

Medical Gastronomy and Glucofriendly Gastronomy: Tools for Chronic Disease and Diabetes Care

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Abstract

In this communication, we introduce and describe the concepts of medical gastronomy, glucofriendly gastronomy, and gastronomic phenotypes. We discuss the clinical relevance of these frameworks in chronic disease management, including obesity and diabetes care. We propose the use of the phrase 'medical gastronomy' to describe the practice of choosing, cooking and consuming food, which is not only appealing or tasty, but nutritious and healthy as well. 'Glucofriendly gastronomy' conceptualizes the art and science of choosing, cooking and consuming food, which is not only safe for persons living with diabetes, but appealing and tasty, too. The term 'gastronomic phenotype' is the sum of all attributes related to the practice or art of choosing, cooking and consuming food. This includes the individual's likes (dislikes), preferences and choices related to meal frequency, meal composition, meal quantity and meal sequencing.

Keywords: Culinary medicine, diabetes, diet, nutrition, obesity, person centred care

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Introduction

The term gastronomy refers to the practice or art of choosing, cooking and eating 'good food'.¹ Traditionally, gastronomy has focussed on the pleasurable or hedonistic aspects of meal planning and preparation. In recent years, molecular gastronomy has gained appreciation as a distinct field which studies the chemical and biochemical aspects of food preparation and presentation.² This concept allows meaningful cross talk between culinary scientists, chemists, as well consumers, and enhances the scope and spectrum of gastronomy as a science.

Health care professionals often find it challenging to

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promote healthy nutrition choices among their patients, and the public at large. This is concerning, as the majority of modern metabolic diseases are fuelled by inappropriate nutrition. Experts of various fields have worked together to involve culinary scientists (chefs) as part of the diabetes care team. Integrating the art and science of culinary skills into nutrition and dietary practice brings colour and creativity into an otherwise dull prescription.^{3,4}

We propose the use of the phrase 'medical gastronomy' to describe the practice of choosing, cooking and consuming food, which is not only appealing or tasty, but nutritious and healthy as well. Interaction between specialists from nutrition, culinary science, medicine and endocrinology can create a robust framework which can contribute to betterment of health, at a public as well as individual level. Specifically, we use the phrase 'glucofriendly gastronomy' to conceptualize the art and science of choosing, cooking and consuming food, which is not only safe for persons living with diabetes, but appealing and tasty, too.

Public Health

Conventionally, the word "diet" has restrictive connotations⁵ which make dietary therapy an inefficient means of primordial or primary prevention of diseases such as diabetes and obesity. Using the word 'gastronomy' confers a pleasant feeling to the same effort. Inputs from gastronomists can help make healthy food more appealing and acceptable to the general population, including gastronomes. Gastronomy is a noun, and carries a similar impression as the adjective 'culinary'. While both culinary medicine and medical gastronomy can be used to convey the same message, gastronomy incorporates the sociocultural domains of food science as well. Hence, medical gastronomy will have greater acceptability as a tool for public health intervention.

Clinical Care

The first line therapy for persons living with diabetes, obesity, and other chronic metabolic diseases, is nutritional and lifestyle modification.⁵ It is easier to prescribe this, however, than to adhere to it. Some persons perceive healthy diet to be monotonous, restricted, regimented and bland. This reduces the acceptance of suggested modifications. Medical gastronomy or glucofriendly gastronomy can contribute by enhancing the flavour,

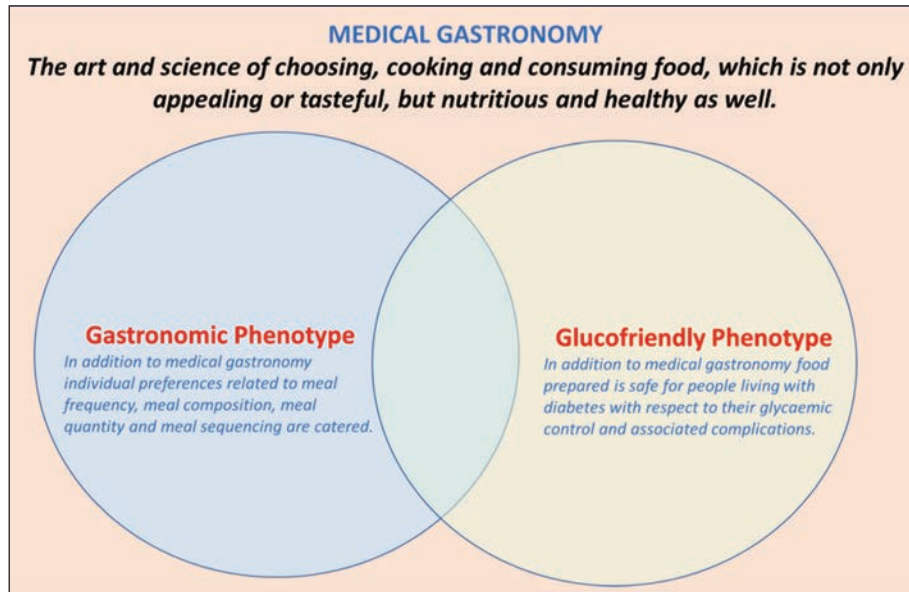


Figure: Medical Gastronomy comprising of the Gastronomic phenotype and Glucofriendly phenotype.

texture and feel of food stuffs, while ensuring that they remain nutritious as well.

Thus, medical/glucofriendly gastronomy can be an integral part of secondary and tertiary prevention of diabetes, obesity and other vasculo-metabolic diseases as well.

Creativity

If the sky is the limit, for human creativity, the plate, and our palate have a limitless expanse of experience. Gastronomy is the perfect platform for originality. By joining hands with colleagues from the medical and health professions, and involving the final customer, gastronomists can contribute towards improving health at a global level.

Gastronomic Phenotypes

We also propose the concept of gastronomic phenotype to define the sum of all attributes related to the practice or art of choosing, cooking and consuming food. This includes the individual's likes (dislikes), preferences and choices related to meal frequency, meal composition, meal quantity and meal sequencing.

Different people have different tastes. Professional sweet-tasters, wine-tasters and tea-tasters, for example, represent a unique gastronomic phenotype.⁶ From a clinical perspective, persons who prefer to take small frequent meals, and those who consume one large meal a day, represent opposite ends of the phenotypic spectrum of gastronomy. Preference for vegan, vegetarian or non-vegetarian food; use of specific cooking oils, spices and condiments; and preference for specific modes of choosing, cooking and curating foodstuffs are other

aspects of the gastronomic phenotype. The term will also extend to including fasting and feasting practices as well.

Clinical Relevance

The gastronomic phenotype concept can be utilized to prescribe appropriate person-centred therapy for persons living with obesity and/or diabetes.⁷ This utility extends to both non-pharmacological and pharmacological therapy.

The astute chef can create healthy and nutritious dishes which appeal to a particular individual's taste.³ Adding specific flavours can help in modifying appetite and enhancing satiety. Making simple changes to the choice of food (e.g., free-range meat vs.

farmed meat), its preparation (e.g., large sized chunks instead of small-sized bits), cooking style (boiling or braising vs. frying), and presentation (in small plates rather than bigger ones) can influence metabolic health significantly. Adding the concept of mindful eating, and of a postprandial digestive walk, can help in management as well. The gastronomic phenotype helps in appropriate choice of pharmaco-therapy, too. Sulfonylureas, for example, may be useful in persons who take small frequent meals, while acarbose voglibose and repaglinide are appropriate for those who take lesser, but larger, meals per day. Glucagon-like peptide 1 receptor agonists (GLP1RA) will be the right choice for a gastronomic phenotype characterized by excessive appetite and hunger.

Similarly, premixed insulins can be offered to persons who take regular meals at fixed times. Ultrarapid acting lispro and fast acting aspart insulins will control post prandial glucose after high carbohydrate meals. Persons with erratic meals habits may benefit from co-formations such as insulin degludec aspart, or from basal plus regimens.

Summary

The concept of medical gastronomy, including glucofriendly gastronomy, brings together multiple disciplines in a common endeavor: to improve the health and happiness of our fellow citizens. We hope this reflective opinion piece stimulates our reader to work towards achieving this goal.

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