

[Home](#) > [Research](#) > [News & Stories](#) > [Caring Enough](#)

[Research Home](#)

[News & Stories Home](#)

[Research Stories Archives](#)

[Press Release Archives](#)

Caring Enough

By Laura Pratt
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Drs. Krista Lanctôt and Nathan Herrmann care. It's a powerful position to take in the face of nothing less soul-emptying than apathy, and alarming statistics that reveal a widespread incidence of people with Alzheimer's disease (AD) suffering debilitating bouts therewith.

Apathy—defined as a lack of motivation and self-initiated action—affects between 36% and 42% of patients with mild dementia, and up to 80% of patients with moderate dementia. Research has shown that, of all behavioural disturbances among people with dementia, apathy is the most common.

The apathy-afflicted population, says Lanctôt, will "be more than happy to sit in a chair or lie in a bed all day and do nothing." Distinct from depression, apathy doesn't have negative affect associated with it.

Just the same, its reality is devastating, for the patient with it and for her frustrated caregiver, who knows full well that her reticent but cognitively competent charge is capable of more than she's allowing. Says Lanctôt, "These people still have the cognitive ability to do things like dress themselves, but they have so much apathy that they don't try." Apathy, say Lanctôt and Herrmann, has been determined to be the primary cause of distress and frustration for 65% of caregivers.



Lanctôt and Herrmann's research was funded by the American Health Assistance Foundation—Alzheimer's Disease Research Program, Canadian Institutes of Health Research, the Consortium of Canadian Centres for Clinical Cognitive Research and a University of Toronto Dean's Fund grant.

Lanctôt, a scientist in the discipline of clinical integrative biology at Sunnybrook Research Institute (SRI), and Herrmann, an associate scientist in the same discipline at SRI and head of geriatric psychiatry at Sunnybrook Health Sciences Centre, have spent the last several years studying the connection between apathy and AD. Their goal is to optimize the management of behavioural disturbances associated with dementia, including agitation, aggression, delusions and depression.

The first step in that direction is to understand what causes these disturbances, which afflict some, but not all, patients with AD. To that end, they have been studying whether there are brain areas affected in apathetic patients with AD and apathy sufferers that are distinct from patients with AD who are not apathetic. Specifically, in collaboration with Dr. Sandra Black, head of neurosciences research at Sunnybrook, they are looking at regional cerebral blood flow as it relates to the brain's reward system, the area responsible for motivated behaviour.

Intrigued by the role of the brain neurotransmitter, dopomenedopamine, the scientists worked to determine whether the area of the brain where dopamine is an important neurotransmitter for motivation would function differently in patients with apathy than in patients without it.

Next, they administered a drug that works on dopamine to both sets of patients with AD (apathetic and not), and marked the differences in how they responded.

The results were illuminating. “We found that nonapathetic patients were more sensitive to the rewarding effects of the drug than were apathetic patients,” says Lanctôt.

With this knowledge, the researchers turned their attention to treatment. The first randomized, placebo-controlled trial of methylphenidate (brand name Ritalin, which targets dopamine) for the treatment of apathy in AD was a three-year exercise that revealed a considerable improvement in some of the patients with apathy. “Significantly more patients responded on treatment than on placebo,” says Herrmann.

These results, says Lanctôt, pave the way for a large, randomized controlled trial. “We’re both really encouraged by the findings,” she says. “Ultimately, it means more choices for medications.”