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Editorial

Nutritional Iron Requirements and Deficiency

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Deficiency of iron is a major cause for disability and mortality globally and it occurs due to non-absorption of iron from diet. Hence, the physiological requirements of human body cannot be met leading to various conditions of health concern such as gestational complications, poor pregnancy outcome, decreased educational and occupational performance. Usually, the dietary iron bioavailability is low in populations consuming vegetarian diet. This iron deficiency can cause several health and economic losses. At large, whole nation and country suffers as a consequence.

Iron requirements are at specified upward extent in adolescents, particularly during the rapid growth period [1]. Overweight children and adolescents are at higher risk of iron deficiency due to insufficient dietary intake of iron and use of those foods which are unbalance in nutrition [2]. Menstrual blood iron losses varies markedly from one woman to another but these losses are very constant for an individual from month to month [3]. Even in geographically widely separated populations of the world, the central part of the variation of menstrual blood losses is controlled genetically by fibrinolytic activators in the uterine mucosa. The variations in iron contents in different populations are related to a variation in the absorption of iron from the diets but not related to a variation in iron requirements [4,5]. Sources of heme and non-heme iron from routine food items (Table 1) and iron content in different foods (Table 2) is displayed below:

SOURCES OF HEME IRON	SOURCES OF NON-HEME IRON
✓ Lean mutton	✓ Nuts
✓ Lean beef	✓ Eggs
✓ Organ meat	✓ Dried beans
✓ Lean lamb	✓ Baked beans
✓ Fish	✓ Green leafy vegetables
✓ Ostrich	✓ Chocolate
✓ Pork	✓ Wholegrain bread
✓ Shell fish	✓ Raisins
✓ Poultry	✓ Coffee

Table 1: Sources of heme iron and non-heme iron from routinely food items

FOOD	IRON CONTENT
Calf liver	7.9mg/100g
Egg yolk	7.2mg/100g
Spinach	4.1mg/100g
Peas	5.1mg/100g
Cow milk	0.05mg/100g
Egg white	0.2mg/100g
Oranges	0.4mg/100g
Grapes	0.4mg/100g
Tomatoes	0.5mg/100g
Carrots	0.7mg/100g
Potatoes	0.8mg/100g

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Strawberries	1.0mg/100g
Peanuts	2.1mg/100g
Rice	2.6mg/100g
Beef	2.6mg/100g
Whole wheat flour	3.3mg/100g
White flour	2.9mg/100g

Table 2: Iron content in different foods

Iron supplementation and flour fortification can control iron deficiency in populations. Governments should take initiatives by monitoring the health status of populations by adopting various methodologies and conducting surveys, follow ups and then providing fortified foods to deficient populations, taking special care of pregnant anemic women and devising a proper policy and guidelines in this regard.

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