## 613.28 GEO

## CONTENTS

| 1. The Chemistry and Properties of Plant Cell Walls and Dietary Fiber                             | 1        |
|---|----------|
| 2. The Chemical Structure of the Cell Walls of Higher Plants                                      | 15       |
| 3. Analysis of Dietary Fiber in Human Foods   | 31       |
| 4. Dietary Fiber and Resistant Starch: A Nutritional Classification of Plant Polysaccharides      | 49       |
| 5. Quantitative and Qualitative Adaptations in Gastrointestinal Much with Dietary Fiber Feed      | ing 67   |
| 6. Premenopausal Osteoporosis: Contributions of Exercise and Dietary Practices                    | 89       |
| 7. Total Dietary Fiber and Mineral Absorption   | 105      |
| 8. Effects of Fiber on Vitamin Bioavailability  | 129      |
| 9. Dietary Fiber and Lipid Absorption   | 137      |
| 10. Macronutrient Absorption  | 157      |
| 11. Physiological Effects of Fiber  | 167      |
| 12. Fiber Metabolism and Colonic Water  | 179      |
| 13. Activities of Polysaccharide-Degrading Bacteria in the Human Colon                            | 187      |
| 14. The Influence of Dietary Fiber on Microbial Enzyme Activity in the Gut                        | 195      |
| 15. The Effects of $\alpha$ -Amylase-Resistant Carbohydrates on Energy Utilization and Deposition | in       |
| Man and Rat   | 207      |
| 16. The Ileal Brake: Is lt Relevant to the Action of Viscous Polysaccharides?                     | 219      |
| 17. Action of Dietary Fiber on the Satiety Cascade  | 227      |
| 18. Lente Carbohydrate or Slowly Absorgbed Starch: Physiological and Therapeutic Implicat         | ions 247 |
| 19. Fiber and Gastrointestinal Disease  | 261      |
| 20. Dietary Factors in the Etiology of Gallstones   | 273      |
| 21. Fiber-Depleted Starch Foods and NIDDM Diabetes  | 283      |
| 22. Dietary Fiber in the Management of Diabetes   | 287      |
| 23. Production and Absorption of Short-Chain Fatty Acids  | 301      |
| 24. Short-Chain Fatty Acids: Production, Absorption, Metabolism, and Intestinal Ellects           | 317      |
| 25. Soluble Fiber: Hypocholesterolemic Effects and Proposed Mechanisms                            | 339      |
| 26. Dietary Fiber and Bile Acid Metabolism  | 365      |
| 27. Antitoxic Effects of Dietary Fiber  | 375      |
| 28. National Cancer Institute Satellite Symposium on Fiber and Colon Cancer                       | 383      |
| 29. Influence of Soluble Fibers on Experimental Colon Carcinogenesis                              | 389      |
| 30. Insoluble Dietary Fiber and Experimental Colon Cacer: Are We Asking the Proper Questi         | ons? 403 |
| 31. Bacterial Metabolism, Fiber, and Colorectal Cancer  | 417      |
| 32. The Epidemiology of Fiber and colorectal Cancer: Why Don't the Analytical Epidemiolog         | gic      |
| Data Make Better Sense?   | 431      |
| 33. Starch, Nonstarch Polysaccharides. and the Large Gut: Epidemiologic Aspects                   | 447      |
| 34. The Epidemiology of Cancer and Its Risk Factors in South African Populations                  | 455      |

| 35. Dietary Fiber Intake and Colon Cancer Mortality in the People's Republic of China | 473 |
|---|-----|
| 36. Rationale for Intervention Trials of Dietary Fiber and Adenomatous Polyps         | 481 |
| 37. Future Research Directions, Including Clinical Trials                             | 489 |
| Index   | 495 |