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Please contact Susy Santos at (204) 477-3372 or [ssantos3@vgh.mb.ca](mailto:ssantos3@vgh.mb.ca) if you are interested in fund raising, becoming a donor or volunteering at the Victoria Institute of Clinical Research and Evaluation (Vic R&E).

Visit: <http://www.vgh.mb.ca/vicre> for more info.

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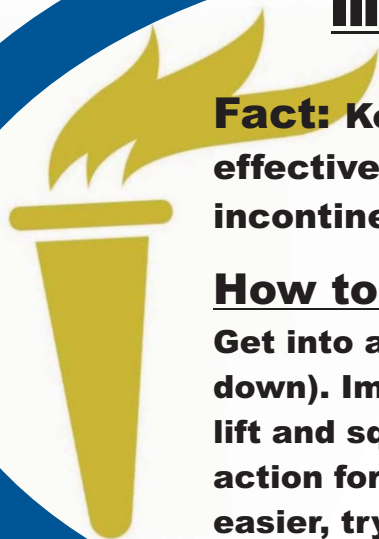
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## Information is Power



**Fact: Kegel exercises are one of the most effective ways to naturally control urinary incontinence.**

### How to do Kegel exercise?

**Get into a comfortable position (either sit or lying down). Imagine you are trying to hold back urine; lift and squeeze from the inside. Try and hold that action for 3 seconds. As it starts to become easier, try holding for longer, and repeat as many times as you can.**

Info from: [www.kegel-exercises.com](http://www.kegel-exercises.com)



**We are the link that bridges policy, investigation, education and service delivery for the best possible clinical practice.**

The Victoria Institute of Clinical Research and Evaluation (Vic R&E) is an experienced multi-disciplinary team committed to providing the highest quality of evidence-based research and evaluation, using ample initiatives to advance care into new domains.

Vic R&E's mission is to be a compassionate, creative and accountable unit while transforming healthcare. Our philosophy is one that seeks continually to improve and invigorate the services for our population. We are grateful to be able to enhance and further findings of new and valuable healthcare design. We look forward to continually respond to ever-changing varieties of research and evaluation needs as well as encourage further breakthroughs that change and enrich lives.

**We are pleased to accommodate industry-sponsored clinical trials.**

### Interested in Research? We can help!

We provide assistance to people who are interested in Research. We offer an accommodating and accessible environment to internal and external researchers alike.

We conduct all three types of research; academic, quality improvement and industry-sponsored.

Please direct your questions to Janice Wong - [jwong5@vgh.mb.ca](mailto:jwong5@vgh.mb.ca)

**We now also outsource program evaluations; through comprehensive analysis and report dissemination.**

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# What is Delirium?

By: David Lee, VicR&E Student Associate

## Introduction

Delirium is an acute confused state that is a common and severe psychological syndrome. It is an acute onset and fluctuating course that consists of attention deficits and generalized severe disorganization of behavior. Approximately 30% of the geriatric population is affected by delirium and the number is steadily rising. While there are many different theories on the pathogenesis of delirium and many studies done on delirium; none, however, have been definitive on their answers to how delirium occurs.

## Risk Factors

Risk factors in general are attributes, characteristics or exposures that an individual might have or display that increases their likelihood of developing the disorder, disease or injury in question. Development of delirium may depend on the complex interactions of multiple risk factors. According to researchers some of the biggest risk factors are dementia and advanced age (>65).

## **The following are some other notable risk factors for delirium:**

- Medications
- Depression or Other Emotional Distress
- Immobilization
- Sensory Impairment
- Long Term Sleep Deprivation
- Cognitive Impairment
- Environmental Impact
- Intercurrent Illnesses
- History of Delirium, Stroke, Neurological Diseases
- Acute Neurological Diseases
- Metabolic Derangement
- Multiple Comorbidities
- Physical or Emotional Pain

## Pathophysiology

Currently there are many different pathophysiology for delirium. However, the pathophysiology of delirium is not fully understood as delirium may be caused by various different mechanisms. According to current researchers in the field of delirium they suggest that acute stress, drug toxicity, and inflammation can cause a disruption in neurotransmission and ultimately lead to delirium.

## Need for Change

Though delirium is a frequent and a serious complication, hospitalized delirium is potentially treatable, reversible and preventable. However, major barriers, including underrecognition of the syndrome and poor understanding of the underlying pathophysiology, have hampered the development of successful therapies. Therefore, it is not always transient or reversible.

According to the National Quality Measure Clearinghouse of the Agency for Healthcare Research and Quality the rate of delirium is considered to be a maker of quality of care and patient safety. This means it is possible to determine that a higher rate of delirium correlates with lower quality of hospital care. Many risk factors are associated with some aspects of hospital care. For example, poor nutrition, dehydration, sleep deprivation, adverse effects of medications, immobilization and sensory deprivation are some factors that can be modified to potentially treat and prevent the development of delirium.

## Conclusion

Delirium is still mystery for modern medicine. Only time will determine if many issues underlying delirium will be clarified. Only through research and evaluation of various different treatment and prevention strategies, assessments, and theories on delirium (such as biomarkers, genetics, pathophysiology, interaction of certain brain areas etc.) will we gain a better understanding of this disorder. However, it should not be limited to delirium but may tie in with cognitive and brain research.