

## The Effect Of Xylitol Chewing Gum On Mutans Streptococci

Sucrose (table sugar) is considered as sugar by most of the people. Though sweet, sugars are the causes for many bitter experiences faced by the modern day civilized man. Sugar, directly or indirectly is considered as culprit for many diseases like diabetes, obesity, atherosclerosis, etc., which prompted the search for a suitable substitute.' At this given point of time, there is no such substitute which can replace sugar (which is versatile) in all aspects. The dental profession shares an interest in the search for safe, palatable sugar substitutes, as there is established evidence suggesting the causal relationship between sugar and dental caries. Use of sugar substitutes in preventive dentistry is gaining importance. Replacing sugar with a suitable sugar substitute to combat dental caries is an option wide open. This is a small effort to give an elaborate discussion on sugar substitutes and their role in dental health and also remove the myths about them and give a clear cut idea on them.

This book provides a comprehensive and accessible source of information on all types of sweeteners and functional ingredients, enabling manufacturers to produce low sugar versions of all types of foods that not only taste and perform as well as sugar-based products, but also offer consumer benefits such as calorie reduction, dental health benefits, digestive health benefits and improvements in long term disease risk through strategies such as dietary glycaemic control. Now in a revised and updated new edition which contains seven new chapters, part I of this volume addresses relevant digestive and dental health issues as well as nutritional considerations. Part II covers non-nutritive, high-potency sweeteners and, in addition to established sweeteners, includes information to meet the growing interest in naturally occurring sweeteners. Part III deals with the bulk sweeteners which have now been used in foods for over 20 years and are well established both in food products and in the minds of consumers. In addition to the "traditional" polyol bulk sweeteners, newer products such as isomaltulose are discussed. These are seen to offer many of the advantages of polyols (for example regarding dental health and low glycaemic response) without the laxative side effects if consumed in large quantity. Part IV provides information on the sweeteners which do not fit into the above groups but which nevertheless may offer interesting sweetening opportunities to the product developer. Finally, Part V examines bulking agents and multifunctional ingredients which can be beneficially used in combination with all types of sweeteners and sugars.

Dietary sugars are known to have medical implications for humans from causing dental caries to obesity. This book aims to put dietary sugars in context and includes the chemistry of several typical subclasses eg glucose, galactose and maltose. Modern techniques of analysis of the dietary sugars are covered in detail including self monitoring and uses of biosensors. The final section of the book details the function and effects of dietary sugars and includes chapters on obesity, intestinal transport, aging, liver function, diet of young children and intolerance and more. Written by an expert team and delivering high quality information, this book provides a fascinating insight into this area of health and nutritional science. It bridges scientific disciplines so that the information is more meaningful and applicable to health in general. Part of a series of books, it is specifically designed for chemists, analytical scientists, forensic scientists, food scientists, dieticians and health care workers, nutritionists, toxicologists and research academics. Due to its interdisciplinary nature it could also be suitable for lecturers and teachers in food and nutritional sciences and as a college or university library reference guide.

Lon Jones, America's most famous country doctor and practitioner of commonsense medicine, shows you how to cure yourself of allergies, sinus problems and other upper respiratory conditions. Dr. Jones proven method using nasal xylitol also helps prevent children's ear infections and cavities. His natural solution is ideal for parents wanting to cut down on their children's use of antibiotics and other allergy drugs such as antihistamines and decongestants. It's as simple as keeping your nose clean!

Dental Caries is a major new work on a subject of vital concern to all dentists. It builds on the work of two former books, Textbook of Clinical Cariology and Fluoride in Dentistry, to present a definitive resource on caries prevention and treatment. The management of dental caries is central to daily work in dental offices because caries is ubiquitous in all populations, lesion development continues lifelong and caries is the most common cause of tooth loss around the world. The book's logical structure consists of four parts, covering: The Disease; Diagnosis; Prevention, Non-Operative and Operative Treatment and Prognosis. It provides a clear understanding of the disease process, be it at an individual or population level. The Editors are joined by 28 expert authors who have contributed a wealth of chapters, ranging from the role of fluorides to restoring the tooth. Careful balance between prophylaxis and surgical intervention guides the reader through the maze of treatment decisions, while the breadth of the book reflects diverse, and sometimes controversial, opinion on dental caries.

You can count on McDonald: the go-to source for expert, complete coverage of oral care for infants, children, and teenagers for over half a century. McDonald and Avery's Dentistry for the Child and Adolescent, 10th Edition discusses pediatric examination, development, morphology, eruption of the teeth, and dental caries in depth — and emphasizes prevention and the treatment of the medically compromised patient. Boasting a new design and handy Evolve site, this new edition by Jeffrey A. Dean equips you with the latest diagnostic and treatment recommendations in the fast-growing field of pediatric dentistry. Complete, one-source coverage includes the best patient outcomes for all of the major pediatric treatments in prosthodontics, restorative dentistry, trauma management, occlusion, gingivitis and periodontal disease, and facial esthetics. A clinical focus includes topics such as such as radiographic techniques, dental materials, pit and fissure sealants, and management of cleft lip and palate. Practical discussions include practice management and how to deal with child abuse and neglect. Evolve site provides you with the best learning tools and resources. UPDATED! More emphasis on preventative care and treatment of medically compromised patients helps you provide more effective care. NEW! Easier-to-follow design.

Providing a current overview of how physical, chemical and biochemical aspects of the oral environment influence tooth condition, this publication covers caries, calculus, tooth wear and erosion, and the roles of pellicle, saliva and plaque in inducing and/or moderating these conditions. It highlights topics such as new intra-oral and laboratory methods to assess tooth wear, the latest ideas on de- and re-mineralisation processes involving enamel and dentine, new insights into the tooth structure-function relationship and the site specificity of anticaries treatments. Reviews of pellicle function and of the inverse relationship between caries and calculus complete the volume. This book is recommended to all oral care scientists, laboratory and clinical researchers alike, and to lecturers in dental medicine.

One of the most successful textbooks in pediatric dentistry, this expert resource provides superior, comprehensive coverage of oral care for infants, children, teenagers, and medically compromised individuals. Thoroughly revised material offers the most up-to-date diagnostic and treatment recommendations based on current research, literature, and clinical experience. Now in its 8th edition, this classic text continues to offer in-depth coverage of all areas relevant to the contemporary science and practice of pediatric dentistry. Discussions of theories related to molecular biology of the eruption of teeth explain problems related to dental eruption and insight into future methods for their resolution. Incorporates the American Cleft Palate - Craniofacial Association guidelines for the most recent advances in treatment of cleft lip and palate. Follows academy-approved guidelines for the use of anesthetics in the treatment of the child patient as well as outpatient vs. in-patient procedures. Provides an overview of practice management including patient scheduling, insurance, and third party plans. Includes dentists' guide for documenting and reporting child abuse and neglect. Provides valuable information on cavity varnish, mercury toxicity, and glass ionomer cements. Provides indications for the use of implants to replace teeth (congenitally missing or lost as a result of trauma) in pediatric patients. An updated chapter on nutrition and health shows how food choices and patterns of eating initiated in childhood affect oral health and overall well-being at every stage of life. An increased emphasis on the genetic influence of root resorption associated with orthodontic treatment explores this hot topic. Coverage of new restorative materials examines their use in everyday clinical restorative practice. New coverage of tooth whitening for children and its indications responds to the growing popularity of cosmetic tooth whitening for people of all ages. An updated radiography chapter provides thorough information on digital radiography in children's dentistry. Increased emphasis on Early Childhood Caries and the Alternative Restorative Technique (ART) - a technique used to restore defective or carious teeth with minimal cavity preparation followed by placement of a fluoride-releasing material - reflects the American Academy of Pediatric Dentistry's position on ART. The chapter on anxiety control and pain/analgesics includes specific dosage recommendations for managing anxious or fearful patients. The updated pharmacologic management chapter includes the latest information on sedation techniques in children. The updated trauma chapter includes new splinting recommendations for root fractures and the new Titanium Trauma Splint, cross-referenced to the International Association of Dental Traumatology Diagnostic and Treatment Guidelines, and categories for treatment of avulsed teeth. A new section on the dental management of patients with sickle cell anemia offers the most current information for treating children with disabilities as well as medically compromised patients. Revised illustrations help readers see techniques in a modern dental office setting.

Risk for dental caries is correlated with exposure time in acidic environments. A chewing gum that releases xylitol over an extended time is desired for maximizing beneficial effects. Data has yet to be collected about the time release properties of xylitol sweetened chewing gum made from a bacterial cellulose gum base. Furthermore, it is unknown if the release time can be extended by incorporating pectin within the bacterial cellulose pellicles. In this experiment, bacterial cellulose was produced from *G. xylinum* ATCC 53582. The harvested cellulose pellicles were freeze dried then rehydrated in different solutions. The first solution contained xylitol, the second contained xylitol and pectin, the third contained xylitol and xyloglucan. The physical properties were collected and compared using an Instron universal strength testing machine. The results may indicate that bacterial cellulose based chewing gum with pectin extends the release time of xylitol than the same gum without additives. If produced for consumer consumption, cellulose-based gum with pectin may provide longer lasting benefits improving oral cavity health by extending the release time of xylitol.

Xylitol Chewing Gum Caries-preventive Effect and Therapeutic Applications Fluoride and the Oral Environment Karger Medical and Scientific Publishers

This book provides information to the readers starting with the history of oral hygiene manners, and modern oral hygiene practices. It continues with the prevalence and etiology of caries and remedy of caries through natural sources. Etiology of secondary caries in prosthetic restorations and the relationship between orthodontic treatment and caries is addressed. An update of early childhood caries is presented. The use of visual-tactile method, radiography and fluorescence in caries detection is given. The book finishes with methods used for the prevention of white spot lesions and management of caries.

The use of Compound-specific Stable Isotope Analysis (CSIA) is increasing in many areas of science and technology for source allocation, authentication, and characterization of transformation reactions. Until now, there have been no textbooks available for students with an analytical chemical background or basic introductory books emphasising the instrumentation and theory. This book is the first to focus solely on stable isotope analysis of individual compounds in sometimes complex mixtures. It acts as both a lecture companion for students and a consultant for advanced scientists in fields including forensic and environmental science. The book starts with a brief history of the field before going on to explain stable isotopes from scratch. The different ways to express isotope abundances are introduced together with isotope effects and isotopic fractionation. A detailed account of the required technical equipment and general procedures for CSIA is provided. This includes sections on derivatization and the use of microextraction techniques in GC-IRMS. The very important topic of referencing and calibration in CSIA is clearly described. This differs from approaches used in quantitative analysis and is

often difficult for the newcomer to comprehend. Examples of successful applications of CSIA in food authenticity, forensics, archaeology, doping control, environmental science, and extraterrestrial materials are included. Applications in isotope data treatment and presentation are also discussed and emphasis is placed on the general conclusions that can be drawn from the uses of CSIA. Further instrumental developments in the field are highlighted and selected experiments are introduced that may act as a basis for a short practical course at graduate level.

Keys to unlock the gateway to health, starting with your digestion. Years of research on the most cutting-edge gut interventions like probiotics, prebiotics, and herbal/mineral supplementation, combined with data and observation from regular consultation on digestive ailments, have culminated in this 3rd Edition of the definitive guide to your gut health, Fix Your Gut. Find out the real causes of surface-level digestive disturbances like acid reflux, heartburn, excessive burping/indigestion, and even the occasional gas. Benefit from the holistic results of your new and improved digestion. There is an average of 70 million Americans diagnosed with digestive disorders every year. More and more Americans are rushing to their doctors to treat conditions like heartburn, gas, GERD, SIBO, IBS, ulcerative colitis, and Crohn's disease. In our modern world, more digestive diseases and problems are being discovered than ever before. The most concerning aspect in light of this onslaught of illnesses is that science and natural medicine are already way ahead of the curve in relieving them, yet patients are not being given answers. When digestion tanks, most people turn to conventional medicine, which is great for emergency procedures and life-threatening conditions, but often doesn't offer what is needed for the prevention and treatment of disease. In everyone's medical treatment, there are benefits from a balance of natural and conventional medicine. Individuals deserve to be given the information required to make their own decisions, not only in treatment options for problems that might arise, but in the development of a healthy overall lifestyle. This book gives you the best interventions to improve your gut health, including how to change your diet to optimize your digestive system and enhance total body function. An ideal digestive system eliminates toxins, governs the immune system, absorbs nutrients, provides peak mental health, and ultimately makes it possible to get the most out of life. This is the only guide that examines all available treatments for hacking and maximizing your microbiome, down to each species of probiotic bacteria and every molecule of prebiotic fiber that might be utilized. Probiotics, prebiotics, herbal remedies, diet and lifestyle changes, and even pharmaceutical drugs are held under the microscope to help determine a gut-healing protocol that's right for your specific goals. We are all individuals with different genetics, microbiomes, and allergies, so every contingency is accounted for in the diverging paths of healing provided within this guide. In his definitive work, John Brisson explores and explains everything you need to know about digestive health. Fix Your Gut covers (and helps you discover): -How Your Digestive System Really Works - Tips to Improve Digestive Health - Probiotic Guide and Information (All Different Flora and Their Uses) - Supplement Brand Recommendations (Quality Matters) - Buying Supplements Online and Locally - Protocols for Most Digestive Diseases (GERD, LERD, SIBO, Gastritis, Gastroparesis, IBS, IBD, Esophageal Motility Disorders) - Protocols for Colon Cleansing and Parasite Elimination - Protocols for Constipation, Diarrhea, and Food Poisoning - Protocols to treat Candida, H. pylori, and C. diff Infections - The True Cause of Ulcerative Colitis and Crohn's Disease - Information on Different Diets and How They Affect Your Digestive Health - Gastrointestinal Cancer General Information and Alternative Treatments - Information on Antibiotics and Medicines Used to Treat Digestive Diseases - Information on Digestive Diagnostic Procedures It's time to take back your digestive health! [www.fixyourgut.com](http://www.fixyourgut.com)

The new edition of Prevention of Oral Disease remains the only comprehensive textbook covering all aspects of dental prevention. Chapters covering conventional preventive issues such as diet and fluorides are complemented by innovative new or revised material in a wide range of areas, including mucosal disease, the pulp odontal disease. Generic subjects such as the social dimension of oral health and health promotion underpin the clinically based chapters. The book is relevant to anyone who has to provide or understand prevention, irrespective of their clinical discipline or interest. The new edition has been brought in line with undergraduate teaching methods and the way in which dentistry students learn/revise. The only textbook to cover all aspects of preventive dental care in a focused, evidence-based way. New two-colour text design and numerous summary boxes and key points throughout the book ensure a format that is learner friendly. Cross-disciplinary, with editors from different fields.

A survey of the extensive field of sucrose alternatives, detailing scientific information, technical applications, and regulatory ratings for a wide array of sweeteners. It highlights the change in status of saccharin, the increased use of polyols, and the possibilities provided by the availability of a variety of alternative sweeteners and their uses in combination. This third edition contains new chapters on neotame, tagatose, trehalose, erythritol, and aspartame-acesulfame salt.

This book offers readers a valuable overview of recent advances in biomedical engineering, as applied to the modern dentistry. It begins by studying the biomaterials in dentistry, and materials used intraoperatively during oral and maxillofacial surgery procedures. Next, it considers the subjects in which biomedical engineers can be influential, such as 3-dimensional (3D) imaging, laser and photobiomodulation, surface modification of dental implants, and bioreactors. Hard and soft tissue engineering in dentistry are discussed, and some specific and essential methods such as 3D-printing are elaborated. Presenting particular clinical functions of regenerative dentistry and tissue engineering in treatment of oral and maxillofacial soft tissues is the subject of a separate chapter. Challenges in the rehabilitation handling of large and localized oral and maxillofacial defects is a severe issue in dentistry, which are considered to understand how bioengineers help with treatment methods in this regard. Recent advances in nanodentistry is discussed followed by a chapter on the applications of stem cell-encapsulated hydrogel in dentistry. Periodontal regeneration is a challenging issue in dentistry, and thus, is going to be considered separately to understand the efforts and achievements of tissue engineers in this matter. Oral mucosa grafting is a practical approach in engineering and treatment of tissues in ophthalmology, which is the subject of another chapter. Microfluidic approaches became more popular in biomedical engineering during the last decade; hence, one chapter focuses on the advanced topic of microfluidics technologies using oral factors as saliva-based studies. Injectable gels in endodontics is a new theme in dentistry that bioengineering skills can advance its development, specifically by producing clinically safe and effective gels with regeneration and antibacterial properties. Engineered products often need to be tested in vivo before being clinical in dentistry; thus, one chapter is dedicated to reviewing applicable animal models in dental research. The last chapter covers the progress on the whole tooth bioengineering as a valuable and ultimate goal of many dental researchers. Offers readers an interdisciplinary approach that relates biomedical engineering and restorative dentistry. Discusses recent technological achievements in engineering with applications in dentistry. Provides useful tool to dental companies for

future product planning, specifically to biomedical engineers engaged in dental research

Most oral diseases are preventable, yet they remain the most globally common noncommunicable disorders, affecting people throughout their lifetime. Lifestyle, including diet and food choice, is central to the occurrence of oral disease. Nutrition and diet can impact the development and status of the oral cavity as well as the progression of illness. Also, poor oral health can influence the ability to eat and, consequently, to maintain an adequate diet and nutrient balance. This book, consisting of 14 chapters, provides current information on the impact of nutrients (macro- and micro-elements and vitamins) and diet on oral health and vice versa (i.e., the impact of oral health on diet/nutrition). It also reviews possible oral health effects of probiotics as well as relationships between genotype and diet, which are important for determining oral disease risk. This book is a helpful resource for under- and postgraduate students. It will also be useful to dentists and nutritionists/dietitians as they integrate nutrition education into medical practice.

Commercially, D-xylitol is produced by chemical reactions that are tailored to the requirements of various sectors. However, due to the rising interest in sustainable development and ecologically benign practices, microbial transformation processes are generally preferred over the conventional chemical conversion process. The former have multiple advantages, including less chemical load on the environment, higher efficiency, and the ability to dilute multiple downstream transformation attempts while maintaining product yield and recovery. This book aims to disseminate the most current advances in the biotechnological production of D-xylitol and its applications in medical and health care. It is a unique collection of 15 book chapters split into 5 sections and written by experts in their respective fields, who present critical insights into several topics, review current research, and discuss future progress in this area. This book also provides essential information on hemicellulose hydrolysis to recover D-xylose, detoxification of hemicellulose hydrolysates, and improved fermentation methods for increased D-xylitol production. The highlights of strain improvement to increase the D-xylitol titers and downstream recovery of D-xylitol are also discussed in several sections. The current applications of D-xylitol in medical and health care have been used to justify the cost incurred for setting up the demonstration plant for D-xylitol production in the market. Apart from researchers and post-graduate students in the field of microbial biotechnology, this book will assist those in the business community who deal with the economic analysis of bio-based products and their marketing.

Emerging Trends in Oral Health Sciences and Dentistry is the second book on Oral Health Science. The first book is Oral Health Care-Pediatric, Research, Epidemiology and clinical Practices and Oral Health Care-Prosthodontics, Periodontology, Biology, Research and systemic Conditions published in February 2012. The present book is a reflection of the progress in Oral Health Sciences, practices and dentistry indicating the direction in which this stream of knowledge and education is likely to head forward. The book covers areas of General Dentistry, Paediatric and Preventive Dentistry, Geriatric and Prosthodontics, Orthodontics, Periodontology, Conservative Dentistry and Radiology and Oral Medicine.

PART ONE: EPIDEMIOLOGY AND PREVENTION THEORY 1. Epidemiology/Biology of Dental Caries 2. Epidemiology/Biology of Periodontal Diseases 3. Epidemiology/Biology of Oral Cancer PART TWO: RISK-BASED PREVENTION 4. Dental Caries and Associated Risk Factors 5. Periodontal Disease and Associated Risk Factors 6. Oral Cancer and Associated Risk Factors 7. Synergism between Pharmacology and Oral Health PART THREE: ASSESSMENT STRATEGIES TO TAILOR YOUR PATIENT CARE PLAN 8. Nutritional Risk Assessment 9. Laboratory Testing 10. Integrating Risk and Health Promotion Counseling 11. Enhancing Patient Adherence to Preventive Programs 12. The Fearful and Phobic Patient 13. Cultural Competence and Risk Assessment PART FOUR: PREVENTION AND PRACTICE 14. Disease Prevention/Health Promotion 15. Prevention Strategies for Dental Caries 16. Prevention Strategies for Periodontal Diseases 17. Prevention Strategies for Oral Cancer 18. Prevention Strategies for Oral Components of Systemic Conditions 19. Prevention Strategies for Special Populations 20. Integrating Preventive Strategies into Clinical Practice.

Diet and Health examines the many complex issues concerning diet and its role in increasing or decreasing the risk of chronic disease. It proposes dietary recommendations for reducing the risk of the major diseases and causes of death today: atherosclerotic cardiovascular diseases (including heart attack and stroke), cancer, high blood pressure, obesity, osteoporosis, diabetes mellitus, liver disease, and dental caries.

Statistical and Methodological Aspects of Oral Health Research provides oral health researchers with an overview of the methodological aspects that are important in planning, conducting and analyzing their research projects whilst also providing biostatisticians with an idea of the statistical problems that arise when tackling oral health research questions. This collection presents critical reflections on oral health research and offers advice on practical aspects of setting up research whilst introducing the reader to basic as well as advanced statistical methodology.

Features: An introduction to research methodology and an exposition of the state of the art. A variety of examples from oral health research. Contributions from well-known oral health researchers, epidemiologists and biostatisticians, all of whom have rich experience in this area. Recent developments in statistical methodology prompted by a variety of dental applications. Presenting both an introduction to research methodology and an exposition of the latest advances in oral health research, this book will appeal both beginning and experienced oral health researchers as well as biostatisticians and epidemiologists.

You brush, floss, use mouthwashes, and are concerned about the foods you eat, yet you still require fillings or lengthy cleanings at the dentist. In Kiss Your Dentist Goodbye, Dr. Ellie Phillips teaches how anyone can achieve and maintain a truly healthy mouth. Empower yourself as you improve the look and feel of your teeth between dental visits. Your dentist will be amazed at the changes he sees, and you will be thrilled as cavities and gum disease become a thing of the past. Traditional dentistry cannot prevent dental disease. But Ellies do-it-yourself daily routine can. Discover how easy it is to reduce plaque buildup, strengthen tooth enamel, repair small cavities, eliminate tooth sensitivity, and improve your overall oral health. Learn about products that hinder your efforts and the risks of bleaching, dental sealants and the wrong use of fluoride. It is time to achieve healthy, clean teeth and gums and wow your dentist at the next appointment.

The study of sweetness and sweeteners has recently been an area well served by books at all levels, but this volume was planned to fill what we perceived as a gap in the coverage. There appeared to be no book which attempted to combine a study of sweetness with a thorough but concise coverage of all aspects of sweeteners. We set out to include all the important classes of sweeteners, including materials which do not yet have regulatory approval, so that clear comparisons could be made between them and their technological advantages and disadvantages. To achieve our first aim, of sufficient depth of coverage, the accounts within this volume are comprehensive enough to satisfy the requirements of a demanding readership, but cannot be

exhaustive in a single volume of moderate proportions. The second aim, of breadth and conciseness, is satisfied by careful selection of the most pertinent material. For the purposes of this book, a sweetener is assumed to be any substance whose primary effect is to sweeten a food or beverage to be consumed, thus including both the nutritive and non-nutritive varieties, from the ubiquitous sucrose to the lesser known, newer developments in alternative sweeteners. The volume has its contents structured in a logical manner to enable it to be used in an ordered study of the complete subject area or as a convenient reference source.

"Comprehensive Preventive Dentistry" provides one user-friendly resource that brings together information on the scientific basis and clinical practice of all aspects of preventive dentistry. This thorough and all-encompassing resource offers techniques and strategies for maintaining excellent oral health in patients through a regimen of preventive measures. "Comprehensive Preventive Dentistry" is grounded in a patient-centered, pre-emptive, and minimally invasive philosophy. The book begins by covering individual diseases, such as caries, periodontitis, and oral cancer, as well as therapies (sealants, fluoride) and other relevant conditions (toothwear, hypersensitivity). Additionally, concepts such as the role of diet and nutrition in oral health are discussed. Also covered are oral care products and new technological developments in caries diagnosis and risk assessment, periodontal disease and oral cancer, as well as new developments in home care products. A valuable and comprehensive companion that will appeal to dentists and dental hygienists, this helpful new book provides its readers with one authoritative resource that offers a reliable and helpful companion to practicing preventive dentistry. Key features:

Comprehensive resource on all aspects of preventive dentistry Thorough discussion of common oral diseases, such as caries, periodontitis and oral cancer Broad-based approach covers other aspects of preventive practice, such as sports dentistry, and the role of diet & nutrition Brings together expert opinion from a variety of contributors

This book is the first to be devoted to translational research – which aims to expedite the transfer of knowledge gained in the lab to clinical practice – within the field of oral health. It is examined how basic sciences and basic research are providing new methods and materials that will enable clinicians to treat patients more effectively. Readers will gain a translational perspective on a variety of oral conditions and related systemic diseases. Individual chapters are devoted to such topics as dental biomaterials, implants, and tissue engineering. The importance of evidence-based research and the roles and comparative value of preclinical and clinical trials are also highlighted. Knowledge of translational and clinical research is essential in understanding how new inventions and developments are being accomplished, and what regulations and guidelines need to be taken into account when planning studies, and not forgetting the ethical aspects of any research. Translational Oral Health Research is the first book to be devoted entirely to the subject, and it will be of interest to both researchers and practitioners.

Degenerative diseases linked to ageing populations are a growing problem for the developed world. Edited by two authorities, this important collection reviews the role of functional foods in helping to prevent a number of such degenerative conditions, from osteoporosis and obesity to immune system disorders and cancer. The book begins with a number of introductory chapters which discuss the regulation of functional foods in the EU, the role of diet generally in preventing degenerative disease. Part one then examines bone and oral health with chapters on the use of diet to control osteoporosis, the use of functional ingredients to improve bone strength, and ways of maintaining dental health. Part two discusses how obesity can be controlled, whilst part three looks at gut health and maintaining the immune function using functional ingredients such as probiotics and prebiotics. The final part of the book reviews research on functional foods and cancer with chapters on synbiotics, anti-angiogenic functional foods, glucosinolates, dietary fibre and phytoestrogens. Functional foods, ageing and degenerative disease is a standard reference for all those concerned with the role of functional foods in the prevention and control of degenerative disease. Explores diet strategies for preventing diseases including osteoporosis Summarises key management techniques for obesity, irritable bowel syndrome and oral health Presents the role of functional foods in promoting good health

This volume brings together current concepts relating to the use of fluoride in dentistry. In contributions written by expert authors, data from this large and complex field have been assembled into a clear sequence and presented in a lucid fashion. The first section deals with the sources of fluoride intake and its metabolism, in order to fully understand fluoride toxicity and the importance of monitoring intake. The second section focuses in more detail on modes of fluoride application and the mechanisms by which this ion interacts with the oral environment to cause a remarkable reduction in dental caries. The role of fluoride in the prevention of dental erosion is also elucidated. The complex mechanisms by which fluoride exerts its effects are described with clarity and the entire text is accompanied by particularly useful illustrations. As a clear up-to-date summary of current thinking in the field, this book will be essential reading for research workers and postgraduate students. Established researchers and teachers in both clinical and basic sciences will find it to be a valuable addition to their libraries, and clinicians will be able to better evaluate the current scientific evidence on the advantages as well as the hazards of fluoride in dentistry.

Foods, Nutrients and Food Ingredients with Authorised EU Health Claims provides an overview of how health claims are regulated in the European Union, as well as detailed scientific and regulatory information about permitted health claims for particular types of foods and ingredients. Part one provides a background to the regulation of health claims in Europe. Part two focuses on authorised disease risk reduction claims, claims relating to children's development, and health and proprietary claims. Part three sets out ingredients with permitted "general function claims, including choline, creatine, sweeteners, dietary lactase supplements, and polyphenols in olive oil. Part four outlines foods and nutrients with permitted health claims, with chapters on vitamins and minerals, proteins, meat, fish, water, and the replacement of saturated fats. Foods, Nutrients and Food Ingredients with Authorised EU Health Claims is the go-to resource for R&D managers and technical managers in the food, and beverage and dietary supplements industry, product development managers, health professionals and academic researchers in the field. Provides a comprehensive overview of foods and food substances that have achieved approved health claims in Europe under Regulation EC 1924/2006 Covers properties and applications of each ingredient, as well as evidence for the health claim and how it benefits consumers Outlines the importance of each claim in product development and marketing and regulatory issues such as conditions of use

This book aims to define the etiological factors in dental caries and to guide the clinician towards methods of caries prevention that are evidence based. The coverage includes discussion of the active role of the biofilm and the oral environment and emphasizes the multifactorial etiology of dental caries. The opening chapters describe the early detection and diagnosis of dental caries, highlight the value of caries risk assessment to the patient, and explain the dynamic process of the demineralization–remineralization cycle. Information is presented on the action of fluoride, and the evidence relating to the use and effectiveness of remineralization agents and biomimetic materials is reviewed. Additionally, the effects of antimicrobials such as chlorhexidine and ozone are summarized. Further chapters focus on dietary counseling (with information on sweeteners and probiotics), the effectiveness of sealants in caries prevention, and resin infiltration. The philosophy of prophylaxis and ways to improve patient compliance and achieve proper mechanical plaque removal are discussed. The book is concluded with a chapter discussing preventive actions in representative cases.

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