

India's Nutritional Crisis

Alka Rao¹, S. Nanda², Akshita Kaushik³, Anju Jain⁴ and Anna Senrung⁵

^{1,3,4,5}Dept. of Zoology, Daulat Ram College

²Dept. of Biochemistry, Daulat Ram College

E-mail: ¹alka1aug@gmail.com, ²saritananda123@gmail.com, ³2495akshitakaushik@gmail.com,

⁴anju37@gmail.com, ⁵annasenrung@yahoo.in

Abstract—Indian cuisine is one of the most ancient cuisine in the world. From salads to sauces, from vegetarian to poultry, from breads to desserts, Indian cuisine is invariably complex. If we look back in India's history and study food that our ancestors ate, we will notice the amount of attention which was paid to the planning and cooking of a meal. But now? We have a category of diseases which are classified as lifestyle diseases, which unsurprisingly are preventable. We have become so dependent on processed foods due to the hectic and fast-paced lifestyle that we are eventually failing to satisfy the nutritional need of our body which is leading to a deteriorating body. What is worse is, that we do not know what's in our food, what is its source etc. As a result, there is a glut of diseases that are trapping us. The amount of calories present in the food which we prefer to eat has overlapped the amount of nutrients required by the body. We are not eating food, we are eating food-like products. This paper explores the often ignored, physiological impact that food can have on our bodies. The food you eat can be either the safest and most powerful form of medicine or the slowest form of poison!

1. INTRODUCTION

Can you recall the last time you had a full body checkup? Most of us can't. So while, there are a plethora of lifestyle diseases which can be fatal, we on the other hand are clueless about what is salubrious. According to a study, over 80% of young adults in India are deficient in Vitamin D^[1]. A logical inference out of it would be that we are slaughtering away the very base of immunity – nutrition. It seems that the problem lies with the perception of nutrition itself. We are spending 6% of our GDP on preventable diseases^[2]. In order to get a less statistical and more practical outlook towards this nutritional crisis, let's just look around us. Since when did cancer become such a common disease? When did PCOS become a lifestyle thing? Why do we have so many food allergies now a days? Oh! And we are also, now the "Diabetic Capital of the World"^[3]. For a country, where Ayurveda was born, one may wonder what went wrong. In this particular analysis, we will dig deeper into what do we actually eat and what are we getting out of it.

2. FOOD: HOW MUCH DO WE KNOW ABOUT IT?

"It has been ingrained to our thinking by supermarkets and their misleading advertisements to focus on calories, rather than what the packet actually contains". Most of the Indian

households show a proclivity towards getting their monthly goods from supermarkets. And the supermarkets are exploiting this fact very efficaciously. All the brands seen on the shelf of a supermarket have access to all sorts of chemicals, which aids them in further manipulating our food. Their pivotal concern is not our health but to make a product which we can buy again and again. And how do they accomplish this? Simple – they make food to look good, to taste good and to be addicted to. In a research conducted in U.S, a pristine human fetus had more than 200 chemicals in its umbilical cord^[4]. And the corollary is, even we are heading towards it. We are not eating food, rather food-like substances. How else one would explain – traces of over 200 chemicals in the umbilical cord of a fetus? Something so pristine in its form is born with chemicals! A major chunk of our food is coming from supermarkets and they are doing this to our food. Let's take up this^[5] one compound which can be found in almost everything in a supermarket: Sodium Benzoate. According to natural news, sodium benzoate has the ability to deprive our cells of cancer, break down our immune system and cause cancer. So even Patanjali, which claims to an all ayurvedic and natural company, uses sodium benzoate in almost all of its juices, including their aloe-vera juice. Sugar in its natural form found in fruits and milk is very healthy but the same sugar when added in free form to any food causes addiction. Sugar causes dopamine to be released in a particular area of brain, so when we eat sugars in large amounts, the dopamine receptors get down-regulated^[6]. So now, there are a few receptors for dopamine, and the next time you consume the same amount of sugar, you won't get the same 'high'. This is similar to the mechanism of nicotine, which is principally found in cigarettes. It is time that we broaden the definition of sugar to "high fructose corn syrup, fructose, and glucose liquid" instead of just the crystallized sugar we use at home. Added sugars are found in 70 % of the packaged foods in a supermarket and yes this includes the "low-fat" anything you buy at a supermarket.

3. CASE STUDY: GETTING A REALITY CHECK

If we do a simple analysis of what we eat throughout the day, we can find out how much of the processed supermarket stuff is getting into our systems. And what are they bringing along

with them. For the table given below, I asked simple questions to one of my roommates about their eating habits:

Now, she eats very small portions of so called ‘big meals’ supposed to be lunch and dinner. She also suffers from severe pain during menstruation; she takes medicines for alleviating the pain. If we look at the table now, almost half the items are processed – Milk, Lays, biscuits, juice. The eggs taken at dinner- they have a whole new story behind them. We all know how the poultry industry works – antibiotics and hormones. Some of these antibiotics are so potent that they are not prescribed by doctors for humans. Apart from being loaded with highly refined carbohydrates, the diet also shows a paucity of vegetables. We all have been told since childhood that the Indian meal plan is a ‘balanced diet’. What we don’t realize however is, the ingredients that are making up these foods is no longer the same. With our sedentary and hectic lifestyles, we don’t want to invest much time in thinking about what we eat. Needless to say, we want it to be ‘cheap, fast and easy’ and in this process, we are not only making ourselves vulnerable to lifestyle diseases, but we are also making the lifespan of our future generations shorter, from the womb itself. That’s right; the placenta is now the source of over 87 chemicals. This pretty well explains the increase in birth defects in Indian fetuses^{[7] [8]}. The paper clearly states that “*Birth defects arise either due to a wholly genetic etiology, or due to gene-environmental interactions, where the fetal genetic susceptibility interacts with the maternal physiological environment to result in the abnormality*”^[8]. After looking up at this scenario, the question worth pondering is “What do we do now? How can we avoid this?” The answer is simple, we have to go back to our roots, look at how our ancestors ate.

4. THE SOLUTION

What I am about to tell you is something, not out of a nutrition journal or an obscure internet source, but it is something I did on my own. Even though, I did not suffer from any medical condition, I always felt lackadaisical, in spite of what I thought was – ‘healthy eating’. My definition of healthy eating said ‘eat fruits’. So I switched from ‘healthy eating’ to ‘conscious eating’, meaning I was aware of what I was eating. So I along with my roommate, changed our eating habits, it didn’t require much work – less investment in supermarket goods (biscuits, Jams, juices, spreads, chocolates) , more investment in actual food (vegetables, fruits, cereals, whole grains, seeds). Once we started out reading the ingredient list of all the packaged goods, the items in our shopping cart dramatically reduced. We gorged on vegetables, fruits, chia seeds, flax seeds, organic dairy products. Turns out, Delhi has its own farmer’s market which only a few people are aware of. It operates on Sundays, so we went there and got hold of fresh produce (sufficient for a week).

It has been a month now and the results have been slow but noticeable. Starting with my roommate, who is suffering from PCOS, she got her periods on the scheduled date, for the first time in 3 years and the pain was considerably less. I on the other hand, became more active, lost a considerable amount of fat from my body, got a clearer and supple skin and of course, experienced considerably less menstrual pain.

5. CONCLUSION

Capitalism, consumerism and mass advertising have led us to believe that we need a plethora of products to survive. Today, the consumers don’t survive on products but the products need consumers to survive. We on the other hand, through this process, have been made to believe that yes, we actually need all those processed foods and products in our diets. Unfortunately though, that is fallacious and misleading. The plethora of diseases we see today, is not a co-incidence, it has been a gradual subliminal process we have been subjecting our bodies to. So in order to fight these diseases, the pharmaceutical companies are developing drugs and minting money out of them. We are so focused on looking for a cure, that we overlook the cause. And as long as we keep looking for cure, we keep these companies in profit. And as soon as we start looking at the cause, we heal ourselves.

6. ACKNOWLEDGEMENTS

We would like to thank our mentors for their persistent guidance. We also thank University of Delhi for sanctioning innovation project for undergraduate students.

REFERENCES

- [1] Bhalodia JN, Oza HV, Modi PJ. Pattern of Malignant Tumors in a Teaching Hospital of Western India. *Int J Sci Stud* 2015;3(6):107-110.
- [2] World Health Organization, “The Country Cooperation Strategy”, May 2013.
- [3] Max Neeman Contract Research, “India – Diabetic Capital of the World”.
- [4] *Environment & Energy Publishing, LLC. www.eenews.net, 202-628-6500.*
- [5] *Phys.org, Top 15 chemical additives in food.*
- [6] Nicole M. Avena, Pedro Rada, and Bartley G. Hoebel, Evidence for sugar addiction: Behavioral and neurochemical effects of intermittent, excessive sugar intake, *Neurosci Biobehav Rev.* 2008; 32(1): 20–39.
- [7] Tracey J. Woodruff, Ami R. Zota, Jackie M. Schwartz, “Environmental Chemicals in Pregnant Women in the United States: NHANES 2003–2004”, *Environ Health Perspect.* 2011 June; 119(6): 878–885.
- [8] Anita Kar, “Birth Defects in India: Magnitude, Public Health Impact and Prevention”, *JKIMSU, Vol. 3, No. 2, July-Dec 2*