

## Antioxidant-Rich spices: Consumption trends

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■ **ABSTRACT** : Spices are known to be rich sources of antioxidants which contribute to our health by preventing chronic diseases like cancer, cardio-vascular disease, diabetes, etc. However, the consumption practices of spices at the ground level need to be assessed for material information. Thus, the present study was conducted to assess the consumption practices of aromatic spices among the population of Udaipur city of Rajasthan state. The sample comprised of 100 respondents who were homemakers and could provide crisp and authentic information. A questionnaire was prepared and the respondents contacted personally. Results revealed that though consumption of aromatic spices was noteworthy among the population, the use was largely attributed to the taste and flavour imparted by spices in food and the therapeutic or medicinal value of spices was not recognized by the majority of respondents.

■ **KEY WORDS** : Aromatic spices, Antioxidants, Consumption practices

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The focus on health benefits of commonly available foods has never been so strong before. The philosophy that food can be health promoting beyond its nutritional value is gaining acceptance within the public arena and among the scientific community as mounting research links diet/ food components to disease prevention and treatment (Farmakalidis, 1999). Among food components with protective effect on chronic diseases, phytochemicals, a class of plant-derived molecules endowed of strong antioxidant properties, have received great attention. The additive and synergistic effects of such bioactive molecules present in plant food are responsible for their potent antioxidant properties (Pellegrini *et al.*, 2006).

According to Halliwell (1994), phenolic compounds, phytochemicals widely distributed in plants, scavenge free radicals, enhance immune system, prevent disease and improve general health and quality of life. Free radicals (superoxide, nitric oxide, hydroxyl radicals, etc.) and other reactive species (hydrogen peroxide, peroxy nitrile, hypochlorous acid, etc.) are produced in the body primarily as a result of metabolism. These spices create chain reactions, which cause cell membrane damage, DNA mutation, lipid and protein damage, immune cell damage and cell death, leading to chronic diseases

such as cancer, cardio-vascular diseases, diabetes, etc. (Arouma, 1994).

Dietary phenolic compounds – major components in spices – have generally been considered as non-nutrients, but their strong antioxidant effect is of medicinal and nutritional interest. Active principles derived from numerous spices block production of reactive oxygen species (ROS) in several *in vitro* and *in vivo* systems. Halliwell (2002) and Aggarwal *et al.* (2002) revealed that owing to their antioxidant properties, various therapeutic effects have been assigned to spices and spice-derived ingredients.

Spices are plants with intensive and distinctive flavours and aromas used as natural additives in food in fresh and dry form. They are a prized group of minor components and have been an integral ingredient of Indian diet. Spices form an important part of the Ayurvedic Pharmacopoeia (The Indian system of medicine). India enjoys the distinction of being the largest producer and consumer of spices as well as the fastest growing spice market in the world (Anonymous, 2010).

As per the recent researches, it is evident that the consumption of spices in the daily diets has become more important. The shift in preferences of domestic consumers, increasing urbanization, rising incomes, demographic and