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ANNUAL REVIEW OF NUTRITION

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PREFACE

The *Annual Review of Nutrition* provides a systematic, periodic examination of scholarly advances through "critical, authoritative surveys of the original literature describing the current developments in the science of nutrition."

This third annual volume has been planned and developed in keeping with the initial intent of addressing significant advances at time intervals warranted by the rate of new developments within the field. The scope of the science of nutrition is displayed well by a survey of the contents of these first three volumes (p. 477), which include reviews on: energy metabolism; carbohydrates; proteins and derivatives; water; vitamins and inorganic nutrients; other food components; nutritional toxicology and pharmacology; diet, nutrition, and metabolic regulation; clinical nutrition; nutritional anthropology; the nutritional role of microorganisms; and chemical senses. This year's volume adds a significant contribution in the area of public health and nutrition. All subjects cannot be represented every year.

The editors and editorial committee for each volume strive to maintain a balance of subject matter and frequency of review that will prove informative, challenging, and stimulating to our readers. The listing of selected relevant chapters from other *Annual Reviews* provides a further key to the breadth of the science of nutrition and its application, and will assist the serious nutrition scholar who seeks constantly to refresh his knowledge of progress in nutrition science.

As nutritionists, the editors are ever conscious of the truism that even a most carefully formulated mixture of nutrients designed to meet fully the quantitative requirements and balanced needs of the individual is valueless if it goes unconsumed because it lacks sensory appeal. Similarly, intellectual food must be consumed in order to nourish. To encourage the mental consumption of this *Annual* fare, we have followed the gastronomic principle of providing a festive variety of tasty courses, reasonable in size yet limited in toto to a digestible quantity.

Each volume of *Annual Reviews* is introduced with a prefatory essay that well may be regarded as a fine aperitif. For this volume, the prefatory essay is by Dr. Madeleine Pelter Cosman, an eminently creative historian of medieval food and medicine, whose beautifully illustrated, superbly documented book, *Fabulous Feasts, Medieval Cookery and Ceremony* (NY: George Braziller, 1976), has rapidly become a modern classic. Her present essay is an enchanting example of the importance attached to food and nutrition in medicine and matters of health throughout the centuries. Many persons today mistakenly accuse physicians of never paying attention to diet and nutrition in practice; they obviously are unfamiliar with the opposite perspective obtained from history. The prefatory essay in last year's volume of the *Annual Review of Nutrition* was "Personal Reflections on Clinical Investigations" by Dr. William

B. Bean, a distinguished physician and professor of medicine. It illustrated the involvement of many of the current century's medical leaders in the nutrition sciences.

Dr. Cosman's essay also depicts the appeal of food lore for those who seek unfulfilled heights of attainment, whether in fulfillment of sexual gratification, unattainable cures for diseases, or other desires. The genesis of food misinformation, faddism, nostrums, and quackery (reviewed in chapter 2 of this volume) becomes more comprehensible through such an examination of history.

The present *Annual Review* includes a timely "mini-monograph" on a nutritional subject that many mistakenly consider completely resolved: endemic goiter, cretinism, and iodine deficiency. Dr. Josip Matovinovic, a physician-scientist of rare broad experience, forcefully reminds us that these preventable, centuries-old tragedies persist in most regions of the world. Dr. Matovinovic indicates why health personnel have failed to control them. He also identifies new considerations regarding iodine metabolism and public health that are of concern to nutritionists and public health personnel, not only in the underdeveloped regions, but in industrially and technically developed countries as well.

It should be noted that the chapter "Endemic Goiter and Cretinism at the Dawn of the Third Millennium" is an elaboration of the third E. V. McCollum Lectureship presented by Dr. Josip Matovinovic at the International Congress on Nutrition in San Diego, 19 August 1981. The E. V. McCollum International Lectureship in Nutrition was established in 1979, the 100th anniversary of the birth of Professor McCollum (1879–1967), who in the first half of the 20th century "changed our understanding of nutrition in much the same way as Albert Einstein (also born in 1879) revolutionized the study of the universe." The lecturers are selected as "contributors to advancement in nutrition whose work promises to improve the health and well-being of people on a global scale." Professor McCollum's contributions to an understanding of trace elements generally and of iodine metabolism and goitrogens in particular, and his early concern for international action to improve nutritional health, make the topic of this chapter an appropriate memorial to him.

To conclude our earlier gastronomic metaphor, between the aperitif and dessert the reader will find a satisfying menu of delectable, intellectually filling courses of scientific nutrients. *Bon appétit!*

The editors and editorial committee of this volume wish to express their great indebtedness to all the authors for their contributions to this series, and especially for their cheerful acceptance of numerous editorial suggestions and their promptness in meeting the demands of the rigorous publication schedule of Annual Reviews.

WILLIAM J. DARBY
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From the *Annual Review of Medicine*, Volume 34 (1983):

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Rachel Peh Cobbe

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Special Announcement: New From Annual Reviews

Some Historical and Modern Aspects of Amino Acids, Fermentations and Nucleic Acids, Proceedings of a Symposium held in St. Louis, Missouri, June 3, 1981, edited by Esmond E. Snell. Published October, 1982. 141 pp.; softcover; \$10.00 USA/\$12.00 elsewhere, postpaid per copy

A FEAST FOR AESCULAPIUS:

Historical Diets for Asthma and Sexual Pleasure

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INTRODUCTION

Medical nutrition's heyday was the Middle Ages. Even the most nutritionally enlightened modern medical practitioners will not find among colleagues nor patients an understanding of the unity between food and health commonplace in medieval hospitals and banquet halls. Food helps or hinders health. The typical medieval view had the medical corollary that good diet helps the body heal itself. The great 12th century medical theorist and physician Maimonides said that any illness curable by diet alone should not otherwise be treated (49). Practitioners were thought irresponsible who did not prescribe diet therapy for disease either as treatment of choice or as adjuvant to medication or surgery. Surgical diets were believed necessary to prepare the body before operations, and thereafter to promote wound healing. A medical text or hygiene book that did not enumerate effects of food upon physiognomy was considered defective and untrustworthy. Inappropriate or incorrect medical nutritional care was legal cause for a patient to sue a physician for malpractice (15, 16, 17, 18, 24).

This assertive interrelationship between nutrition and health is documented magnificently in Western European archives of the 11th through 16th centuries. But the data are not easy to find. The medical culinary texts are written in medieval Latin, Hebrew, Arabic, French, German, Italian, Spanish, Portuguese, and early English dialects. Few of them have been well translated into modern languages and fewer into English. The medical nutrition scholar must not only be linguistically facile, but intrepid—undaunted by hazards of tracking a vital unique manuscript of a popular book located in a remote place guarded by a malign librarian, obstructionist foreign government, or keyless locked

vault. Such exhilarating perils notwithstanding, medieval medical texts are a treasure-trove of food lore, specific recipes, scientific disquisition, practical cooking and preparation techniques, as well as ceremonial service suggestions. Some recommend mood music for enhancing digestion.

These books, meant neither for sustenance nor ceremony alone, were regimens for maintaining health or restoring it, and preventing diseases or curing them. An itinerary through this hoard suggests by brief encounter its awesome totality. An excursion through medieval texts discussing cardiovascular or gynecological organ systems might please as much as an inquiry into medical treatises on an anatomical part, such as the head, the neck, the lungs or the extremities; so would a verbal tour of a medical herb garden or zoo, emulating the format of popular 15th century health instruction books, listing plants and animals according to their medicinal qualities and uses. However, to best balance generalization with detail, the typical with the exotic, and the ordinary with the brilliant texts, I suggest our exulting together, first, with the *Medieval Food of Love: Sexual Stimulants and Depressants*, a subject of universal curiosity, with references drawn from multiple manuscript sources. Then let us consider one particular diet therapy for a specific disease which represents the "state of the art" in medieval medical nutritional treatises: Maimonides's 12th century discourse, *On Asthma*.

THE FOOD OF LOVE: SEXUAL STIMULANTS AND DEPRESSANTS

Food dramatically joins interests of the saintly and the sensual. Feasts and fasts, food rituals, and symbolic breads and wines are essentials of the Western religious heritage (20, 37, 46). Food has been thought not only an expression of virtue but also a direct cause either of piety or physical pleasure. Throughout Western history, people of all social classes have insisted that particular foods and drinks affected their bodies—purifying or contaminating them, and stimulating or tranquilizing their sensual spirits. Revelers celebrated love's stimulants. Sainly ecclesiastics praised sexual suppressants. Physicians and surgeons recommended either erotic exciters or amorous sedatives for maintaining mental health. Certain sexual downers were considered contraceptives. For at least five thousand years, from ancient Hebrew culture to the modern era, men and women have used food to encourage sensuality or to destroy it. Some of the most congenial food lore of love, the medieval, dates from about 1000–1600 AD (19, 20).

Friends celebrating in the year 1383, for instance, might feast to musical accompaniment on rare roast beef wrapped in saffron-spiced pastry, turnips and asparagus cooked in herbed wine, and a dessert of roasted chestnuts in cream. Thereafter, they would not be surprised at their stimulation to amorous ardor

(Figure 1). They would have eaten foods thought to be sensually arousing, happily anticipating their expected effects. Fault for their after-dinner appetites would not go to their company or their conversation, but rather to their menu and its music (22).

Medieval foods and wines certainly were not coarse and crude items guzzled and gorged by graceless gluttons. Courses were prepared, served, and eaten according to elaborate and refined ceremonies. But these foods were more than mere aesthetic pleasures and ostentatious demonstrations of wealth. Cooks and feasters were ever mindful of each nutrient's effects upon body and mind. Fourteenth century banqueters, wishing to indulge erotic fancies, would



Figure 1 Lovers wear love tokens; he, at right, sports flamboyant "love sleeves" and she has an amulet on a neck chain. (German print, 15th century. Metropolitan Museum of Art. Harris Brisbane Dick Fund, 1934)

eat saffron beef and creamed chestnuts while listening to lute and trumpet music before repairing from the table to the bed—or bath. Others having eaten the food of love could quench their passionate heat by munching a cooling salad of lettuce tossed with chicory and rue.

Manuscript Qualities and Sources

An erotic food itinerary through Western European monasteries, castles, courts, cathedrals, townhouse kitchens, and physicians' libraries reveals manuscript sources as varied as the buildings containing them. Books with such titillating titles as *Treatise on Coitus (de coitu)* are not at all pornographic (1, 19, 52, 63). They list foods of love in unremarkable language describing physical and psychogenic effects medically, botanically, and scientifically. The 12th century rationalist-philosopher-physician Maimonides used a similar format and diction for his book *On Sexual Intercourse* and his treatises *On Asthma* and *On Hemorrhoids* (28, 49). (Amusingly, as later we shall see, Maimonides recommends that a severe asthmatic prophylactically precede lovemaking with hot clear chicken soup.)

The best sensual cookery recipes are embedded in the medieval medical handbooks, laymen's health guides, and herbals (2, 8, 27, 29, 39, 44, 60, 62). Encyclopedic and wonderfully illustrated, most of these medical manuals for hygienic eating were written by physicians for intelligent audiences. Almost all are indebted to earlier learned works written in Greek, Latin, Arabic, and Hebrew. These hygiene texts include such whimsical titles as *Tables of Health (Tacuinum Sanitatis)* (3, 62); *Health's Theatre (Theatrum Sanitatis)* (62); *Health's Garden (Garten der Gesundheit)* (30, 42); and *Benevolent Indulgence (De Honesta Voluptate)* (57). Within, the foods of love are listed with their effects and recipes for preparation and service alongside remedies for asthma, arthritis, and epilepsy, as well as cancer, leprosy, and flu. Foods of love simply are edible antidotes to sexual apathy. Here follows an informal catalog of these comestibles for the consuming passions culled from more than two dozen 11th–16th century medical manuscripts (3, 5, 7, 9, 10, 11, 12, 14, 25, 26, 29, 30, 31, 34, 36, 38, 42, 45, 50, 54, 55, 56, 57, 58, 59, 61, 62, 64).

Meats and Fish

Concupiscence is the desire for the delectable, according to St. Thomas Aquinas (4). He linked appetites for food and for sex, and thereby the deadly sins of gluttony and lust. Many a churchman following St. Thomas forbade all meat dishes from monastic diets and kitchens. But vegetarianism paved no straight road to salvation. Adorning banquet tables of both the pious and the revelers were passion-arousing meat dishes—such as the rare roast beef in its saffron pastry, roast venison with garlic cloves, and suckling pig with candied crab apple (Figure 2). These meats had the supposed tendency to increase



Figure 2 Animals later to become feast fare are grazed, herded, and watched in a well-stocked farmyard. (Petrus Crescentius, *In Commodu Ruralium*, 15th century. The Pierpont Morgan Library M 232, f.212)