vocal cords, pianists may play some scales or simple tunes before beginning a concert, an orchestra warms up before performing a symphony. Why should it be any different for surgeons before they perform an operation?

It has recently been demonstrated that warming up has a place in the operating theatre as well, specifically before performing laparoscopic surgery. Unfortunately, pre-operative 'warm-up' has not become a popular part of laparoscopic surgery.

Laparoscopic surgery uses a variety of different skills, some of which are innate and some of which can be taught. As a laparoscopic surgeon is performing a procedure using instruments that may be remote from their hands and has to view the instruments on a 2-dimensional monitor, similarities can be drawn between laparoscopic surgery and playing video games. Some studies have shown that surgeons with a background in video games may pick up laparoscopic surgical skills more quickly than those without such a background. Video games consoles are also cheaper and more readily available than laparoscopic simulators, and they can be easily placed near to the operating room. Therefore they would be an ideal tool for pre-operative 'warm-up' and might help to popularise the concept of warming-up.

#### Study design:

This study aims to determine if warming up on a video games console prior to undertaking a set of laparoscopic tasks improves the performance of those tasks. We hope to recruit 60 participants to help us establish whether this hypothesis is correct. We would hope that participation can be arranged in your own time to minimise any disruption to your work. No payment will be given for participation.

If you choose to partake in the study, you will initially be asked to fill out a short questionnaire asking some demographic questions and some specific questions relating to this topic. You will then be randomly assigned to one of two groups involved in the study. Group A will spend up to 20 minutes using the games console and then undertake a selection of laparoscopic tasks on a simulator, while group B will simply go straight into doing the laparoscopic tasks.

We would expect that during your participation, you will spend 10 minutes filling in the questionnaire and then between 20 and 40 minutes performing tasks depending on which group you are assigned to.

All questionnaires and the results of gaming performance and laparoscopic skills performance will be anonymised and kept on a spreadsheet on a password protected computer.

**Benefits and risks:**

This study does not provide any direct benefit to you as a participant. However, if it proves that games consoles are effective for warm-up, then the ease with which they can be provided to an operating suite means that their uptake as warm-up tools may improve on the current uptake of simulators and therefore lead to improvement in the performance of laparoscopic procedures for patients in the future.

You will have access to practice on a surgical simulator, which may be of use to you in your future career. It is important that you are aware that this is a simulation, and does not reflect on how you may perform after proper training. All performances will be anonymised and information on participants skills will not be shared with third parties.

There is no risk to any participant involved in this study. Participation is voluntary and can be withdrawn at any time. Your participation will have no bearing on academic or workplace assessment outcomes.

Once the work has been completed and published, a copy can be supplied to you if you wish. This will take approximately 6 months from the end of the study.

**Investigators:**

This study is being performed as the research component of a Master's of Minimally Invasive Surgery. The principal investigator is Professor Peter Hewett and the investigator is Mr James Andrews.

**Confidentiality:**

Your information will remain confidential except in the case of a legal requirement to pass on personal information to authorised third parties. This requirement is standard and applies to information collected both in research and non research situations. Such requests to access information are rare; however we have an obligation to inform you of this possibility.

**Contacts:**

Professor Peter Hewett, Consultant Surgeon TQEH, contact: T: 08 67598222;  
e: [peter.hewett@health.sa.gov.au](mailto:peter.hewett@health.sa.gov.au)

Mr James Andrews, Surgical Registrar WCH, contact: T: 0400497057  
e: [jandrews@doctors.net.uk](mailto:jandrews@doctors.net.uk)

**Ethical Approval:**

This study has been approved by:

The Children, Youth and Women's Health Service Research Ethics Committee, contact Brenda Penny, Research Secreteriat, T: 8161 6521

And

The University of Adelaide Research Ethics Committee

And

The Royal Australasian College of Surgeons Research Ethics Committee