



Light therapy reduces "jet lag" and shortens hospital stays

30 April 2019

Using light therapy during anaesthesia helps patients get over the 'jet lag' effect of the anaesthetic and shortens their stay in hospital after surgery, according to a ground-breaking new study.

A research team at University of Auckland had been successfully testing the light therapy on anaesthetised honey bees, but recent clinical trials on patients have cemented that success.

Initially replicating the research in the human population was problematic according to Associate Professor Guy Warman from the Department of Anaesthesiology at the University of Auckland.

"Most people presenting for surgery are suffering from underlying disease or illness and already have disrupted sleep. It wasn't until a urologist showed interest in our bee research that we stumbled onto the perfect patient population – the kidney donor," he says.

Kidney donors are screened and in top health before they go into the operating theatre.

"Obviously a better, faster recovery for kidney donors is a great outcome in an area where more live donors are needed."

Professor Warman told the Australian and New Zealand College of Anaesthetists (ANZCA) scientific meeting in Kuala Lumpur how his team has been using clock-shifting blue light on the kidney donors during surgery, while some get a placebo red light.

"We recorded rhythms in core body temperature, melatonin and sleep wake timing. What we found was those given the red light (placebo) were jetlagged after surgery, while those receiving the blue light suffered less "jet lag" and had a shorter stay in hospital."

They have tested 40 patients over the last three years and are about to publish the results. "We have shown that blue light does reduce the biological clock disruption that occurs after anaesthesia and surgery."

Professor Warman says the research has thrown up possible reasons for the improvement in recovery times, including the blue light affecting the immune function and creating better wound healing, but he says a larger population, multi-national study is needed to further explore this theory.

More than 1900 anaesthetists, pain specialists and other medical practitioners have gathered for the ANZCA meeting New worlds come explore.

The meeting features dozens of significant research papers, workshops and presentations on clinical and scientific advances.