

Brief Communication

The gustatory hexad

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The Gustatory Hexad builds upon earlier nutrition and culinary models such as the nutritional triad, culinary pentad and degustatory pentad. Inspired by Ayurveda, it lists six tastes (rasas) which must be satisfied during the course of a day's meals. These tastes-sweet, sour, salt, pungent, bitter and astringent- serve as a checklist to help ensure nutritional adequacy, especially micronutrient balance, and culinary acceptance. Adherence to the Gustatory Hexad allows for healthy dining and digestion, which in turn promote optimal health, and healthful outcomes. Understanding of this concept may help plan therapeutic interventions for gustatory autonomic neuropathy.

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Key words : Autonomic neuropathy, culinary diabetology, diet, medical nutrition therapy, obesity, overweight, underweight.

Medical nutrition therapy (MNT) is an integral part of diabetes and metabolic care¹. Modern definitions emphasize that MNT is much more than a simple product. MNT encompasses both individualized diets, and the process by which this information is shared. MNT is delivered by registered nutrition professionals, who aim to provide person-specific meal plans, to ensure optimal health^{2,3}.

It is understood, however, that diabetes care should be an interprofessional and interdisciplinary effort MNT, similarly, needs collaboration between various professionals, including dietetics and nutrition, endocrinology and diabetology, as well as culinary science. A comprehensive MNT should include inputs from all these diabetes care providers. This allows MNT to be crafted and communicated in a person specific manner. This approach is similar to the patient-centred philosophy followed while planning pharmacological therapy⁴.

The Degustatory Pentad :

Modern models provide guidance regarding the goals of integrated MNT, and the strategies necessary to achieve these. These concepts, in turn, facilitate optimal choice of nutritional therapy, and ensure concordance with other forms of glucose lowering treatment.

These models provide an overview of nutritional, culinary and degustatory aspects of MNT. The degustatory pentad is inspired by the philosophy of Vietnamese cuisine. This lists the five senses-vision, olfaction, taste, touch

and hearing-which should be stimulated by food⁵.

The Gustatory Hexad :

Ayurveda, one of the traditional Indian schools of medicine, goes a step further. It explains that food consists of six tastes primarily. For a person to remain healthy, all these six tastes should be had on a daily basis through food⁶. These six tastes, or 'rasas' are listed, with examples, in Table 1. We term this the Gustatory Hexad (Fig 1). An understanding of the components of food that contains these rasas helps one prepare a meal plan based on the individualistic requirement, which includes various food groups, satisfies the palate, and ensures a balanced diet with adequate micronutrient content. The gustatory hexad, as we term it, is relevant not only to home cooked food and fine dining cuisine, but also to MNT.

Taste	Sanskrit	Examples
Sweet	Madhura	Sugar, jaggery
Sour	Amla	Lime, citrus
Salt	Lavana	Salt, rock salt
Pungent	Katu	Pepper, chilly
Bitter	Tikta	Bitter gourd, neem
Astringent	Kashaya	Black tea, butter milk

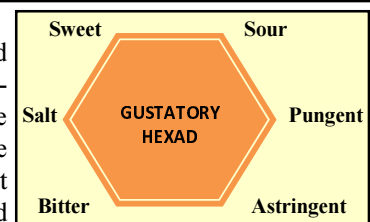


Fig 1 — The gustatory hexad

Clinical Relevance :

The gustatory hexad should be studied in conjunction with culinary triads and pentads that have been published earlier. This model focuses detail on a relevant aspect of MNT, and serves as a checklist for providers. It helps improve the quality of care provided through MNT, by en-

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sureing a holistic (and healthy) culinary and nutritional experience.

The MNT provider should be aware of each element of the hexad, its sources, properties and advantages, and its contraindications, if any. The ideal diet, and ideal MNT, should aim to ensure stimulation of sweet, sour, salt, pungent, bitter, and astringent tastes. There may be situations, however, where some rasas are contraindicated (eg; salt in severe hypertension, sweet in diabetes) or not tolerated (eg, pungent and bitter). In these cases, balance can be achieved by changing the proportion of other components of the gustatory hexad.

It is not necessary to include all these gustatory factors in every meal, or every dish. These can be satisfied at any time of the day, through major meals, or snacks, and main courses or side dishes. Appetizers, desserts and digestives can also be used to ensure completeness of the hexad. Sweet and astringent properties, for example, are easily met through desserts and digestives.

Apart from its relevance to routine therapy, the Gustatory Hexad may inform MNT approaches to specific disease conditions. Diabetes and hypertension can be managed by reducing sweet and salty foods, respectively. Persons with obesity may benefit from greater proportion of bitter (or appetite reducing) foods, while those with constipation require astringent rasa.

Summary :

The Gustatory Hexad is a taste-based culinary framework, inspired by Ayurveda. It serves as a checklist to ensure delivery of MNT which is adequate from a nutritional, and appealing from a culinary perspective.

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