

Media Release:

Alzheimer's disease... it's more than you think First wave of baby boomers turning 65 not ready for Alzheimer's

Alzheimer Society survey reveals alarming knowledge gap

Canadians can test their own knowledge at www.alzheimer.ca/testyourknowledge

Toronto, ON, January 4, 2011 – An online survey of baby boomers across Canada conducted by the Alzheimer Society reveals a worrying lack of awareness about Alzheimer's disease.

Survey results show that an astonishing 23 per cent of boomers can't name any of the early signs of Alzheimer's disease, even though their risk doubles every five years after age 65.

Of those surveyed, 50 per cent identified memory loss as a key symptom, but failed to mention other critical signs.

"Boomers are their own best detectors of Alzheimer's," says Mary Schulz, National Director of Education at the Alzheimer Society. "This is an insidious disease. Most people associate memory loss with Alzheimer's but it's so much more. Sudden changes in mood, misplacing common household items (like keys in the refrigerator), repeating words or statements or difficulty with everyday tasks like getting dressed can all be warning signs that need to be discussed with a doctor."

Most boomers are familiar with the common hallmark of Alzheimer's disease of not recognizing familiar faces and objects. But less than half know about life-altering changes, such as hallucinations or total dependency on others for basic care, that occur in the disease's later stages. More troubling, respondents are unaware that diabetes, obesity, heart disease and chronic depression significantly increase their odds for developing the disease.

Today's findings confirm a disturbing lack of knowledge about Alzheimer's disease among boomers, the country's largest demographic group, who will become increasingly at risk as they age. But the reasons for self-awareness and prevention have never been more compelling. Without a cure or drugs to stop the disease, Alzheimer's is destined to be the most pressing and costly health issue boomers will face in their lifetime: either they will get the disease themselves or be faced with caring for someone with the disease.

In Judy Southon's case, it might have saved her a lot of anguish. The 63-year-old former school teacher and business owner was blindsided four years ago when her husband Vic, an electrician, was diagnosed with both Alzheimer's disease and vascular dementia. "I started noticing he was having trouble fixing ordinary things and using a drill. He couldn't follow instructions, use his cell phone or handle money; he couldn't even tell time. I was traumatized. The grief never goes away, but the more you know about this disease, the better you'll cope and plan ahead and make the most of each day. It's important that people really understand and be aware of the signs." At 74, Vic is now in the last stages of the disease and is being cared for in a long-term care facility.

During Alzheimer Awareness Month, the Alzheimer Society is asking Canadians to test their own knowledge by taking the survey at www.alzheimer.ca/testyourknowledge. The Society also urges Canadians, especially those 40 and older, to practice prevention by learning the risks and making simple lifestyle changes: eat a heart-healthy diet, stay active, exercise regularly, maintain a healthy weight and monitor their blood pressure and cholesterol levels.

This year's campaign is made possible in part through an unrestricted educational grant by Pfizer Canada.

About Alzheimer's disease

Alzheimer's disease is the leading form of dementia. It is a fatal progressive disease of the brain that robs memory and steals the ability to reason, communicate and perform daily tasks. Changes in the brain can begin to appear decades before diagnosis and progression can last between seven and 10 years. Eventually, the person affected will require 24-hour care and supervision. Age is the single biggest risk factor but the disease can also strike as early as 40.

About the survey

More than 1,000 Canadians aged 45 to 65 completed the survey in July 2010. Men and women were split evenly. Of those surveyed, 37 per cent had some personal connection to the disease. None were affiliated with the Alzheimer Society in any way, nor have they or a family member donated to or used any of the Society's programs and services. Boomers were tested in three areas: early signs of Alzheimer's disease (unaided and aided awareness); later-stage symptoms (aided), and key risk factors (aided). To read the results, visit www.alzheimer.ca/testyourknowledge

About the Alzheimer Society

The Alzheimer Society is the leading nationwide health organization for people affected by Alzheimer's disease and related dementias in Canada. The Society is a principal funder of Alzheimer research and training, provides enhanced care and support to people with the disease, their families and their caregivers, and is a prominent voice within all levels of government. [Active in more than 150 communities across Canada](#), the Society is also a founding and key member of [Alzheimer's Disease International](#) (ADI), an organization at the forefront of global efforts to fight dementia.

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Fact sheet:

Alzheimer Society Baby Boomer Survey 2011

Alzheimer's disease... it's more than you think

Rising tide of dementia – *and* boomers

In January 2010, the Alzheimer Society issued a wake-up call to Canadians with its groundbreaking report *Rising Tide: The Impact of Dementia on Canadian Society*. The report details the soaring prevalence as well as financial and personal costs of Alzheimer's disease and related dementias that could potentially overwhelm Canadian families and our health care system. In 25 years, the number of Canadians affected by dementia will exceed 1 million – and there is no cure in sight.

Because age remains the single largest risk factor, baby boomers, the country's largest demographic group, will be most impacted. As the first boomers reach 65 in 2011, their risk for developing the disease will double every five years.

Are boomers ready? The Society set out to test their knowledge and understanding of Alzheimer's disease in July 2010 by conducting an online survey.

Survey says...

Survey results point to a disturbing lack of awareness about the disease and what boomers can do to lower their risk. Key findings include:

- 23 per cent of boomers polled can't name any of the early signs of Alzheimer's disease even though their risk increases considerably with age
- 50 per cent identify memory loss as a warning sign, yet fail to name other critical signs such as changes in personality, behaviour, reasoning and judgment
- Most boomers are familiar with the hallmark of Alzheimer's disease of not recognizing familiar faces and objects, but less than 50 per cent are familiar with later-stage changes such as hallucinations and total dependency on others for basic care
- Most respondents are unaware of high but manageable Alzheimer health risks such as obesity, diabetes, heart disease and chronic depression

Boomers can take charge

Boomers can be proactive by learning about the disease and how they can protect themselves against it. They can

- Test their own knowledge by taking the Society's survey at www.alzheimer.ca/testyourknowledge
- Lower their risk through simple lifestyle changes such as eating a heart-healthy diet, staying active and exercising regularly
- Monitor their blood pressure and cholesterol levels and maintain a healthy weight
- See their doctor as soon as they notice sudden changes in their or a family member's memory or behaviour
- Contact their local Alzheimer Society for information

About the survey

A geographically, nationally representative sample of 1,006 online surveys was completed in July 2010. Participants fit the following criteria:

- Between the ages of 45 and 65
- 50/50 split between men and women
- Have never donated to the Alzheimer Society nor had anyone in their immediate family, including themselves, ever used its programs and/or services
- At least 37 per cent have a personal connection to Alzheimer's disease or a related dementia
 - They have Alzheimer's disease or dementia and/or they have close friends or relatives they know/knew who have/had Alzheimer's disease or a related dementia
- Respondents were tested in three key areas:
 - Early signs of Alzheimer's disease (unaided and aided awareness)
 - Later-stage symptoms of Alzheimer's disease (aided)
 - Key risk factors for Alzheimer's disease (aided)

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Fact sheet:

Alzheimer's disease and related dementias – In pursuit of a cure

The Alzheimer Society is a leading funder of dementia research and training in Canada: it has contributed nearly \$30 million in the past 20 years. In 2009, the Society and its partners funded over \$2.4 million in the fields of biomedical and Quality of Life research. However, there is still no cure for dementia. Greater funding must be invested in support of Canadian researchers, who rank among the world's top dementia scientists.

What is Alzheimer's disease and related dementias?

Alzheimer's disease is a progressive and irreversible disease of the brain. It is the most common form of a large group of disorders known as "dementias", representing 64 per cent of all cases. Dementias are characterized by the deterioration of thinking ability and memory as brain cells become sick and eventually die. Aside from loss of short- and long-term memory and impairments in judgment and reasoning, common symptoms include changes in mood, behaviour and the ability to communicate. These symptoms will affect a person's social relationships and daily activities.

Other irreversible dementias include Vascular Dementia, Lewy body Dementia, Frontotemporal Dementia (including Pick's disease), Creutzfeldt-Jakob disease, as well as Parkinson's and Huntington's diseases.

Risk factors

Dementia appears to be caused when the combined effects of Alzheimer risk factors overwhelm the natural self-repair and self-healing mechanisms in the brain. Risk factors include age and certain genes, as well as modifiable factors such as lifestyle and environment, high blood pressure, high cholesterol, diabetes, chronic depression, and head trauma. Increasingly, research is focusing on these risk factors and how to enhance the brain's self-healing capacity.

Biomedical research

Biomarkers

It's long been hoped that biological markers (chemical or anatomical changes) for Alzheimer's disease would appear in various tissues that could be more easily studied than the brain itself. New studies suggest that early diagnosis could be considerably accelerated by such biomarkers. Unfortunately, recent reports of potential biomarkers in skin and blood have turned out to be unreliable as diagnostic tools. Other markers, however, are proving more successful. These include changes in the brain that

can be measured by new imaging techniques, and changes in the levels of certain proteins in the cerebrospinal fluid (CSF), a fluid that bathes the brain and spinal cord. Though a routine procedure, obtaining CSF samples is not without risk.

Alzheimer vaccine

There are promising developments in the search for an Alzheimer vaccine that would immunize the body against a protein called "beta amyloid," or "A-beta." A-beta is a normal protein found in the brain, but in Alzheimer's disease its concentration reaches abnormal levels which eventually cause deposits to appear throughout the brain. These deposits are called "plaques" and are the major hallmark of Alzheimer's disease. However, long before the plaques develop, as the A-beta levels in the brain increase, the individual molecules begin to stick together. When the toxic actions of A-beta are exerted they cause the brain's nerve cells to become sick and eventually die. One way to immunize the brain is to administer a modified version of A-beta itself to stimulate the production of antibodies against A-beta, but without the toxic actions. This is called active immunization. The other way is to administer ready-made antibodies (known as passive immunization), that are created in animals or in immune cells and kept alive in a nutrient medium.

The first human trials using a vaccine that had shown positive results in mouse models began in 2000, but were halted two years later due to the development of brain inflammation in some participants. Since then, new vaccines have been designed which are anticipated not to cause inflammation of the brain. These are currently being tested in more than 40 clinical trials involving some 20,000 participants. Studies are also underway to produce a vaccine which targets not the A-beta, but the chemical reactions which cause the formation of the "tangles" inside nerve cells. Tangles are the second hallmark of Alzheimer's disease and are more challenging than plaques.

Reducing A-beta levels in the brain

The most common strategy for reducing levels of A-beta in the brain has been to inhibit an enzyme that splits off the potentially threatening A-beta from a much larger "parent" protein called APP. Dozens of clinical trials are ongoing with drugs designed to achieve this end with some in Phase 3 trials. These should provide answers within three to five years. Other drugs in clinical trial are designed to prevent the individual A-beta molecules from sticking together to form the toxic aggregates known as "oligomers."

Alzheimer's disease and diabetes

It's long been known that diabetes is a risk factor for Alzheimer's disease. Unexpectedly, certain anti-diabetic drugs, like rosiglitazone, seem to help maintain brain function in people with Alzheimer's disease. New evidence indicates that people with Alzheimer's disease may in fact have a sort of diabetes of the brain. It's believed that brain cells become resistant to insulin (as is the case for other body tissues in Type 2 or adult diabetes) and that lower levels of insulin is produced in the brain (resembling decreased production of insulin in the body as in Type 1 or childhood diabetes). The net effect is the long-recognized impaired use of glucose in the Alzheimer brain, regardless of whether the person has diabetes or not. A supportive observation is that when insulin was administered during an experimental study through the nasal passage of people with Alzheimer's disease (this approach gets the insulin preferentially to the brain) memory and cognition improved in some cases. This new awareness of a diabetic-like brain state in people with Alzheimer's disease is expected to lead to new therapeutic approaches in people who do not have conventional diabetes, including the use of drugs like rosiglitazone, which help sensitize the body to insulin.

Emerging problems

Currently, popular but somewhat controversial thinking focuses on the "amyloid cascade" hypothesis. The premise is that the first, or at least a very early, abnormal event to occur in the Alzheimer brain, is the accumulation of A-beta, and that this then triggers the development of the other abnormalities, especially tangles. Another concern among researchers today is the fact that plaques and tangles have been found in the brains of people who had not developed dementia. Some of these individuals were very old and had died from other causes without any suggestion of dementia being present. Some were young adults in their late 30's or 40's who had been diagnosed with "Mild Cognitive Impairment (MCI). Furthermore, participants in the discontinued vaccine studies had died with significantly reduced numbers of plaques in their brains (the vaccine seemed to have worked!), but with their dementias totally unchanged.

Promoting brain repair

Even when a successful treatment for Alzheimer's disease is discovered, there will still be a need to repair the damage that has already been caused in the brain. Of great importance here is a class of substances called 'growth factors' which promote the health of nerve cells and their ability to grow new connections with other nerve cells.

One critically important growth factor is called Nerve Growth Factor (NGF). Studies testing NGF's potential value to people with Alzheimer's disease are showing initial promise both in keeping nerve cells from dying and in improving cognition.

Another important growth factor in the brain is the Brain-Derived Neurotrophic Factor (BDNF). Animal studies indicate that exercise, which is known to reduce the risk of developing Alzheimer's disease and to slow its progression in the early stages, leads to an increase in the levels of BDNF in the brain. Perhaps this also occurs as a consequence of increased socialization, another preventative and progress-reducing activity.

For a more, visit www.alzheimer.ca and download *A Report on Alzheimer's Disease and Current Research*.

Quality of Life research

Quality of Life research is aimed at understanding and addressing the physical, psychological, emotional, social and spiritual needs of people living with Alzheimer's disease or a related dementia and their caregivers. Current Quality of Life research funded by the Alzheimer Society focuses on how to enhance memory, language and daily living activities for people with dementia, how to lessen the impact of the disease on family caregivers, how to meet the needs of people with dementia living in the community, how to improve support of people with dementia in care facilities, and how, as communities, we can support people with dementia.

For more information, visit www.alzheimer.ca and download *Enhancing Quality of Life for People Living with Dementia*.

Knowledge Translation and Exchange

In dementia research today, there can be a gap between what research shows is effective and current care practices. While there are many researchers and clinicians whose work makes significant impacts to dementia care, they often operate in isolation from one another. Knowledge translation is the adaptation of research findings into effective treatments, services, and products..

The Alzheimer Society has partnered with the Canadian Dementia Knowledge Translation Network (CDKTN) to support training opportunities in knowledge translation for doctoral students and postdoctoral fellows who are already engaged in, or intend to become engaged in dementia research.

For more information, or to donate to the Alzheimer Society Research Program, visit www.alzheimer.ca or call 1-800-616-8816.

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