

## ABOUT THE TUTOR



Guy Sutton's primary research interests are the genetics of neural development and the interactive nature of biological, behavioural and genetic factors in chronic disease and mental illness.

He is an Honorary Lecturer at University of Nottingham Medical School where he lectures in neuroscience to undergraduate medical students and postgraduate psychiatrists. Previous academic appointments include posts at Manchester, Manchester Metropolitan and Cambridge Universities. Guy has been actively involved in heart disease and cancer research. He has been a visiting researcher to universities in the United States and has conducted research projects and data analysis for various organisations, including the Department of Health and the Medical Research Council. In addition to presenting research at various international conferences and writing for academic publications, Guy Sutton has talked about the theoretical and clinical aspects of his research on television and radio.

Guy has tutored on 'A' level reading parties for students and teachers for several years, and is an associate tutor with Villiers Park Educational Trust, Cambridge. He has developed courses for the OCR Examining Board and for the National Academy for Gifted & Talented Youth.

## ABOUT MBI

MBI (Medical Biology Interactive) delivers one-day and half-day courses, seminars and tutorials in epidemiology, occupational health and the human sciences to the health service, industry and education. All MBI seminars are written and run by academics and health specialists, each of whom has considerable experience in research and its practical applications. Seminars are delivered at the hospital, workplace or school, based on cutting-edge research and current practice benchmarks, and tailored to the needs and concerns of the client.

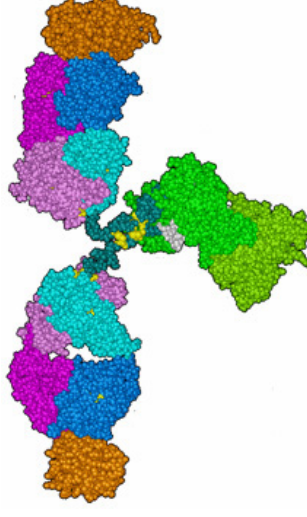
For further information and full programmes, please contact Dr. Guy Sutton: tel. 07941 039670.  
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# HUMAN HEALTH & DISEASE



*A One-Day Tutorial  
For AS/A2 Students  
In The Aetiology,  
Prevention & Treatment of  
Infectious & Complex Diseases*

T U T O R:

**Dr Guy Sutton**

Director, MBI &  
Honorary Special Lecturer,  
University of Nottingham Medical School



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**Seminars & Tutorials For The  
Health Service, Industry & Education**

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## WHY A HEALTH & HUMAN DISEASE DAY?

One of the major goals of the biological and biomedical sciences is to understand the complex factors which influence human health and cause disease. As advances in genetics and molecular biology herald a new era of medicine, we are still faced with huge challenges in trying to explain, prevent and treat diseases such as cancer and AIDS. Knowledge of the diverse factors mediating disease risk is important not only to the study and practice of medicine and the biomedical sciences but also to that of allied health disciplines such as psychology.

This tutorial is intended to serve as a comprehensive introduction to health and illness, introducing the student to the field of epidemiology and developing basic knowledge of cell biology and genetics. Complex theories of disease aetiology will be considered and the latest theories and research relating to health and specific illnesses will be presented.

### WHICH STUDENTS WILL BENEFIT?

This tutorial is designed primarily for very able A2 level biology students but will also be useful to:

- any AS students with an interest in the factors responsible for disease causation and the ways in which chronic and infectious diseases may be prevented and treated.
- those students considering a university degree and/or career in the following subjects:

Medicine Biological Sciences Psychology  
International Development Nursing/Health  
Studies

The material presented during this tutorial is intended to complement and develop upon topics and issues encountered at AS and A2 level.

### AIMS OF THE TUTORIAL

There are three main aims to this tutorial:

- to explore conceptions of health and illness and to appreciate the complex interaction of social and biological factors determining health and illness status.
- to consider chronic and infectious diseases, focusing on the aetiology, development and treatment of coronary heart disease, cancer and AIDS.
- to examine the efficacy of techniques for disease prevention employed in different countries, from vaccination to public education.

## EXEMPLAR PROGRAMME

- 9.00-9.15 Introduction & Aims
- 9.15-10.00 Health & Illness  
Definitions of health and illness. A brief history of illness and disease. The relative roles of diet and exercise in maintaining health. Factors influencing health throughout the world: an introduction to epidemiology.
- 10.00-10.45 Chronic Illnesses 1:

### Coronary Heart Disease

The molecular biology of atherosclerosis and overview of coronary heart disease. The role of diet, smoking and other traditional risk factors in the aetiology of hypertension and atherosclerosis.

### Morning Break

- 11.00-11.25 HealthWeb 1  
An introduction to the tutorial software and an animated trip through heart disease and cancer development.
- 11.25-12.15 Chronic Illnesses 2: Cancer  
Types of cancer. Cell biology and molecular genetics: apoptosis, angiogenesis, metastasis, cell signalling, oncogenes and tumour suppressor genes.
- 12.15-12.40 HealthWeb 2  
More online exercises.

### Lunch

- 1.30-2.00 An Introduction To Immunity  
Types of immunity: cellular and humoral immunity. New horizons: A brief overview of neuroimmunology and psychoneuroimmunology
- 2.00-2.45 Infectious Diseases: AIDS  
An overview of infectious diseases. Focus on AIDS: epidemiology, transmission, symptoms, treatment.
- 2.45-3.40 Public Health: Group Exercise  
Group problem solving exercise in disease prevention with brief student presentations.
- 3.40-3.45 Conclusions & Questions

## FORMAT

Format is varied, with interactive, multimedia lectures and group discussions.

Each school will receive a CD-ROM with software containing tutorial material, exercises and web links. Students will each receive a comprehensive tutorial pack containing complementary tutorial material.

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## SEMINARS & TUTORIALS

### FOR THE HEALTH SERVICES & THE LEGAL PROFESSION

MEDICAL GENETICS  
(FOR GENERAL PRACTITIONERS)

METHODS IN  
MOLECULAR BIOLOGY

EPIDEMIOLOGY & STATISTICS  
IN CLINICAL PRACTICE

BRAIN DAY FOR THE  
HEALTH & EMERGENCY  
SERVICES

THE BRAIN & THE LAW

### FOR EDUCATION

BRAIN DAY

DNA DAY

HEALTH & HUMAN DISEASE

PSYCHOPATHOLOGY

FORENSIC SCIENCE

BRAINS & GENES FOR MEDICS

THE LEARNING BRAIN  
(INSET FOR TEACHERS)

STRESS & SRESS MANAGEMENT  
(INSET FOR TEACHERS)