Fragmented sleep can increase one’s risk of developing Alzheimer’s disease, new research shows, suggesting that improvements in sleep continuity may offer a useful strategy for reducing the likelihood of dementia in old age.

“An individual with high sleep fragmentation had a 1.5-fold risk of developing Alzheimer’s compared to someone with low sleep fragmentation,” says Dr. Andrew Lim, the study’s lead author and a neurologist at Sunnybrook. “Previous research had suggested the possibility that sleep disruption may contribute to cognitive impairment and neurodegeneration, but a link between sleep disruption and the risk of Alzheimer’s disease in older adults living in the community had never been shown,” adds Dr. Lim, who is also an assistant professor at the University of Toronto.

While past studies have reported associations between sleep and cognitive function in older adults, long-term community-based studies linking sleep function in older adults with the risk of developing Alzheimer’s or the rate of cognitive decline were lacking in several ways. For instance, the studies used sleep measurement approaches that disturbed natural sleep behavior, were usually limited to a single night of testing, could only be performed in settings outside the participant’s home, and could only be performed on relatively small groups of people because of the expense involved.

With the development of smaller, more portable devices, researchers are now able to obtain objective measures of sleep-wake behaviour that do not interfere with natural sleep. They can measure rest and activity continuously 24 hours a day for weeks at a time, capturing total daily sleep and providing investigators with non-invasive objective measures that overcome many of the limitations of previous investigations.

The study, published in the July 2013 issue of the journal SLEEP, included the following collaborators: Dr. Matthew Kowgier (University of Toronto) and Drs. Lei Yu, Aron Buchman and David Bennett (Rush University).

Nadia Norcia Radovini

Broken sleep heightens risk for the development of Alzheimer’s disease

Canadian actor Jason Priestley has a thing for cars – and helipads. So much so, the former Beverly Hills, 90210 heartthrob is serving as honourary co-chair of the inaugural Cobble Beach Concours d’Elegance in Georgian Bay, benefiting the construction of Sunnybrook’s rooftop helipad.

An avid automobile enthusiast and experienced racer, Priestley’s support of the prestigious and competitive event, which showcases some of the rarest and most refined automobiles ever made, is a personal one.

In 2002, his race car crashed head-on into a wall near 290 kilometres per hour during a final practice run at Kentucky Speedway. He was airlifted to the University of Kentucky Hospital by a helicopter.

Priestley attributes the speed of his rescue and the landing on the rooftop of that hospital for saving his life.

Thanks to longtime Sunnybrook supporters Rob and Rosemary McLeese, proceeds from the Cobble Beach Concours d’Elegance on Sept. 14 will help fund a state-of-the-art helipad on top of Sunnybrook, home to Canada’s largest regional trauma centre.

Up to 20 per cent of Sunnybrook’s approximately 1,200 annual trauma cases come via helicopter, arriving from nearby and faraway cities such as Buffalo, Ottawa, Sudbury and Thunder Bay.

Building the rooftop helipad will provide patients a more immediate and direct link to Sunnybrook’s trauma care.

To find out more about the Cobble Beach Concours d’Elegance, visit www.cobblebeachconcours.com.

L.H. Tiffany Hsieh
Helpful info on hip and knee replacement just a click away

Patients undergoing hip and knee replacement have a new and easy way to get informed about surgery preparation and recovery, thanks to Dr. Mike Evans and Sunnybrook’s Holland Centre team.

“Preparing You for Your Hip or Knee Replacement Surgery” is a six-minute animated patient education video that will help patients understand the hip and knee replacement surgery process and ensure they are partners in their care and recovery.

Dr. Evans shares five key messages that will help patients be better prepared, set more realistic expectations, understand how to manage their pain and maintain a positive attitude throughout the process.

Join us for Patient and Family Education Day on Oct. 7

This free afternoon event will focus on Patient and Family Education in the Digital Age. Come and learn more about how becoming an informed patient or family member leads to better health outcomes, and ultimately a more sustainable health-care system. With keynote speaker Dr. Mike Evans.

Where: Sunnybrook’s McLaughlin Auditorium, EG18a.

When: Oct. 7 from noon to 3 p.m. For more info, visit www.sunnybrook.ca/calendar. Email patienteducation@sunnybrook.ca to register.

A family physician at St. Michael’s Hospital and “curator of health information” on www.myfavouritemedicine.com, Dr. Evans is well-known for his online visual lectures.

After watching his viral video “23 ½ hours” – a visual lecture about the most important thing you can do for your health – Deb Kennedy loved Dr. Evans’ user-friendly style. She decided to approach him about partnering for a hip and knee replacement lecture.

“This is a great way to use technology to get the information out there in an accessible and engaging way,” says Kennedy, manager of rehabilitation and program development.

Kennedy worked with orthopaedic surgeon Dr. Jeff Gollish and physiotherapist Amy Wainwright to develop the video’s content. They also had input from many other members of the Holland Centre team.

“While the Holland team worked on the video, the messages for patients really are universal,” Kennedy says. “This is important information for hip and knee replacement patients anywhere, now available in a fun format.”

To watch the video, visit www.sunnybrook.ca/Holland and go to Patient Education. Like it? Give it a thumbs-up!

Alexis Dobranowski

Sunnybrook-led superbugs research prompts critical dialogue on Canadian infection control guidelines

On any given day, “superbugs” like MRSA and C. difficile affect one in 12 Canadian adult patients, with most cases being health-care acquired, a Sunnybrook-led study reveals. The study is the first national survey of prevalence rates for antibiotic resistant organisms in 176 Canadian acute care hospitals, and was recently published in Infection Control and Hospital Epidemiology.

Superbugs are antibiotic-resistant organisms, such as MRSA (methicillin resistant Staphylococcus aureus), VRE (vancomycin-resistant Enterococci) and CDI (Clostridium difficile infection), that result in a substantial burden of disease in hospitals, as well as costs to the health-care system.

“This disconcerting finding signals the need for more investigation to manage a major public health concern,” says Dr. Andrew Simor, head of Microbiology and Infectious Diseases at Sunnybrook.

Sunnybrook researchers reported that 2,895 patients had MRSA, VRE or CDI at the hospitals studied. The study also uniquely correlated prevalence rates with hospital characteristics and infection prevention/control policies:

• significantly lower rates of MRSA and VRE were found in hospitals that routinely used private rooms to accommodate patients struck by these organisms
• periods of higher occupancy of beds in a hospital were associated with higher prevalence of CDI
• enhanced cleaning of rooms used for patients with VRE was associated with lower VRE rates

Hospitals from all provinces and territories took part in the study, and data from a follow-up survey conducted in 2012 are currently being analyzed.

Natalie Chung-Sayers

Sunnybrook’s Dr. Andrew Simor led important research on the prevalence of antibiotic-resistant diseases in Canadian hospitals.
Sunnybrook cancer surgeon receives award for innovation-filled career

Sunnybrook surgical oncologist Dr. Allan Covens – well-known for his international contributions to minimally invasive treatments for women with gynecologic malignancies – has been awarded with the 2013 Society of Gynecologic Oncology of Canada (GOC) Medal for his lifetime commitment, achievements and leadership in research and clinical care.

“We are always looking at methods to treat cancers in a less radical fashion,” says Dr. Covens, head of the Odette Cancer Program’s Gynecological Cancer Care team.

Dr. Covens is leading multiple international studies that are examining ways to just as effectively treat cervical (cervix), vulva, ovarian and other gynecological cancers, but with low-impact approaches that reduce treatment side-effects.

Dr. Covens has long been instrumental in advancing gynecological cancer surgery practices. He was one of the first to offer a fertility-sparing treatment called “radical trachelectomy” instead of the standard full “radical hysterectomy” to women with early stage cervical cancer.

Dr. Covens was also the first to report that sentinel lymph node biopsy is more effective than the current standard biopsy method in detecting metastases in cervical cancer. Typically used during breast cancer diagnosis, sentinel lymph node biopsy removes only the sentinel or first lymph nodes into which a primary tumour drains, whereas the standard biopsy is more invasive, removing 10 to 30 lymph nodes. Dr. Covens and fellow researchers adapted the procedure to cervical cancer.

A University of Toronto professor in the Department of Obstetrics and Gynecology, Dr. Covens collaborates with various team members, including Dr. Gillian Thomas, Dr. Ida Ackerman, Dr. Lillian Gien, Dr. Danielle Vicus and Dr. Rachel Kupets, to develop innovative treatment approaches and more personalized medicine.

Powerful, targeted radiation treatment shows promise for prostate cancer

In one of the few studies of its kind, researchers at Sunnybrook’s Odette Cancer Centre have shown that radiation treatment can be effectively reduced from 39 sessions to just five for men with low-risk prostate cancer that hasn’t spread beyond the prostate.

Though the study was small in scale, the results are impressive. Sunnybrook researchers used a high-dose, high-precision radiation treatment known by two names – stereotactic ablative body radiotherapy (SABR) and stereotactic body radiotherapy. In the study, which was published in May in Radiotherapy and Oncology, researchers compared the technique to two other prostate cancer radiotherapies.

The high-dose treatment demonstrated equally effective tumour control, but with far fewer sessions.

“Our goal is to improve quality of life for patients, to improve treatments with greater accuracy and to reduce treatment time without compromising treatment effectiveness,” says Sunnybrook radiation oncologist Dr. Andrew Loblaw, the study’s lead author and its co-principal investigator along with fellow Sunnybrook radiation oncologist Dr. Patrick Cheung.

“We continue to strive for greater accuracy with these high-precision, high-dose approaches so that we can decrease treatment time for patients and spare more healthy tissue to help reduce side-effects,” Dr. Cheung adds.

The researchers followed 84 patients with localized, low-risk prostate cancer who received SABR once per week over five weeks. The five-year tumour control rate was 98 per cent.

The study went on to compare low-risk patients treated with SABR to those receiving standard image-guided radiation (over 38-39 sessions), as well as to those receiving low dose-rate brachytherapy. Results showed equal tumour control (97 per cent at five years for all treatments) and slightly lower risk of side-effects for SABR and standard radiation.

Variation in timing of early gallbladder surgery matters

The timing of surgery for acute gallbladder inflammation varies widely across hospitals in Ontario, according to a recently published study by researchers from Sunnybrook.

“We found that similar patients with gallbladder inflammation were managed very differently depending on the hospital to which they presented,” says Dr. Charles de Mestral, the study’s first author and a General Surgery resident at Sunnybrook.

Despite evidence in favour of early surgery for most patients with gallbladder inflammation, delayed surgery remains a common management strategy at hospitals worldwide, even though it can be harder on the patient.

“While both approaches are considered to be safe, it is far simpler for the patient to have early surgery. After early gallbladder removal, the patient is generally back to work within a few weeks. Delaying surgery means a longer total hospital stay and more time off work,” says primary investigator Dr. Avery Nathens, surgeon-in-chief at Sunnybrook and a professor in the Department of Surgery at the University of Toronto.

In one of the few studies of its kind, researchers compared the technique all treatments) and slightly lower risk of side-effects for SABR and standard radiation.

Sunnybrook’s Dr. Allan Covens (seated left) is a co-recipient with Dr. Marie Plante of the 2013 Society of Gynecologic Oncology of Canada (GOC) Medal, which was awarded in June at the society’s annual general meeting in Calgary. Standing behind Dr. Covens and Dr. Plante are fellows trained by Dr. Covens.

Natalie Chung-Sayers

Natalie Chung-Sayers

Natalie Chung-Sayers

Natalie Chung-Sayers

Dr. de Mestral and his colleagues attribute some of the difference in early gallbladder removal rates to hospital-specific factors, including availability of operating rooms and other clinical priorities of the hospital’s medical staff.

“We still need to look further into why rates of early surgery differ so much. Is it surgeon beliefs, or is it a lack of resources or training? We’re in the process of surveying surgeons in Ontario to better understand the barriers they may be facing in offering early surgery,” says Dr. de Mestral.

“Despite any barriers, acute gallbladder inflammation is a very common disease, so all hospitals need to develop local solutions to efficiently treat these patients.”

Researchers from the Institute for Clinical Evaluative Sciences (ICES) and St. Michael’s Hospital were also involved in the study, which was published in CMAJ Open. It was funded by operating grants from the Canadian Surgical Research Fund, Physician Services Inc. Foundation and ICES.

Sybil Edmonds

Sybil Edmonds
Victoria Agius was just 10 years old when she founded Victoria’s Hope in 2010, a cancer charity she established by selling her own handcrafted bracelets. An important goal for the Markham resident was to show that anyone, regardless of age, income or other factors, could make a difference in the world.

Victoria, a student at San Lorenzo Ruiz Catholic Elementary School and now 13, has quickly achieved that goal. With the help of her family, she has raised $40,000 for the cancer care and research of Sunnybrook’s Odette Cancer Program. An effort that began with bracelets has grown to annual fundraising dinners that mobilize the broader community.

“Most rewarding is knowing that I’m going to help people – knowing that all these funds and all this work is going to actually make a difference for families,” says Victoria, whose father Eric received “terrific” care at Sunnybrook in 2010 as he overcame non-Hodgkin lymphoma.

“Our family had a happy ending, and I remember Victoria saying that she hoped every family who visits the Odette Cancer Centre could have a happy ending,” Eric notes.

Victoria, her mother Marcia and Eric were recently able to see first-hand the impact of Victoria’s Hope during the April 2013 opening of Sunnybrook’s Louise Temerty Breast Cancer Centre, the largest and most advanced facility of its kind in Canada. Contributions from Victoria’s Hope and many others in the donor community helped fund its construction.

“We’re very proud of Victoria,” says Marcia, who notes the whole family has rallied around her efforts, including her older brothers Nicholas and Thomas.

“If someone asked me to describe myself, Victoria’s Hope would be part of that,” Victoria says. “I really want to expand it and make it into something great and help so many more people.”

Eric and Victoria discussed the possibility that she should try to raise $1 million for cancer in her lifetime. “It’s easy – just raise $20,000 a year for 50 years,” he chuckles.

Somehow, it doesn’t seem all that far-fetched for this passionate and motivated young woman.

Learn more about Victoria’s Hope by visiting www.victoriashope.org

Dan Birch