

U3A

Dunedin Charitable Trust

A LEARNING OPTION FOR THE RETIRED

in association with



Series 3 2013

THE NERVOUS SYSTEM

Dates: Wednesday 11 September – Wednesday 16 October

Time: 2:15pm to 4:15pm

Venue: Leith Bowling Club, 2 Duke Street, Dunedin North

Enrolments for this course will be limited to 110

Course Fee: \$40.00

Tea and Coffee provided

Course Organisers: Sue and Robin Harvey (478 0057)

Course Assistant: Rosemary Hudson (477 1068)

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You may apply to enrol in more than one course. If you wish to do so, you must indicate your choice preferences on the application form, and include payment of the appropriate fee(s).

All applications must be received by noon on Wednesday, 14 August, and you may expect to receive a response to your application on or about 23 August.

Any questions about this course after 23 August should be referred to Marjan Lousberg, U3A Dunedin, telephone 473 8224 or on email at courses@u3adunedin.org.nz

Please keep this brochure as a reminder of venue, dates, and times for the courses for which you apply.

THE NERVOUS SYSTEM

This course aims to provide information on and to suggest answers to questions such as: Why do we have a nervous system? What does it do? How is it organised? How does it work? What are some of the ways in which it can malfunction, and how can the effects of these be ameliorated?

11 September **Introduction to the Nervous System.**
Dr Robin Harvey, formerly of the Department of Anatomy, University of Otago

Some of the terms used in describing it. How knowledge of the nervous system and its workings have been investigated and extended. The anatomical and physiological basis of nervous system functions.

18 September **Imaging the brain in action, and how to modulate this activity.**
Prof Dirk De Ridder, Professor of Neurosurgery, University of Otago

The brain is a complex adaptive system that helps us reduce inherent uncertainty in a changing environment. It does so by constantly predicting what's coming next and updating its prior beliefs. In order to do so the brain uses oxygen and glucose, which can be seen via functional imaging techniques. Sometimes the brain reacts maladaptively leading to diseases. Via neuromodulation one can attempt to normalize these maladaptive changes.

25 September **The neurological conditions, such as Alzheimer's disease, that cause amnesia.**
Prof. Bob Knight, Department of Psychology, University of Otago

In this session we will consider the neurological conditions, such as Alzheimer's disease, that cause amnesia. The focus is on what can be learned about how the brain acquires and retains new memories from forms of memory failure.

2 October **Persistent pain, some mysteries and what NOT to do about it.**
Dr David Jones, Department of Surgical Sciences, Section of Anaesthesia and Intensive Care

Population surveys indicate that persistent pain is reported by up to 20% of subjects, and that increases with seniority. The sensation component of pain is a function of the nervous system. Overlapping that is a huge variety of individual interpretations and effects modified by individual and community beliefs and contexts. Many widely held beliefs are not supported by evidence, and some of them are outright detrimental to maintaining a reasonable quality of life. Modern tools continue to demonstrate even more mysteries and marvels of what goes on in the nervous system as part of this complex phenomenon.

9 October **Parkinson's Disease**
Assoc Prof Graeme Hammond-Tooke, Neurologist, Department of Medicine
Parkinson's Disease. How it affects people and how it may be treated

16 October **Multiple Sclerosis**
Dr John Mottershead, Neurologist, Department of Medicine

Recent developments in understanding how it arises, and promising possibilities for disease-modifying treatments.