

Using dental materials

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This book is intended for students in allied dental health programmes who need to understand the clinical application of dental materials. This could also be a good review text for a dental hygienist who is preparing for board examinations. The content is organised into six broad sections, and more specific content is focused in chapters within each section. A variety of self-study resources and a glossary of terms are provided as appendices that are intended to enhance the student's learning of dental materials. Additionally, each chapter begins with chapter highlights and objectives, and concludes with a key points summary and self-test questions.

Section 1 contains four chapters and presents the vocabulary with a succinct discussion of terms needed for the understanding of basic dental material science. The content of these four chapters provides the basic material terminology with definitions and application to practice. The definitions are minimally simple, providing an introductory level of understanding.

Section 2 contains five chapters focusing on preventive, diagnostic and cosmetic materials. This section presents information about various polishing agents, dental sealants, tooth whiteners, impression materials, and study model and die materials.

Section 3 contains three chapters focusing on materials used for direct-to-tooth restorations. The chapters provide information on intermediary materials, composite, glass ionomer and blended aesthetic materials for direct restorations. The section concludes with a chapter on the non-aesthetic restorative materials, namely amalgam, and reinforced zinc oxide and eugenol.

Section 4 contains five chapters focusing on dental materials for indirect restorative procedures. These chapters include information on impression trays, final impression materials, materials for temporary tooth coverage and permanent indirect restorations. The section concludes with a discussion of cements and their use, including mechanism of action, materials used, and the characteristics of and how to manage each cement.

Section 5 contains two chapters and provides information on materials used for tooth replacements, such as dental implant and

denture materials. Section 6 concludes the book and presents one chapter on materials for pulp therapy.

Generally, the book provides a general overview of dental materials needed for allied dental health student's understanding and application for the oral environment. Aspects of dental materials that are most related to dental hygiene practice would require further study from additional resources in order to increase the depth of understanding for dental hygienists. The book provides content for general understanding.

The photographs and diagrams are reproduced in black and white. In most instances, these suffice to complement the written text, but colour photographs would definitely enhance the presentation and clarity of the information. In some instances, the clinical and laboratory pictures are very small and are not effective in being illustrative of the intended concept. A student would have difficulty visualising the material or procedure in the photograph. An experienced clinician may be able to interpret what is represented in the picture, taking into account his/her increased clinical experience, but it is unlikely that new a student would have the same ability.

The self-study material provides a nice combination and variety of study aids that will appeal to each individual student. The study material includes 25 case studies followed with the rationale for each case study, and crossword puzzles that are thematically organised into 'materials' terminology or concepts of dental materials.

For the educator, the book provides samples that could be used to assess the student's competency for knowledge, application and evaluation of dental materials. The sample competency evaluations are included for each chapter and, where appropriate, are divided into both content (knowledge) and laboratory (application) competency evaluation. I would recommend this book with minimal reservations for students and for dental hygienists needing a review text.

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