

book review

Disinfection, sterilization and preservation (5th ed)

Publishers: Lippincott Williams and Wilkins,
Philadelphia 2001

Editor: Seymour S Block

This is a comprehensive reference text combining the knowledge and experience of 124 renowned international authors. The book, consisting of 1500 pages divided into seven sections and 75 chapters, is an excellent resource suitable for sterilising practitioners, infection control practitioners, microbiologists, epidemiologists, pharmacists, health care professionals working in both acute and community settings, and also for personnel involved in the manufacturing of sterile goods and equipment. There are also chapters of interest to veterinarians and dentists on sterilisation, disinfection and asepsis.

Two Australians are published in the book. Julian D Druce author of Chapter 29, *Human Immunodeficiency Virus: disinfection and control* and Margaret M Peel, co-author of Chapter 41 entitled *Disinfection by ultraviolet irradiation*.

It has been a decade since the last publication of this reference book. As a result, this fifth edition has been completely updated and revised and also contains a substantial amount of new information not covered in previous editions.

Chapter 1 provides an overview of the history of sterilisation, disinfection and preservation. This chapter written by the editor touches briefly on biblical and medieval disinfection strategies, beginning with the use of heat from fire to destroy contagion arising from human waste. Block then progressively moves through the centuries to the Renaissance period and on to the early years of modern medicine. He identifies eminent scientists and physicians who gained recognition as pioneers in disinfection and sterilisation, describes their work and attributes credit to their discoveries.

The chapters contained in Part IV revisit the basic principles and procedures of sterilisation and disinfection. Topics of special interest relate to the evolution of sterilisation and disinfection processes developed in response to new surgical techniques such as endoscopy.

Chemical disinfectants such as peroxygen, iodine, chlorine and their compounds, together with alcohols, phenolics and glutaraldehyde are dealt with comprehensively, as is the use of ozone. Contemporary agents used in gaseous chemical sterilisation are also covered.

Chapter 15, entitled *Chlorhexidine* discusses colouring of solutions, efficacy in regards to surgical and hygienic hand disinfection, skin irritation and pre-operative skin disinfection. The bactericidal, sporicidal and virucidal activities of these chemicals are also examined.

Contemporary issues are addressed in disease specific chapters such as *Control of Staphylococcus aureus and Enterococcal infections* and *Prions* (covering CJD and variant CJD). Other chapters related to clinical practice include *Management of infectious wastes*, *Infections arising from the use of medical devices* and *Prevention of nosocomial infection*. *Survival of microorganisms in the environment* examines patient risk in regards to dust on floors, inanimate surfaces, survival in soils, and body waste.

Chapter 62 on *Chemical disinfection of microbial contamination on surfaces* provides instruction for preventing transmission via environmental surfaces and applies this specifically to day care centres and long-term facilities. The book even contains a chapter on *Microorganisms and building related illnesses*.

Part VII covers methods of testing and includes disinfectants, antiseptics, antimicrobials, fungicides, antivirucidal activity; also sterilisation validation processes. There are chapters that discuss the limitations of the various sterilisation methods available today and those that confirm scientifically basic concepts such as the need to thoroughly clean prior to disinfection or sterilisation.

We thought this an excellent publication and a 'must' for any reference library.

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