

## Preventable dementia?

If you're at risk of a stroke, should you also be concerned about dementia?

Dr. Sandra Black at the University of Toronto sees increasing evidence that the two are connected. Both conditions, her research shows, are related to the health of the blood vessels – the arteries and veins – in your brain.

A growing number of researchers share Dr. Black's view. This shift in opinion suggests an exciting possibility – namely, that controlling risk factors like hypertension and high cholesterol could help prevent or delay forms of dementia, such as Alzheimer's disease.

The challenge will be to identify people in the early stages of the disease, so that they can take steps to reduce their risk.

Through the ongoing Sunnybrook Dementia Study, started in 1995, Dr. Black has collected brain scans of more than 1,000 patients with dementia. In addition, she's attempted to link the patients' brain scans with changes in their memory and behaviour, and comparing them to scans of healthy aging brains.

‘We've done scans in a way that's enabled us to measure the brain changes in an objective way that can be linked to cognition and behaviour,’ says Dr. Black.

These scans have revealed the widespread nature of silent strokes – strokes that cause no obvious symptoms, but leave behind small holes in the brain.

‘A quarter of Canadians 65 and older have these tiny areas of dead brain tissue,’ says Dr. Black. Unlike major strokes which result in dramatic, almost immediate paralysis or loss of speech, silent strokes can cause a gradual, cumulative decline in mental abilities. Another condition that affects the small blood vessels of the brain causes partial brain injury that appears as small white dots or patches, and is present to some degree in 95% of the elderly.

Her imaging research, funded in part by the Canadian Institutes of Health Research, has laid the groundwork for the possibility of using brain scans as an early detection and screening tool for dementia-related changes. Patients who show these early changes could then be prescribed tried-and-true stroke interventions, such as blood pressure medications, exercise and diet changes, to reduce their risk of dementia.

‘I have a sense of urgency about the future,’ says Dr. Black. ‘We need to find ways to set up care to prevent this disease.’

**By Canadian Institutes of Health Research**