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India, Dietary Diseases
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India: Reducing Dietary Diseases

India is a beautifully diverse and culturally rich country, known for its deep-rooted traditions, vibrant festivals, and diverse culinary heritage. Located in Southern Asia, India holds the title of being the most populous country in the world. With a total population of roughly 1.457 billion, a significant portion of its citizens face food insecurity with over 190 million individuals struggling to access adequate nutrition. The population highlights a predominance of rural residency, with 63.64% of the population living in rural areas while 36.36% reside in urban communities.

India has a Sovereign Socialist Secular Democratic Republic, governed through a parliamentary system with a Prime Minister at the helm. The nation's economy is intertwined with agriculture, as nearly 60% of the land is cultivated for farming. The average farm size is relatively small, measuring around 2.67 acres or 1 and a half football fields. India produces a variety of essential crops that sustain both its domestic food supply and international exports. Among the most significant crops grown in the country are rice, wheat, sugarcane, and coffee, which contribute to staple ingredients in Indian diets.

The average family size in India consists of four people. However, financial challenges persist as the average monthly salary is about $382 according to Statistica.com a salary like this falls short of meeting the cost of living for a family of four, which is estimated to be $519 per month. This contributes to the difficulty for many families to afford a comfortable and nutritionally balanced lifestyle. While most households have access to electricity and modern technology, water scarcity remains a concern in several regions, affecting daily living conditions and agricultural productivity. The diet usually consists of processed and fatty foods, as well as fried vegetables. According to various sources, religion plays a large role in the diets of almost all of the Indian population. For instance, Hinduism, the predominant religion in the country, encourages veganism to its followers, while Islam and Sikhism also have specific dietary guidelines.

India is facing a growing burden of dietary diseases like type 2 diabetes, driven by rapid urbanization, lifestyle changes, and shifting dietary patterns. With one of the highest numbers of diabetes cases globally, the country is at a critical point for addressing this health crisis. India's diverse culinary landscape, spanning both vegan and non-vegan diets, provides a unique opportunity to explore how traditional eating habits can be leveraged to combat these diseases. From plant-based staples like lentils, vegetables, and whole grains to non-vegan favorites like dairy and meat, both diets have potential benefits and drawbacks when it comes to managing blood sugar levels and improving overall health. By reviewing the nutritional aspects of these dietary approaches, India can identify sustainable and culturally relevant strategies to reduce the prevalence of type 2 diabetes and promote healthier lifestyles nationwide.

The strict elimination of all animal-derived foods in a vegan or vegetarian diet can lead to certain nutritional deficiencies if not properly planned. This impact affects approximately 40% of adult Indian citizens, while most still have some form of limitations on the meat intake in their diets. For example, animal products provide complete proteins, meaning they contain all the essential amino acids. While plant-based sources like lentils and chickpeas provide protein, they may not always offer a complete amino profile. A lack of protein can lead to muscle weakness, fatigue, and poor immune function. Although veganism has been linked to various health benefits such as reduced risks of heart disease and obesity, an unbalanced or poorly planned diet can lead to several deficiencies, which may contribute to dietary diseases. Some of these diseases are protein-energy malnutrition, which causes muscle weakness and weakened immunity. Other protein-energy malnutrition includes anemia, osteoporosis (a disease that causes weakened bones), and hypothyroidism (a disease that negatively affects hormonal changes).

On the other hand, many Indians who are not vegan consume excessive amounts of fatty, fried, and processed foods, which leads to serious dietary diseases. High consumption of deep-fried. foods such as samosas, pakoras, and puris have the ability to contribute to obesity, high cholesterol, and metabolic disorders. These foods are staples in Indian cuisine. They are often prepared with refined oils and trans fats and dense in calories but poor in nutrients. Along with this, non-vegan diets are also impacted by environmental factors such as pesticide contamination in animal products, inflaming risks associated with many dietary diseases. India is the largest

producer and consumer of milk in the world with dairy products forming a cornerstone of the Indian diet. While dairy products provide essential nutrients like calcium and protein, excessive consumption of dairy products such as ghee, butter and full-fat milk can lead to an intake of unhealthy saturated fats. These saturated fats could increase the risk of obesity, heart disease, and type 2 diabetes.

Type 2 diabetes in India is a growing public health crisis. Around seventy-seven million people live with this disease. India has the second highest number of diabetes cases in the world. It is estimated that by 2035 one hundred thirty-four million people will live with this disease in the country according to the National Library of Medicine. Some causes of diabetes have been driven by a combination of genetic predisposition, unhealthy diets, and sedentary lifestyles. The unhealthy vegan and non-vegan diets of India plays a large role in the rise of diabetes. While vegan diets are considered healthier, unbalanced versions of these diets can still contribute to diabetes. Not only does veganism have a large impact on the overall health of the bones and muscles, it also plays a role in blood sugar levels. Foods like poori, parathas, and naan are low in fiber and high in simple carbohydrates. This combination causes rapid spikes in blood sugar levels. Compounding these risks of nutrient deficiencies and blood sugar spikes may indirectly worsen metabolic health. Although non vegan diets offer some nutritional diversity, they pose significant risks to getting diabetes. Together, these dietary habits highlight the urgent need for balanced and nutrient-rich eating practices to combat the growing diabetes epidemic in India.

Addressing this epidemic in India would require an extensive, multi-faceted approach that tackles the root causes of these healthy dieting patterns. By targeting the different issues, the negative impact the type 2 diabetes has on India could be minimized.

The first goal would be to promote healthier diets. For vegan diets, a variety of foods like whole grains, beans, nuts, and healthy vegetables should be included. These foods are rich in fiber and nutrients that help control blood sugar. Along with this, healthier cooking methods should be

used instead of constantly frying foods. Steaming, baking, and grilling foods can reduce unhealthy fat content. On the other hand, vegan diets have the potential to lack essential nutrients like vitamin B12, iron, and calcium. The provision of a larger variety of vegan alternatives such as plant-based milk, tofu, and whole wheat breads, could attack this issue.

For non-vegan diets, cutting down on fatty foods by eating more lean meats like chicken and fish would help, as well as cutting down on full-fat dairy products that are high in saturated fats. Processed foods are also a prevalent cause of diabetes in India, therefore limiting the amount of processed junk foods that many Indian households are reliant on and replacing them with healthier alternatives would help lessen the risk.

In addition to dietary changes, raising public awareness about the importance of healthy eating habits is crucial. Large-scale educational campaigns could help people understand the dangers of consuming too many high-sugar, high-fat, and processed foods. In Mexico, a nationwide initiative called “Eat Well” was implemented to inform citizens about proper portion control, reducing processed food consumption and increasing fruit and vegetable consumption. These efforts, along with other government interventions like warning labels on sugary drinks and snacks, have led to a decrease in sugar-sweetened beverages: a major contributor to type 2 diabetes. India could use a similar strategy of educating the masses about healthy eating habits, which would spread awareness about the causes and ways to prevent type 2 diabetes.

Government policies can have a significant impact on the dietary habits and overall health of the population. An effective way to reduce the consumption of unhealthy foods is through regulation and taxation. By implementing taxes on high-calorie, processed foods like sugary snacks, fried items, and carbonated drinks, the government can discourage unhealthy food consumption while generating funds that can be used to promote healthier eating habits. At the same time, the government could provide assistance for healthier foods such as fresh fruits and vegetables, making them more affordable for lower-income families.

Finally, research is essential to understanding the complex relationship between diet, lifestyle, and diabetes in India. More data should be collected to study how regional diets and food availability influence diabetes risk. This would allow for the development of region-specific

solutions that take into account local food preferences, cultural habits, and economic constraints. A deeper understanding of how specific foods affect blood sugar levels in different parts of the country could lead to more effective and personalized dietary recommendations.

In conclusion, addressing type 2 diabetes in India requires a multi-faceted approach that includes dietary changes, increased physical activity, better healthcare access, and government policies to promote healthier lifestyles. By learning from successful strategies like the ones used in Mexico, India can develop initiatives that encourage balanced diets, reduce the consumption of processed and fatty foods, and improve public health awareness. Implementing nationwide nutrition education programs, investing in preventive healthcare, and promoting physical activity can help curb the rising diabetes epidemic. With government support, public awareness, and community participation, India can take significant steps toward reducing dietary diseases and improving the overall health of its population.