

# Cortical Spreading Depression (CSD)

2

CSD propagates slowly at 2-6 mm/min<sup>5,11,12</sup>

1

Initial wave of neuronal depolarization<sup>5,10</sup>

3

Inhibited cortical activity and reduced blood flow<sup>13,14</sup>



Trigeminal activation

✓

CSD causes a large wave of slow-spreading depolarization within the grey matter, which inhibits cortical activity<sup>10</sup>

✓

As a result, changes to synaptic activity, extracellular ion concentrations, blood flow, and metabolism occur<sup>13,16</sup>

✓

CSD has been hypothesized to activate the trigeminovascular system, driving aura symptoms<sup>14,17</sup>

CSD in the cortex is considered to be the primary pathophysiology behind the aura phase of a migraine attack.<sup>5</sup>

# Spreading Depression

**Jes Olesen**



## **Spreading Depression:**

**The Headaches** Jes Olesen, 2006 Established worldwide as the one definitive encyclopedic reference on headache The Headaches is now in its thoroughly revised updated Third Edition The foremost international authorities examine the mechanisms of over 100 types of headache and provide evidence based treatment recommendations including extensive tables of controlled clinical trials This edition presents the revised International Headache Society classification of headaches and explains how to use this new classification for accurate diagnosis Many headache entities are discussed for the first time such as chronic migraines primary headache attributed to sexual activity primary stabbing cough exertional and thunderclap headaches hypnic headaches and new daily persistent headaches A new section focuses on childhood headaches Chapters that focus on headaches in elderly patients and patients with psychiatric or medical diseases are also included

**Neurovascular Events After Subarachnoid Hemorrhage** Javier Fandino, Serge Marbacher, Ali-Reza Fathi, Carl Muroi, Emanuela Keller, 2014-11-03 This book contains articles presented at the 12th International Conference on Cerebral Vasospasm held in Lucerne Switzerland in July 2013 The included papers represent a balanced cross section of the enormous progress achieved in basic and clinical research on aneurysmal subarachnoid hemorrhage and its sequelae including early neurovascular events and delayed cerebral vasospasm The section on basic research covers a broad range of aspects with a special focus on animal models for the study of acute events after experimental subarachnoid hemorrhage The section on clinical topics encompasses imaging and endovascular management surgical innovations and techniques management and monitoring in neurocritical care the status of clinical trials and factors involved in aneurysm formation This edition is of interest not only for basic researchers but also for clinicians who wish to apply state of the art knowledge to the research and management of this devastating condition *Common and distinct mechanisms of migraine and stroke* Rashid Giniatullin, Arn M. J. M. Van Den Maagdenberg, Rustem Khazipov, Jukka Jolkkonen, 2023-04-10 *Migraine* Robert A. Davidoff, 2002-02-14 *Migraine Manifestations Pathophysiology and Management* Second Edition is a much expanded updated monograph that focuses in detail on migraine s diverse variations its pathophysiology and its treatment Authored by a clinician scientist who himself suffers from migraine the book s premise is that the clinical significance of migraine and its treatment are intelligible only if the physician understands the anatomical physiological and pharmacological factors underlying both head pain and the other manifestations of migraine The book provides clear clinical descriptions of the myriad of specific migraine syndromes and discusses the rationale for and elements of a sensitive inclusive patient history Also covered are important but sometimes ignored topics such as environmental triggering of migraine and myofascial syndromes The Second Edition also bridges the gap between basic science and clinical practice by explaining those substantive advances made in understanding fundamental mechanisms of head pain and aura Recent knowledge about genetics hormonal changes cerebral circulation nitric oxide peptides central sensitization of trigeminal neurons and the role

of periaqueductal gray matter buttress the discussion of basic mechanisms On the treatment side the Second Edition reflects the impressive advances in pharmacological approaches to migraine There is a greatly expanded section on the triptans and their mechanisms of action and rationales and practical information about the use of all other viable anti migraine and prophylactic drugs Psychobiological aspects of stress and stress management elimination of environmental stimuli the educational facets of management and aspects of the patient physician interaction so crucial in the treatment of migraine are all discussed Special problems associated with the care of women children the elderly patients with intractable headaches and emergency department patients are thoroughly reviewed In sum this scholarly well referenced book offers in one volume a comprehensive scientific and clinical discussion of migraine headache

*Epilepsy Bibliography, 1950-1975* J. Kiffin Penry, 1976 1771 entries to worldwide literature mostly journal articles Intended as source of current published works on epilepsy also serves as cumulative index to Epilepsy abstracts v 1 9 1967 1976 Classified arrangement under 9 broad headings e g Seizures Etiology and Treatment Entries include bibliographical information with foreign language titles also in English and Epilepsy abstracts citations Keyword subject indexes

**Indexes to the Epilepsy Accessions of the Epilepsy Information System** National Institute of Neurological and Communicative Disorders and Stroke. Epilepsy Branch, 1978

*Indexes to the Epilepsy Accessions of the Epilepsy Information System* J. Kiffin Penry, 1978

**Experimental Models of Epilepsy--a Manual for the Laboratory Worker** Dominick P. Purpura, 1972

Bioelectronics Abstracts. V. [1]- ; 1956-61--, 1962

Federation Proceedings Federation of American Societies for Experimental Biology, 1962

**Physiologia Bohemoslovaca**, 1972

Bioelectronics Abstracts, 1965

Migraine and Epilepsy Frederick Andermann, Elio Lugaresi, 1987

Malnutrition in the 21st Century Lyman W. Vesler, 2007 Malnutrition is a general term for the medical condition caused by an improper or insufficient diet It most often refers to undernutrition resulting from inadequate consumption poor absorption or excessive loss of nutrients but the term can also encompass overnutrition resulting from overeating or excessive intake of specific nutrients An individual will experience malnutrition if the appropriate amount of or quality of nutrients comprising a healthy diet are not consumed for an extended period of time An extended period of malnutrition can result in starvation or many other diseases such as scurvy Malnutrition as the lack of sufficient nutrients to maintain healthy bodily functions is typically associated with extreme poverty in economically developing countries It is a common cause of reduced intelligence in parts of the world affected by famine This new book presents leading research from around the world

**Migraine and Other Headaches** Jes Olesen, 1991 Looks at the mechanisms of migraine and other vascular headaches and details strategies for diagnosis and treatment of migraine with aura migraine without aura tension type headache cluster headache and other vascular headache disorders

**Journal of Nervous and Mental Disease**, 1949 July 1918 include reports of various neurological and psychiatric societies

The Laryngoscope, 1991

*The Central Nervous System and Behavior* Mary Agnes Burniston Brazier, 1959

**Cortex Cerebri** Otto Creutzfeldt, 1995 A subject of

intense scientific curiosity the cortex is the most highly developed part of the brain yet the youngest in evolutionary terms This revised and updated translation of Creutzfeldt s classic German text brings together for the first time the biological psychological and philosophical strands of enquiry relating to the cortex Otto Creutzfeldt was one of the most eminent neuroscientists of the century until his untimely death in 1992 He is known as one of the pioneers of neurophysiology and his outstanding scientific reputation combined with a subject of intense interest to researchers will ensure that this uniquely comprehensive book will be valued both for its scientific and historical contributions to the field Proceedings ,1960

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