

About brainscreen

Developed by Professor Konstantine Zakzanis through the University of Toronto and The Hemisphere Centre for Mental Health & Wellness, Brainscreen® is a 15 minute test sensitive to cognitive disorder secondary to numerous disease states or injury; including the early stages of Alzheimer's disease and other Dementia syndromes, Post-Concussive Syndrome, Attention Deficit Disorder or other disease processes affecting brain function.

Brainscreen® successfully demedicalizes the screening process, placing knowledge in the hands of loved ones and concerned parties, by providing automated and instantaneous results to the client and their families. In addition, it may also be configured to provide results to contracted user groups and agencies; for example sports teams, managing bodies, government/healthcare agencies, and insurance companies.

Brainscreen® can be administered by just about any person and can be completed without the aid of an administrator on various mobile and personal computing devices, in addition to government kiosks



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“ a real world solution for the
screening of cognitive disorders ”

Your Brain Matters!

Dementia – An Approaching epidemic

Dementia is an acquired syndrome of intellectual impairment produced by brain dysfunction (e.g., Alzheimer's disease; AD). Its prevalence is rapidly increasing, and adequate care of the burgeoning population of demented individuals requires a knowledgeable approach to diagnosis and management. Operationally, dementia can be defined as an acquired persistent impairment of intellectual function, with compromise in at least three of the following spheres of mental activity: language, memory, visuospatial skills, emotion or personality, and cognition (abstraction, calculation, judgment, executive function). This definition is based on evaluation of disturbances that are readily testable using neuropsychological testing, such as that employed by BrainScreen®.

Current and Future developing trends

- Today, half a million Canadians have Alzheimer's disease or a related dementia. Approximately 71,000 of them are under age 65.
- This year alone, more than 103,000 Canadians will develop dementia. This is equivalent to one person every five minutes. By 2038, this will become one person every two minutes, or more than 257,000 people per year.
- If nothing changes, the number of people living with Alzheimer's disease or a related dementia is expected to more than double, reaching 1.1 million Canadians within 25 years.

Economic Burden of Dementia

Right now, dementia costs Canadians \$15 billion a year; a figure expected to grow ten times to \$153 billion by 2038.

Economic Burden of Dementia (in future dollars)

- 2008 - \$15 billion
- 2018 - \$37 billion
- 2028 - \$75 billion
- 2038 - \$153 billion

Why Early Active Screening Matters....

Dementia is a complex disease. That's why current treatments focus on several different issues, including helping people maintain mental function, managing behavioral symptoms, and slowing progression.

Research has developed to a point where scientists can look beyond treating symptoms, to think about delaying and prevention by addressing the underlying disease process. Scientists are looking at many possible interventions, such as treatments for heart disease and Type 2 diabetes, immunization therapy, cognitive training, changes in diet, and physical activity.

Pharmaceuticals work by regulating neurotransmitters, the chemicals that transmit messages between neurons. They may help maintain thinking, memory, and speaking skills and may help with certain behavioral problems.

Other medicines may ease the behavioral symptoms — sleeplessness, agitation, wandering, anxiety, anger, and depression. Treating these symptoms often makes patients more comfortable and makes their care easier for caregivers.

Through early detection, proactive strategies may be employed involving pharmaceutical therapies, lifestyle modification and cognitive rehabilitation.



Post-Concussive Syndrome

Post-concussion syndrome, also known as post-concussive syndrome or PCS, is a set of symptoms that a person may experience for weeks, months, or occasionally up to a year or more after a concussion. PCS is a mild form of traumatic brain injury. PCS may also occur in moderate and severe cases of traumatic brain injury.

The condition can cause a variety of symptoms: physical, cognitive, emotional and behavioral. As many of the symptoms in PCS are common to, or exacerbated by, other disorders, there is a risk of misdiagnosis. Though there is no treatment for PCS itself, symptoms can be treated with medications. Physical therapies may be employed and patients can be educated about symptoms and their usual prognosis. The majority of PCS cases disappear after a period of time.

Neuropsychological tests exist to measure cognitive function. The tests may be administered hours, days, or weeks after the injury, or at different times, to determine whether there is a trend in the patient's condition. Athletes may be tested before a sports season begins to provide a baseline comparison in the event of an injury.

Of great importance is the need to identify possible concussion injury following a traumatic event, such as those occurring during athletic endeavours. It is of paramount importance that potentially concussed participants be objectively assessed and screened prior to returning to action.

Brainscreen® provides the objective "timeout" required by participants, in addition to being the objective screening measure that eliminates premature return to activities that may occur through unconscious bias and influence.

