

Fast food-induced obesity in youngsters; Toxicopharmacological aspects and current anti-obesity treatment options

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A Review will be presented on the nutritional implications and obesigenic-effect of regular fast food (junk food) consumption with special reference to its toxicopharmacological impact and newer anti-obesity medication(s). Fast food, the “ready cooked food to go”, is generally made in advance and delivered instantly after heating. Most fast foods are deep-fried, high fat (Trans fat), unprocessed, containing chemical-additives and have a lot of ‘empty-calories’. Mostly youngsters (children, teenagers and adolescents) consume these foods on a regular basis. Therefore, overweight and obesity have become the most prevalent nutritional disorder in them. Further, they become more predisposed to insulin resistance and type 2 diabetes, hypertension, hyperlipidemia, liver and renal disease, reproductive dysfunction and pulmonary consequences. There have also been some reports for the dependent-liability of fast food. The presence of sugar and fat may lead to stimulation of endogenous opioids (enkephalin) and/or other pleasure-chemicals in brain to cause addiction from fast-food. The Trans fat and other fats of fast-food-ingredients can influence human body through Ghrelin, Leptin, and/or Insulin. Insulin has role in CNS-regulation of energy-balance, while leptin is the hormone that sends messages to brain to say when can we stop eating, i.e., it calls halt to hunger pangs and gives “stop eating signals”. The very high levels of fat/triglycerides in blood are supposed to block the action of leptin. The chemical-entities like acrylamide, mono sodium glutamate, azodicarbonamide, fluorinated telomere, dimethyl polysiloxane etc. present in fast food have also been implicated to be involved in serious complications like cancer, chromosomal-sperm-damage and other fertility/reproductive harms. Recently, many treatment options have come up with lesser side-effects to fight against obesity, which will also be discussed at length.

Biography

Kiran V.Barar, Ph.D.(Med.)Pharmacology, is currently working as a Senior Professor & Head at the Department of Pharmacology, SPMC, Bikaner, Rajasthan, India. She is also an Honorary Professor in Albert Schiwzter International University (ASIU), Geneva, Switzerland for last 12 years. A meritorious (gold medallist) throughout, she has published about ‘60’ papers including ‘6’ theses. She has been an Editor, Reviewer and Writer/Columnist in the field of Psychopharmacology, Neuropharmacology, Chemotherapy, Biotechnology-derived Drugs and Recent Advances in Pharmacology. She is Life Member in IPS, SOPI, and ISPOR (KSPOR) and has remained an active member in the New York Academy of Sciences (NYAS) and in DIA-India recently. She also is a Full Individual Member in Organization for Women in Science for the Developing World (OWSDW/ previously TWOWS).

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