

The Nervous System and the Heart

Edited by Gert J. Ter Horst.

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The connections between the brain and heart are important in many ways, encompassing the regulation of normal cardiovascular activity, the development of disorders such as hypertension and coronary artery disease and understanding of the triggering of cardiac events and the emotional sequelae of acute myocardial infarction. A variety of disciplines contribute to knowledge of these processes. This substantial edited volume addresses the topic primarily from the neuroanatomical and physiological perspectives. The 13 contributions are predominantly review chapters, and are centred around five themes.

The first five chapters concern autonomic control of the heart, describing neuroanatomy and biochemistry, the brain regions involved in cardiac control and the regulation of circadian rhythms, and the specific roles of the insular cortex, infralimbic cortex and amygdala in organising cardiovascular responses. The effects of neuropathological conditions such as stroke, Parkinson's disease, headache and multiple sclerosis on autonomic cardiovascular control are discussed in a comprehensive chapter by researchers from Oulu in Finland.

The second section has a single chapter on hypothalamic–pituitary–adrenocortical activity and cardiovascular disorders, based primarily on rodent physiology. The third section contains four chapters on heart pain. This is an interesting issue, in that notwithstanding the lawful associations between myocardial ischaemia and pain in patients with angina pectoris, ischaemia of comparable intensity can occur without pain (silent ischaemia), while angina-like pain can occur in the absence of coronary vessel disease in syndrome X and other conditions. The chapters in this section review the neuroanatomy of cardiac nociceptive pathways, neurophysiology and neurotransmission. Rosen summarises his elegant series of functional neuroimaging studies that identified the brain regions activated during angina and suggest that the mechanisms for silent ischaemia and chest pain in syndrome X are central rather than peripheral in origin.

The fourth section of the book concerns humoral mediators, with chapters describing

the renin angiotensin system in cardiovascular regulation and hypertension, and the role of inflammatory processes in atherogenesis. Ter Horst develops the stimulating notion that has been circulating for the past few years, without as yet much empirical support, that inflammatory mediators such as cytokines released peripherally in coronary artery disease contribute directly to the fatigue and mood disorders that follow cardiac events in some patients. Finally, Tulner and den Boer provide a thorough review of the relationship of cardiovascular disease to depression, anxiety and other disorders, and the mechanisms that might lead to increased cardiac morbidity in depression.

This book will be of greater interest to neurologists and biological psychiatrists than to those involved in liaison psychiatry, health psychology or the care of patients with coronary heart disease. The balance of topics covered is somewhat uneven, with much space being devoted to autonomic processes and cardiac pain and very little to behaviour, human emotion research or psychophysiology. The contributions are generally up to date but take no hostages, and there is a bewildering array of abbreviations for brain regions, neurotransmitters and peripheral mediators. This is definitely a book for the specialist.

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Women and Mental Health

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Prevalence data estimating the number of women compared with men with significant psychiatric disorder or psychological symptoms have consistently found women to have higher rates both in the UK and other Western countries. Clinicians and researchers alike are increasingly aware of gender differences and their potential effect on aetiology, presentation, course and management issues in a range of mental disorders. This multi-author book takes a closer look at depression, schizophrenia, perinatal illness, eating disorders and substance misuse and the possible effects of

gender on them. It adds to the expanding literature that seeks to address the lack of provision of appropriate services for groups with distinctive needs. Women clearly are a group of health service users with specific needs related to their place in modern society and their particular presentation of mental health problems. Therefore, any book focusing on women's mental health is welcome and this one has the advantages of being easy to read, disorder-specific for 'quick dip' information and well presented.

The main criticism is that one could easily get the impression that gender differences in mental illness expression and therapeutic response are, in the main, of biological, rather than biosocial origin, despite a paucity of good biological data. Although some of the differences in mental health presentation between women and men are traceable to biological gender differences, it is increasingly apparent that these are minor players in any gender effect. Attempts to modify psychiatric disorder with hormonal therapies have at best been relatively harmless, but have certainly not provided the elixir once promised. The likelihood is that hormonal or genetic gender effects are most prominent in relatively early neurodevelopment and neuronal plasticity and that oestrogens are likely to have greatest effects on physical and cognitive symptoms in women across their reproductive life.

Perhaps predictably, then, the most interesting and thought-provoking chapters address the sociobiological and psychological viewpoint. That said, the chapters on eating disorders by Ulrike Schmidt and on alcohol and substance misuse by Jane Marshall provide excellent academic reference. Given the title of *Women and Mental Health*, it is puzzling that there were no chapters discussing mental health in minority groups of women (ethnic, lesbian), older women or children. Personally, I would also like to have seen a broader approach to this fascinating and important topic, for example with chapters addressing the feminist and historical perspective in depth. A more questioning examination of the role of gender and the clinical and service provision implications for women's mental health would also have set the book in a firmer context.

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