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Editorial


A Country's Dietary Guideline Should Now Be Updated by Replacing Refined Grain Diets by Whole Grains

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At this moment of time, if we look at the list of the deadly diseases of the world, cardiovascular diseases are always found to be on the top. As per WHO report dated 17th may 2017, an estimated 17.9 million people died from CVDs in 2016 representing 31% of all global deaths. Of these deaths, 85% are due to heart attacks and strokes. As we all know, the common risk factors of these diseases are smoking, excessive alcohol consumption, eating unhealthy diets, physical inactivity, hypertension, overweight or obesity, type 2 diabetes and hyperlipidemia. Most cardiovascular diseases can therefore be prevented to some extent by changing our life style such as, avoidance of smoking, excessive alcohol consumption and changing of all unhealthy diets by their healthy versions [1]. Now, for identifying the unhealthy diets, all the dietary items, particularly, the cereal food grains we are consuming every day at the highest quantity as our major energy source should be reexamined for their nutritional values. As per the report received from Harvard school of public health, the whole cereal grain obtained just after the removal of the non edible hull of the seed is a structure consisting of three parts, namely, the bran, germ and endosperm. Each part of the whole grain houses their own sets of health promoting nutrients. The bran is the fiber rich outer layer that supplies B vitamins, minerals like iron, copper, zinc, magnesium, antioxidants and phytochemicals. The germ is the core of the seed from where growth starts. It is rich in healthy fats, vitamin E, B vitamins, phytochemicals and antioxidants. The endosperm is the innermost layer made up of mostly starch with little amount of proteins, B vitamins and minerals. The refined grain is the starch rich endosperm obtained after stripping off the bran layer and the germ by milling. The starch molecules present in the whole grain, being packed very tightly by the bran layer, its glycemic index is very low and therefore, the release of glucose from it will be very slow. Fiber present in the bran layer helps in lowering blood cholesterol and triglyceride by minimizing their absorption and increasing excretion along with the feces. It also helps in preventing the formation of small clots that can trigger heart attack or stroke. Phytochemicals and minerals such as magnesium, selenium and copper help in blocking progression of many diseases including cancers. Because of these beneficial contributions, the whole grain is considered as healthy diet. In contrast, the refined grain being exposed already, is easier to chew and the glycemic index of the starch present in it is very high thus, releasing glucose at much higher level. This spike of blood glucose invites higher level of insulin. High insulin level increases the utilization of glucose towards the synthesis and deposition of fats in the adipose tissues. No other health benefits are expected from this grain and therefore, it is considered as unhealthy diet [2]. Why we are still enjoying with this unhealthy diet is yet to be answered.

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The author's intention of choosing this title of the editorial is to identify the unhealthy diet which we all knowingly or unknowingly consuming and to apprise the fellow researchers, dieticians, nutritionists, and lastly the planners of the country's food and nutrition program for intensifying an awareness campaign for switching on to the consumption of the whole cereal grains, in place of the refined one which we have just declared as unhealthy diet. Rice is the cereal grain used as staple food by more than half of the world population (90% being Asians including the writer of this editorial). The color of the whole grain of rice is brown because of its outer bran layer, whereas, the refined one is white. This author, out of his own curiosity, and also being an old man still carrying extra fats, started consuming this brown rice procured from a nearby rice mill (collected just after husking) as an experiment aimed at trimming of his extra fats. From this experiment, three findings could be taken as major reasons of avoiding brown rice by the mass. The findings are: (i) Difficulty in chewing and swallowing, (ii) feeling of indigestion and (iii) very bad taste and because that objection raised by the family members. Somehow, the experiment is still continuing and will be continued as being encouraged by some positive findings like: (1) Solving of the problem of constipation, may be because of the high quality fiber associated with the bran layer, (ii) feeling of lightness while walking; perhaps, the body's weight, in fractions of a kg, might have really been reduced, (iii) sounder sleeps and (iv) finally, the consent given by family members for going ahead as planned.

Dear colleagues, now, we know that, by eating whole grains, by virtue their being associated with many health promoting nutrients, can prevent glucose from spiking, lower blood level of cholesterol, LDL, Triglycerides and insulin. As per additional reports [3], they can also lower blood pressure, an important risk factor for heart disease, type 2 diabetes, obesity and constipation. Lowering of these parameters ultimately mean lowering of the rates of progression towards those deadly diseases mentioned above. Now, some countries, have accepted the proposal of inserting whole grain in place of refined grains in their dietary guidelines. The U S government, in their recommendation of 2015-2020 dietary guidelines for Americans, the quantity of grains to be inserted (for 2000Cal) was 6 ounce, at least half of that as 100% whole grain. But, due to the increasing amount of research showing the various health benefits, it was later corrected as 6 ounce of 100% whole grains [4]. I wish, the same type of action be taken in this part of the globe also. I know, in a country like ours it will be very difficult to change food habits so suddenly. For wheat consumers, it is better as we are getting atta as its whole grain preparation but, for rice grains, at every corner of the markets in India and Nepal, mostly white rice (refined grains) are sold. Therefore, we are worried as the larger proportion of our population is rice consumers. Well, I met a gentleman in Nepal who could manage to get brown rice for his own consumption as being suggested by his family doctor. I wish, our clinicians can start this campaign from small groups comprising of their own selected patients.

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