Transitions in modern nutrition practices: Paradigms lost and regained

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Modern nutrition has undergone an epidemiologic shift and a significant transition in dietary preferences and practices over the last few decades mostly in India. Diet has played an important part in both preventive and therapeutic medicine over the ages. Indian medicine has always laid emphasis on physiologic individuality and also on culinary and prescriptive remedies food, what to eat and what not to eat across various times of the day, seasons, geography, physiological and psychosomatic states. Nutrition transition is very significant for Indian population as genetically the thrifty gene hypothesis plays an important role in etiopathogenesis of life style disease like obesity, metabolic syndrome, coronary artery disease, gut motility disorders, psychosomatic, autoimmune as well as degenerative disorders. Major transition is increasing use of sugar, processed food; beverages animal source foods and fast foods have impacted health. This is where back to basics and increasing use of traditional Indian foods like spices and curd can help. Extensive research within the last few decades from our laboratory and others has indicated that phytochemicals and dietary additives including spices and herbs in traditional Indian diet and Indian lifestyle practices may prevent various chronic metabolic and degenerative illnesses including cancerous, diabetic, cardiovascular, pulmonary, gastrointestinal, neurological, dermato logical and autoimmune diseases. Traditional Indian dietary spices maintain human health by their antioxidative, chemopreventive, antimutagenic, antiinflammatory, immune modulatory effects on cells and a wide ranging array of putative beneficial effects on gastrointestinal, cardiovascular, respiratory, metabolic, reproductive, neural and other systems. Local effects on gut mucosa, gastrointestinal reflexes and enteric nervous as well as systemic autonomic responses, effect on carbohydrate, protein and fat metabolism and exert several beneficial physiological effects including the anti-diabetic influence via short term hypoglycemia and long term improved glucose tolerance. Probiotic supplements are a constructive and viable adjunct to maintain, sustain and regain normal gastrointestinal function including secretion, permeability, motility, turnover and microflora. This benefit is both by top-down and bottom up interactions in the brain gut microbiome metabolome axis and influence the structural and functional integrity not only of the large intestine but have far reaching systemic influences both in health and disease. Nature endowed genetic profile versus nurture induced epigenetic modifications debate has been revisited and come full circle from integrative systems physiology through the various ‘omics’ to again nutritional systems biology traversing proteomics, metabolomics, adipo biology, gut microbiomics, geronto biology and Indian populomics as well as physiologic and cultural individuality. Thus Indian diet followed properly in modern context is a prescription for health and longevity. Evidence based research shall be presented and discussed.

Biography
K P Kochhar is currently working as an additional professor Physiology, All India Institute of Medical Science. Her Special interest: Nutrition, biomedical ethics and medication education.

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