

## Dietary Intake During Fasting In The Month Of Ramadan

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**Abstract: Objective:** To evaluate the level of awareness of diet plan and common physical & mental health problems faced by the people, during fasting in the month Ramadan. **Study design:** Study survey. **Setting:** Liaquat University of Medical and Health Sciences, Jamshoro. **Study period:** July, 2014. **Subjects and Methods:** A survey based study was conducted through a questionnaire, to collect the information regarding the awareness of diet plan and common physical & mental health problems faced by the people. Several relevant factors were considered in study like associated diseases and particularly diabetes mellitus, natural substitutes for insulin as well as antioxidants which can be useful for the prevention of such diseases. **Inclusion criteria:** Those individual having fast or experience of fasting for whole month. **Exclusion criteria:** Individual does not like to participate in study and Individuals with any systemic problem other than diabetes mellitus were excluded. **Results:** only 26 people (20%) had awareness of balanced diet plan during fasting in Ramadan. Dehydration (48%) was reported as a most common problem faced by participants. Diabetics were reported more strict follower of dietary plan simultaneously decreased working capability and hyperphagia were reported more common among them as compared to healthy participants. **Conclusion:** Most of the people do not take into consideration a healthy and balanced diet plan required for their body during fasting, and sometimes increase their saturated fat consumption manifolds that may aggravate the health issues particularly in cases of diabetes, Gastrointestinal (G.I) Disorders, & cardio-vascular diseases. It is needed to change nutrient intake and choose a healthy and balanced diet particularly during fasting.

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### 1. Introduction

In the holy month of Ramadan, Muslims fast from dawn to dusk in which they refrain from food intake, thus slowing down the metabolism of body. <sup>(1)</sup> Due to negligence of important nutritional requirements of human body and widespread practice to eat spicy and oily food, many of us face low blood sugar, headache and Gastrointestinal Disorders like constipation and indigestion. <sup>(2, 3)</sup> It is also very crucial for people having diabetes, C.V.S diseases and cholesterol abnormalities to select what they eat in Suhoor and Iftar. Ramadan fasting can be in fact the best time to get rid of junk foods and hazardous habits like smoking and chewing of tobacco products. Unfortunately, many individuals aren't quick to seize this opportunity. On the other hand, most people gain weight during Ramadan as a consequence of overeating. Due to the fact, the typical iftar food includes a plethora of fatty, heavy and high calorie meals which can cause digestive problems. It has harmful effects on health, but it also kind of defies the reasons of fasting to enforce moderation, self-discipline and patience. <sup>(3, 4)</sup>

In this study highlights the common dietary habits of people in Ramadan and to elaborate pros and cons of the food they eat in Suhoor and Iftar. The information is collected about nutritional intake, common problems of physical & mental health of people.

### 2. Method:

A survey questionnaire was conducted among a group of people belonging to different age and health background. The information was collected related to the awareness of diet plan and common problems of physical & mental health faced by the people. In the survey, different questions were asked like how they feel in Ramadan, what is their eating habit, their level of physical activity and health problems they face during Ramadan. As an attempt to provide awareness of healthy diet for people suffering from several diseases and diabetes in particular, this study also mentioned natural substitutes for insulin as well as antioxidants which can be useful for the prevention of such diseases.

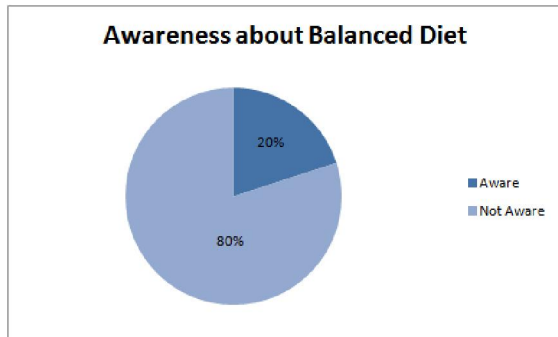
**3. Results:**

Among 130 persons surveyed altogether belonging to different age and health background, only 26 people (20%) had awareness of balanced diet plan in Ramadan while 104 persons (80%) doesn't know about balanced diet at all (Figure.1).

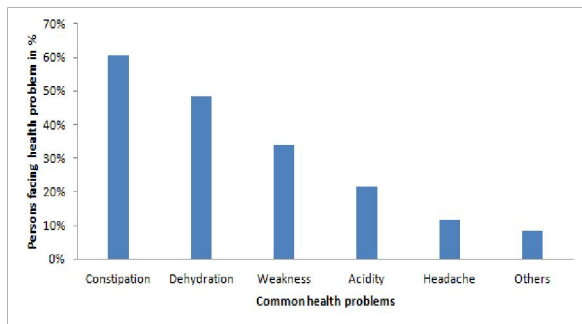
The common health problems faced overall among 130 participants were constipation (61%), dehydration (48%), weakness (34%), acidity (22%), headache (12%) and some other diseases (8%)(Figure.2).

Among the persons who filled the questionnaire, 100 persons said they were totally fit, while 30 persons were facing diabetes mellitus. For the 100 healthy persons, 80% reported with imbalanced diet during Ramadan while only 18% followed some Diet Plan. Also 23% of healthy people said their working capability decreased and 35% said their food intake increased (Figure.3).

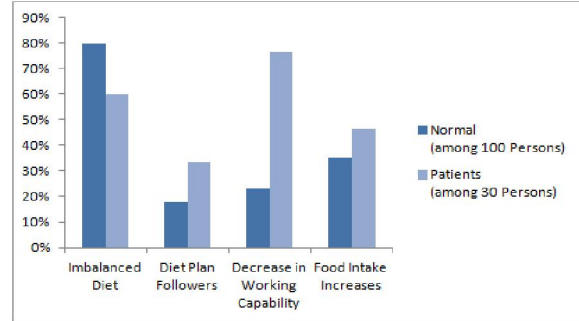
For the 30 persons having diabetes mellitus, 60% of them had imbalanced diet during Ramadan, 33% followed Diet Plan, 77% had working capability decreases while 47% had their food intake increased. A comparative analysis mentioned in table 1.



**Figure 1: Awareness level regarding diet plan among participants.**



**Figure 2: common health issues faced by individuals during fasting**



**Figure 3: Details of dietary plan and physical activities among the healthy participants and participants with diabetes mellitus.**

**Table 1: showing comparative analysis of dietary plan and physical activity among healthy participants and diabetics.**

Activities	Normal (among 100 Persons)	Patients (among 30 Persons)
Imbalanced Diet	80%	60%
Diet Plan Followers	18%	33%
Decrease in Working Capability	23%	77%
Food Intake Increases	35%	47%

**4. Discussion:**

Ramadan is the month that provides us the opportunity to cleanse ourselves spiritually and physically as well. <sup>(4)</sup> Let us highlight the healthy and simple living that Islam has always stressed and let us think before what we eat to sustain the blessing of health. Balanced food and fluid intake is important between fasts. As mentioned above, majority of the people, and people having diabetes in particular, need to change their nutrient intake and choose a healthy and balanced diet. <sup>(4)</sup>

**“Eat of the good things we have provided for your sustenance but commit no excess therein.” (AL-QURAN).**

This study also indicates the changes required in selecting the meals of Suhoor and Iftar that can be adopted easily in order to adhere to a healthy diet plan that caters the daily requirement of human body. <sup>(5)</sup> By adopting these changes and introducing healthy food items easily available in market, people can not only enjoy disease-free Ramadan but also good health if they continue to consume ‘super-foods’ year long. As an attempt to provide awareness of healthy diet for people suffering from several diseases and diabetes in particular, this research paper also

mentioned natural substitutes for insulin as well as antioxidants which can be useful for the prevention of such diseases. Do break your fast with something nutritious & don't give up on exercise.

In the holy month of Ramadan, consider the following main points to keep the diet balanced: Divide the meals by a break of fasting. Suhoor is the early morning meal before the sun rises, Iftar the late evening meals before the complete sun set to break the fast. A complete diet plan should include carbohydrate meals enrich with fiber, i.e. fruits, seeds and grains, wheat, brown rice, cereals, bran, bajara, beans, and vegetables, especially at Suhoor. Fiber-rich foods helps in digestion, promote good blood glucose levels gives the feeling of fullness. Fasting raises the gastrointestinal acid content and may give rise to feeling of discomfort or pain. Fiber-enriched meals at iftar can help to neutralize the acidity and relief from the feeling of discomfort and pain. It's better to intake more fluids with fiber to prevent excessive gases production. <sup>(5-8)</sup>

At Iftar, juice and dates are consumed as a religious tradition. Consumption of dates and juice provides the "instant-energy" with hydration and helps to subside the possible signs of hypoglycemia. Diabetics should consult with endocrinologist for adjustments of diet and medication. In another study the target population is reported with worse lipid profile with increased risk of cardiovascular diseases <sup>(9)</sup>. In general and particular in this case; decrease the utilization of oil and Grilled or Baked foods instead of frying them. Instead of just pouring oil from the bottle, measure the oil in spoonfuls. Choose the meat with lower fat contents and thin cuts. Before cooking remove any visible fat from chicken. To make the work for stomach easy, chew well and eat slowly. After all day fasting, there is hunger to eat fast and larger quantity. It takes 20 minutes for the gastrointestinal system to inform the brain about its fullness, so it's better to take small quantity of meal first. Namaz five times a day provides an ideal routine exercise. Namaz not only keeps the mind clear but also helps metabolism. Light exercises and walking is good. However, straight after eating a big meal exercise is not good for health because blood needs to divert towards gastrointestinal system rather than muscles. It's better to drink plenty water and keep the meals light. <sup>(10, 11)</sup> It is recommended to intake attest 1 to 1.5 liters of of water after Iftar and before going to bed so that to normalize fluid balance. It's better to avoid the fried and oily foods such as French fries, greasy curries sweets, fried sandwiches. Fats enriched diet is deficient in nutrient which may leads to an imbalanced dietary intake, causes fatigue and sluggishness during fasting. Due to limited fluid intake during fasting and high salt

intake there is always a risk of dehydration. Foods containing too much sugar such as sweets and drinks are sources of very little nutritional value with empty calories. Although, they may produce instant energy but it will not sustain longer. <sup>(11)</sup> Further metabolic imbalance may produce by less eating or overeating such as hypo or hyperglycemia and dehydration. Consumption of caffeine/ tea, due to their diuretic action leads to lost quantities of fluids along with valuable minerals and salts. Altered sleeping pattern due to early morning awaking for suhoor and short break for meal time may leads to going to bed immediately after Suhoor and Iftar meals, as a consequence may produce gastrointestinal disturbance. <sup>(11, 12)</sup> It is better wait for 2-3 hrs to digest the food before sleeping.

Antioxidants are chemicals that may prevent from free radical cellular injury. As a consequence of the environmental exposures i.e. tobacco smoking or food metabolism, free radicals produce, which may damage body's cellular structure, <sup>(13)</sup> may play a vital role in cardiovascular disease and oral cancer. It is recommended to avoid smoking and to consume anti-oxidants enriched diet. Studies reported that antioxidants enriched diet (vegetables and fruits) lowers the risk of oral cancer, cardiovascular disease, Alzheimer's disease and Parkinson's disease. <sup>(14, 15)</sup>

In addition, meals enrich in antioxidants are also enrich in fiber, as well as have decreased cholesterol and saturated fat, and are good sources of vitamins and trace metal elements. Antioxidants enriched fruits i.e., pears, berries, walnuts, plums, almonds, pistachios; pomegranate should be added into fasting diet plan. <sup>(15)</sup>

Natural super foods are nutrient dense and calorie sparse foods; they have a lot of punch for their weight is superior sources of essential nutrients and anti-oxidants, nutrients we require but produce ourselves. Yoghurt, baked beans, apples, olive oil, bananas and salmon are the easily available super foods for everyone and must be included in fasting dietary plan. <sup>(14, 16)</sup>

### Conclusion:

The survey concluded main trends of eating habits among the masses and summarized common diseases (headache, constipation, dehydration etc.) that may arise due to eating disorders in Ramadan. It also highlighted that most of the people do not take into consideration a healthy and balanced diet plan required for their body during fasting, and sometimes increase their saturated fat consumption manifolds. This can be a major risk for people having cardiovascular diseases and diabetes. Majority of the people and people having diabetes, Gastrointestinal (G.I) Disorders, & cardio-vascular diseases (C.V.D) in

particular, need to change their nutrient intake and choose a healthy and balanced diet.

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