

**Kahle W, Frotscher M. Color Atlas and Textbook of Human Anatomy. Volume 3: Nervous System and Sensory Organs. 5th ed. Stuttgart: Thieme Medical Publishers; 2003. 420 pages; ISBN 1588900649. Price EUR 34.95**

**Field of medicine:** Anatomy, neuroanatomy, neurohistology.

**Format:** Paperback.

**Audience:** Undergraduate students of medicine, biology, and pharmacy; scientists and postgraduate students in biomedical research; physicians.

**Purpose:** To provide a detailed textual and visual approach to anatomy of the nervous system and sensory organs.

**Content:** The book is composed of two main parts: the Nervous System – divided in ten chapters, and Sensory Organs – divided in two chapters. Chapters are marked with different color tags for easier orientation.

The book opens with an overview of the nervous system, including development and structure of the brain, and a short presentation of brain development from lower vertebrates to humans. The next chapter introduces basic elements of the nervous system. It contains a detailed description of the nerve cell, methods commonly used in neuroanatomy and neurohistology, sections on the synapses and neurotransmitters, nerve fibers and myelin sheath, and finally neuroglia and blood vessels. The third chapter opens with an overview of the spinal cord and spinal nerves. It proceeds with the detailed anatomy of the spinal cord, including the spinal cord syndromes. Peripheral nerves are excellently illustrated using multi-color images, followed by a detailed text. The fourth chapter begins with an overview of the brain stem and cranial nerves. Sections are divided according to the subdivision of the brain stem: medulla oblongata, pons, and mesencephalon. The chapter continues with the cranial nerves. All twelve nerves are well described, with separately illustrated afferent and efferent fiber pathways and functions. The chapter ends with a short presentation of the reticular formation and histochemistry of the brain stem. The fifth chapter brings the structure, functional organization, and pathways of the cerebellum. The sixth chapter is divided according to the subdivision of the diencephalon: epithalamus, dorsal thalamus, subthalamus, and hypothalamus. This chapter also includes a section on the development and organization of the hypophysis. The following chapter describes telence-

phalon, and is the most detailed one. The first part presents sections (coronal, lateral, and horizontal) through different levels of the telencephalon, each described both visually and textually. Furthermore, the chapter contains organization of the paleocortex and amygdaloid body, subdivision and functional significance of the archiocortex, pathways and significance of the neostriatum, and a brief description of the insula. The neocortex is fully described, lobe by lobe. The eighth chapter offers a look into the cerebrovascular system of the brain, where the arteries and veins are fully described and illustrated. The chapter also contains sections on the cerebrospinal fluid spaces and meninges. The next chapter is about the autonomic nervous system, and the last one in the first part of the book deals with functional systems: motor, sensory, and limbic.

The last two chapters fully describe sensory organs, the eye and the ear, including structure, visual and auditory pathways, and ocular reflexes.

**Highlights:** The book is a highly readable guide that provides an excellent insight into human neuroanatomy. It is an excellent source for learning not only for medical students, but for anyone who might need a solid source of knowledge about neuroanatomy. Each chapter contains clear, highly understandable, magnificent multicolor illustrations.

**Limitations:** Although it is not in the primary scope of the book, it could be beneficial to add illustrations of more contemporary brain imaging methods used for both brain investigation and clinical diagnostics, such as functional magnetic resonance imaging and magnetoencephalography.

**Related reading:** Several similar readings of an anatomical atlas and textbook are available: Neuroanatomy Text and Atlas by John H. Martin (McGraw Hill Text, 2003), The Human Brain: An Introduction to Its Functional Anatomy by John Nolte (Mosby, 2002), and Atlas of Functional Neuroanatomy by Walter J. Hendelman (CRC Press, 2000).

Goran Šimić

**Shemer J, Shoenfeld Y, editors. Terror and Medicine. Medical Aspects of Biological, Chemical and Nuclear Terrorism. Lengerich: Pabst Science Publishers; 2003. 562 pages; ISBN 3-89967-018-3; price: EUR 30**

**Field of medicine:** Public health, bioethics.

**Format:** Paperback.

**Audience:** Public health specialists, physicians specialized in various branches of medicine, philosophers and specialists in bioethics, psychologists, health managers, policy makers.

**Purpose:** To draw attention of the medical community to the threat of chemical, biological, and radiological weapons, and other non conventional means that can be used in terror attacks. The authors suggest that every nation should establish infrastructure to ensure preparedness for possible terrorist attacks, and they offer guidance and practical knowledge on how to act, based on their country's experience.

**Contents:** The book is a product of work of a large number of authors, and is composed of five main chapters, dividing the content into thematic parts. All articles are concise, clearly written, and with precise instructions. The first chapter is an introduction dealing with recent terrorist attacks around the world and describing basic concepts of non-conventional warfare and epidemiology of terrorism. It gives an introduction to the bioethical issues, discusses whether aggressive public health interventions improve public confidence and cooperation, and explores ways to allocate resources in the situation of mass destruction, in the best interests of public health. In that light, questions are raised to which extent freedom of movement should be restricted, and where the limits are of doctor-patient confidentiality. The second chapter deals with policies and doctrines in the event of terrorist attacks. It gives a short historical overview, and then explains precisely how to organize medical services and hospital functioning in the anticipation of use of various forms of mass destruction weapons, and how to act in the situation when balance between resources and demands is not stable. Articles are dealing with problems of distribution and rationing of vaccines or antidotes, resource allocation and medical triage, education and duties of health workers and first responders, and involvement of local or regional governmental institutions. It provides principles of contingency planning for unusual biologic events, and explains how such a planning has value in the times of peace as well, and how it can be converted into action plan for natural outbreak of different infectious diseases. Chapter three describes chemical, biological, and radiological terror, and is divided in five sections. The first section is a general overview, explaining classical and new epidemiological paradigm of bioterrorism, and traditional and new surveillance systems. Syndromic surveillance systems in the USA and Israel are presented, and use of technology is described. The authors strongly sug-

gest that healthcare professionals at all levels should be properly educated and playing a more active role in the disease surveillance. Also, principles of personal protection are presented. The second section is devoted to the chemical agents, describing everything from the organization of the health care to the description and explanation of the chemical agents used in the world so far. It provides detailed clinical signs and step by step guidance for the treatment, and short and long follow up. The third section is a description of the biological agents with special emphasis on anthrax and smallpox. It is brilliantly written, and covers every imaginable aspect of biological warfare. It gives principles of preparedness, prevention, clinical signs, treatment, and projections for possible terror attacks. This part has a quality of a true medical textbook, with clear and extensive description of all characteristics of major biological agents divided into bacteria, viruses, and toxins. All articles in the book give some examples from Israeli experience, but two articles in this section are completely devoted to the situation in Israel, analyzing preparedness for smallpox and SWOT (strengths, weaknesses, opportunities, and threats) analysis of Israeli smallpox revaccination program. It introduces the SWOT analysis as a tool for mapping different forces acting in a given time. The fourth and fifth sections are about radiological terrorism and veterinary medicine, represented with one very informative article each. In times of a crisis, veterinary medicine is usually dealing with sanitation, but emphasis in this article is on sentinel use of animals as one aspect of general preparedness. The fourth chapter describes the aspects of trauma in terrorist attacks. At the beginning, the chapter explores preparedness for mass casualty situations, and gives step by step management plan for situations when medical facilities fail to deliver therapy to outnumbered patients. The rest of the chapter describes bizarre cases characteristic of suicide bombers and car bombs in Israel, and management of such victims. It also covers burn injuries, otology injuries, and some potential new modes of infection through penetrating bone fragments in suicide bombing. Although the rest of the world did not experience this type of terror attacks, some aspects of blast management and trauma treatment are universally applicable. The chapter finishes with a case report of the rehabilitation of the spinal cord injuries resulting from terrorist attack, with special attention to the social setting of the victims. The fifth chapter deals with psychological aspects of terror in mass destruction. It introduces expected clinical findings and psychiatric guidelines for such situations. It also describes the role of leadership and communication to the public. The book ends by describing cases of stress resulting from terrorism and war in

the primary care clinic in the border neighborhood of Jerusalem.

**Highlights:** Although the book mostly describes the Israeli experience, I am convinced that the model of the first response or health care management is relevant for other countries as well. Its organizational guidelines are informative, especially for the countries with similar population size or geographical area. The book offers extensive descriptions of various biological, chemical, radiological, and other agents, with excellent graphical presentations and a number of literature citations. Therefore, some parts could be used as a textbook or serve as a reference book in everyday medical practice. The book is writ-

ten particularly catchy, and all case studies presented, no matter how macabre or bizarre, are interesting from both professional and human aspects.

**Limitations:** This book confirms the common need for preparedness of infrastructure and personnel for terrorist attacks. However, there is a subtle presence of political promotion and victim role playing of the state of Israel throughout the whole book. I strongly believe that in a modern evidence-based medical book, elements of political or religious promotion are not adequate.

Ksenija Vitale

### **Reilly C. Metal Contamination of Food. Its significance for food quality and human health. 3rd ed. Oxford: Blackwell Science Ltd.; 2002. 320 pages; ISBN: 0-6320-5927-3; price: £79.50**

**Field of medicine:** Public health, toxicology, food safety and quality, nutrition, analytical chemistry.

**Format:** Hardback.

**Audience:** Public health workers, nutritionists, toxicologists, physicians, experts and laymen interested in the topic.

**Purpose:** To provide the reader with key information on metals in food and their influence on nutrition, health, and environmental safety. Advances in techniques of food quality control with respect to metal contamination are described, as well as requirements and legislative aspects of food safety and quality control. Particular attention is given to multi-element analysis, improved closed system sample digestion and determination of chemical species, as well as new codes of practice, nutritional and food safety concerns, as reflected in the legislation of many countries in the world and key international organizations.

**Content:** This is the 3rd revised and up-to-date edition of an internationally accepted comprehensive text on metal contamination in food. The previous edition was published in 1985. In the first part, *The Metals We Consume*, the author explains the omnipresence of metals in the human environment, especially food, the important role the metals have in human life, how the presence of metals in food can have both good and bad consequences, and how the technology of food processing and storage depends in many ways on metals. This part is divided into five chapters. The first chapter, *Introduction*, deals with ash, the metals in food, and distribution of the metals in the environment. The second chapter, *Metals in Food*, informs us on the metal components of food, reasons of our interest in metals in food, the toxic metals, effects of metals on food quality, how much metal we consume with our food, and how risks from metals in food are assessed. The titles of the following

three chapters best describe the topics they deal with: *Metal Analysis of Food*, *How Metals Get Into Food*, and *Metals in Food and the Law*.

The second part, *The Individual Metals*, is comprised of seven more chapters. The sixth chapter deals with the persistent contaminants (lead, mercury, and cadmium); the seventh with the packaging metals (aluminum and tin); the eighth with transition metals (chromium, manganese, iron, cobalt, nickel, copper, and molybdenum); the ninth with other transition metals and zinc; the tenth with metalloids (arsenic, antimony, selenium, tellurium, and boron); the eleventh with new metal contaminants (the radioactive metals, the catalytic metals, the electronic metals, germanium, tantalum, and caesium); and the twelfth with barium and beryllium. Thallium, bismuth, lithium, zirconium, cerium, and the other rare earth elements sum it all up.

**Highlights:** Indeed, the book fulfills all three major objectives preset by the author. First, it presents a brief and useful summary of available information on metals in food, and makes this information, which otherwise might require time-consuming literature search and presence of relevant technical databases, available in one place. Second, it critically assesses the current status and development of metal and multi-element analytical techniques, with special reference to the need for a wide acceptance of greater care and the practice of immaculate laboratory hygiene when dealing with trace levels of metals in food. Third, it presents a thorough overview of the field in a concise, readable, and not too technical manner for less specialized readers of different backgrounds, interests, and fields of expertise. Finally, the author dared to define clearly one of the main future goals in assessing the risk of metal contamination of food, ie, the speciation of elements, since different species of the same element seem to have remarkably

distinct biological and health effects upon man and his environment.

**Limitations:** I can only praise this book. I found it extraordinary in breath and scope; it covers many disciplines and transgresses even the more traditional disciplinary boundaries. This book is highly comprehensive but still amazingly rich in the detail. It has an exceptional quality in dealing with metal traces where, indeed, "the devil is in the detail". In-depth probing of many book chapters has convinced me that this book is at the very cutting edge of current analytical technical development and public health and safety. The book is non-partisan but data-driven on many hot issues, such as food fortification, supplementation, functional foods (nutriceuticals), and nu-

tritional life-style preferences. Because the first edition appeared almost 30 years ago, this new edition reflects a sublimated and long experience in the field condensed by the sharp-eyed and witty expert into hands-on, easy-to-follow writing intended for experts as well as the educated layman with an interest in the field – from analytical chemist to the practicing clinician, from engaged environmentalist to the food industry lawyer, from laboratory toxicologist to the conscience consumer's kitchen. In addition, I personally found this book to be an excellent tutorial in English language and style for those of us of a different mother tongue. Impressive reading!

Berislav Momčilović

**Dittrich LR, editor. Ten Years of Medicine and the Arts: 100 Selections from Academic Medicine, 1991-2001. Journal of the Association of American Medical Colleges. Washington (DC): the Association of American Medical Colleges; 2001. 226 pages; ISBN 1-57754-021-4; Limited complimentary edition**

**Field of medicine:** Humanities.

**Format:** Monograph, paperback cover.

**Audience:** Medical students, physicians, medical educators, and laymen interested in the topic.

**Purpose:** To promote reflection on important human concerns, and to provide a useful teaching tool for medical educators, particularly those unfamiliar with the arts and medicine field.

**Content:** Medicine has long been a source of inspirational motives for artists, and the arts have been accompanying medicine for centuries. It has been ten years since *Academic Medicine*, one of the most esteemed journals of medical education and the scholarly journal of the Association of American Medical Colleges, began publishing a monthly feature of medicine and the arts. Each journal issue brought a work of art (fiction and nonfiction novels, plays, poetry, movies, documentary films, fine arts, or photography) on one page, accompanied by a commentary on the relevance of the work to medicine and medical education on the opposite page. This is a 10-year anniversary book collecting a hundred pieces together in one publication.

Many famous artists' works found their place here, be it from the world of film (Akira Kurosawa's *Ikiru*, David Lynch's *The Elephant man*, and Michael Ondaatje's *The English Patient*), fine arts (Pieter Brueghel the Elder, Rembrandt van Rijn, Edward Munch), literature (Daniel Defoe, Jane Austen, Mary Shelley, Henrik Ibsen, Emily Dickinson, Mark Twain, Herman Hesse, Virginia Woolf, William Faulkner, Al-

exander Solzhenitsyn, and many more), or another form of arts.

The book is divided into eight thematic sections: *Witnessing and Creating, Patients' Stories, Empathy and Objectivity, Dying and Death, About the Body, Caregivers, Difficult Questions*, and *To be a Doctor*. It covers numerous topics that (should) intrigue students, physicians, and all health care workers, e.g., domestic violence, "difficult patients", AIDS, aging, caring for the elderly, and euthanasia. In the commentaries, physicians contemplate their career choices and discuss their professional dilemmas; medical students reflect on the process of becoming physicians; teachers share real-life classroom experiences; nurses and allied health professionals consider their roles in healing and their relationships to physicians.

**Highlights:** Every piece offers the opportunity to explore one's own thoughts, feelings, experiences, and personal views, to enrich and deepen the understanding of medicine, patients, oneself, and ultimately – life. The editor states that the goals in creating the column were "to promote reflection on important human concerns, and to provide a useful teaching tool for medical educators, particularly those unfamiliar with the arts and medicine field." Our warmest congratulations for succeeding for extending the boundaries of medicine yet again, and making practicing and teaching it ever nobler.

Kristina Fišter

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**Erratum:** The author of the book review "Hepatitis C: State of the Art at the Millennium" published in the *CMJ* October issue 2002 was Antea Topić, not Vedran Katavić as it was published.

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