

ELSIE WIDDOWSON

21 October 1906

Born in Wallington, UK

1928

Receives Bachelor of Science in Chemistry from Imperial College, London

1931

Receives Doctorate from University of London, having introduced new methodology for measuring the carbohydrate in apples

1933

Enrols for a Dietetics diploma course at King's College, London. Historic meeting with Robert McCance, her lifelong scientific partner, at King's College Hospital.

1938

Widdowson and McCance move to the Department of Experimental Medicine, Cambridge

1940

First edition of *The Chemical Composition of Foods* published

1946

An Experimental Study of Rationing is published, although the results had been made available to the British Government during WWII

1976

Elected as a Fellow of the Royal Society

1977–80

Elected President of the Nutrition Society

1979

Made a Commander of the British Empire (CBE)

1993

Made a Companion of Honour (CH), an honour restricted to only 65 Britons at any one time. Publication of biography, *McCance and Widdowson: a Scientific Partnership of 60 years* (Ed: Margaret Ashwell).

14 June 2000

Dies in Cambridge, UK



Although best known for her

pioneering work on the first British food tables with her scientific partner for more than 60 years, Robert McCance, Elsie Widdowson's influence on nutrition went much further than the chemical composition of foods. She made significant scientific discoveries in the diverse worlds of mineral metabolism, body composition, the physiology of the newborn and in normal and retarded growth, to name just a few.

In the citation for her Honorary Doctorate, she was introduced as the woman who won World War II on account of her research for the British food rations. 'You can, if you have to, live on a very simple diet', she said. She worked out that bread, cabbage and potatoes contained all the nutrients for healthy survival in the event that Britain could not import food. For three months in 1939–40, Widdowson, McCance and a number of their companions ate nothing else. To demonstrate their fitness following this bleak regime, Elsie, McCance and two others completed a rigorous course of cycling and mountain climbing in the English Lake District. Just like the secret codebreakers of wartime Britain, Elsie was driven by Britain's desperate necessity to survive in wartime.

Self-experimentation featured highly in Elsie's research. Widdowson and McCance even came close to death once when they injected

themselves with solutions to judge the absorption and excretion of minerals in the body. The photo of Elsie's arm jammed full of syringes never fails to wow today's students.

Elsie considered the most important unanswered question in nutrition to be the influence of genetics on the way that the body treats the nutrients delivered to it. She based her belief on her research of the individual diets of children in the 1930s and 40s, which had shown their vast range of energy and nutrient requirements: 'Similar individuals may differ enormously and unpredictably in their food habits.' These observations have paved the way to the modern study of nutrigenetics, now defined as the science of the effect of genetic variation on dietary response.

Promoting the acceptance and encouragement of women in science was Elsie's passion. On her death, the Imperial College Elsie Widdowson Fellowship Award was set up to allow academic staff to concentrate fully on their research work upon returning from maternity, adoption, surrogacy and/or shared parental leave.

Elsie always retained her humility, her intuition and her sense of excitement for discovery and debate. Her greatest satisfaction was discovering how something she had said, written or done had helped someone else in their career.

Margaret Ashwell