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Commentary

What Is Culinary Medicine and What Does It Do?

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Introduction

OVER THE PAST 35 YEARS, a new enthusiasm has emerged about the relationship of food, eating, and cooking to personal health and wellness.[1] Though there are few peer-reviewed publications, grant monies, books, or biomedical journals entitled ''culinary medicine,'' there are thousands of peer-reviewed publications, found mainly in mainstream medical journals that form its published research base. How can the emerging field of culinary medicine be helpfully described?

Culinary Medicine

Definitions and goals

Culinary medicine is not nutrition, dietetics, or preventive, integrative, or internal medicine, nor is it the culinary arts or food science. It does not have a single dietary philosophy; it does not reject prescription medication; it is not simply about good cooking, flavors or aromas; nor is it solely about the food matrices in which micronutrients, phytonutrients, and macronutrients are found.

Instead, culinary medicine is a new evidence-based field in medicine that blends the art of food and cooking with the science of medicine.[2] Culinary medicine is aimed at helping people reach good personal medical decisions about accessing and eating high-quality meals that help prevent and treat disease and restore well-being.

A practical discipline, culinary medicine is unconcerned with the hypothetical case, and instead concerned with the patient in immediate need, who asks, ''What do I eat for my condition?'' As food is condition-specific, the same diet does not work for everyone. Different clinical conditions require different meals, foods, and beverages.

Culinary medicine attempts to improve the patient's condition with what she or he regularly eats and drinks. Special attention is given to how food works in the body as well as to the sociocultural and pleasurable aspects of eating and cooking. The objective of culinary medicine is to attempt to empower the patient to care for herself or himself safely, effectively, and happily with food and beverage as a primary care technique.

Development

Five reasons for the rise in interest in culinary medicine are:

- Flourishing interest in eating out away from home and in food and cooking in popular entertainment media, as well as in oft-conflicting popular dietary advice, especially about weight management and chronic illness;
- Widespread dissatisfaction with conventional medical approaches to chronic illness together with popular excitement about integrative medicine;
- Near ubiquity of highly processed and convenience foods, accompanied by an increasing suspicion of their health value and the acknowledgement of the hyperpalatable nature of fast food[3];
- The rising cost of health care, with the growing economic burden of diet-related noncommunicable health risks and diseases; with reports of some 30% of low-income older US adults having to choose between purchasing medication or food; and with the dearth of healthy food procurement and promotion policies in institutions, worksites, schools, and government; and
- A revived enthusiasm for additive-free organic food, home gardening, local agriculture, and farmers' markets.

Some eating patterns have been found to be as or more effective than prescription medication for some conditions: an anti-inflammatory eating pattern for rheumatoid arthritis[4]; a ketogenic diet for epilepsy[5]; a Mediterranean eating pattern for cardiovascular disease,[6] advanced colon cancer,[7] and type 2 diabetes.[8] Several foods have been found to be as or more effective as well: legumes for cholesterol lowering[9]; soy nuts for systolic and diastolic hypertension[10]; tree nuts for metabolic syndrome[11]; baked and broiled fish for heart failure[12]; honey and milk for acute cough.[13] For many patients, nutritious food is medicine.

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Medical education

The first cooking and nutrition elective in a US medical school was taught in 2003 at SUNY-Upstate; the first annual Harvard Healthy Kitchens, Healthy Lives postgraduate course for clinicians was taught in 2007[14]; the first culinary medicine center in a US medical school opened at Tulane in 2013[15]; and the first senior elective in culinary medicine was offered in 2013 by Des Moines University and Santa Barbara Cottage Hospital.

At least 10 US medical schools teach culinary medicine to undergraduates as elective courses in their undergraduate curricula. Tulane has developed and licensed a curriculum to at least 7 other medical schools. Culinary medicine Continuing Medical Education (CME) courses have been offered through NACCME (North American Center for Continuing Medical Education), the largest independent CME organization in the United States. Similar live CME programs have proven successful in lifestyle medicine.[16] Several hospitals now offer culinary medicine programs to clinicians and to the public.

Culinary medicine offers systematic ways to understand and appreciate the patient's understanding of food and cooking as part of her or his care, and apply that understanding to her or his health care goals. Although curricular progress, especially in medical education, may influence the attitudes and practices of clinicians, equally important to many educators is the effect of the ''hidden curriculum'' (ie, the observed effect of how practicing clinicians actually eat, drink, cook, and care for themselves).[17] Such behavior is important not just for self-care, as clinicians' own health habits predict their counseling practices on food and diet,[18] but also for the health habits of students, staff, and patients.

Objections

Some may doubt the need for another described clinical discipline. Clinicians already offer eating advice to patients, and dietitians, chiropractors, and physician nutrition specialists have specialized training to do so. However, most clinicians have not been trained in culinary skills or preparation, or in behavioral nutrition, including eating patterns, all of which influence patient adherence, quality, quantity, and consumption. Most clinicians also have not been trained to understand the mechanisms by which food influences metabolism, immunity, pathophysiology, or well-being.

In addition, few physicians have learned to facilitate patient access to self-care skills and programs. Expensive conventional interventions take less time to recommend than proven lifestyle intervention. The increased health care costs created by food insecurity, especially in diabetic adults and in children, are not recognized by most physicians. Barely half of graduating resident physicians feel adequately trained to counsel patients on preventive health behaviors.[19]

Other expert nonclinicians, such as personal chefs, trainers, coaches, and farmers, already offer important advice to clients about optimizing performance, improving mental acuity, healing musculoskeletal injuries, and accelerating recovery. However, these latter experts may lack sufficient training in both the science of medicine and the art of cooking. Some may rely excessively on recommending dietary supplementation. Still, these experts have much to offer culinary medicine.

Future challenges

Every clinician should be able to access evidence-based, practical methods, skills, research, and continuing education in the field. Such materials are not yet widely available.

Culinary medicine, like prescribed exercise,[20] should become another tool in a clinician's toolkit. One such format for writing culinary medicine prescriptions is FOOD: Frequency (of the food, beverage, or meal to be eaten); Objective (its goal); Options (how much, and different methods to prepare, serve, shop for it, or grow it); Duration (how many times per day, week, or month the prescription should be consumed). This format is simple to follow and patterned after how clinicians prescribe medication.

Every patient should have access to evidence-based, practical, culturally sensitive advice about issues of food, cooking, and eating specific to her or his particular case. These issues, though seldom explicitly discussed, arise daily during patient visits. Identification, analysis, and resolution of these issues should become an explicit part of clinical visits, and a patient's medical history and treatment plan.

Conclusions

Clinicians can understand food and its importance to health and well-being and make that understanding available to patients, families, and health care systems for high impact, low cost, high value care. Whether clinicians will be able to undertake adequate additional education and training in culinary medicine, access evidence-based materials and research, practice the skills required to meet patient needs direct resources to help people improve negative social determinants of health, and be appropriately compensated for their efforts is unknown, and defines the core challenges ahead.

Author Disclosure Statement

Dr. La Puma declared the following potential conflicts of interest with respect to the research, authorship, and/or publication of this article: He is the author of a book on culinary medicine, *ChefMD's Big Book of Culinary Medicine*, from which he receives royalties when the book is purchased. He is founder of Chef Clinic®, a nutrition-focused medical practice in Santa Barbara, California, a professionally trained chef, and cofounder of ChefMD.com, a free online healthy recipe video Web site.

Prior Presentations

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