DURING RAMADAN, CAN HIGH FIBRE FORTIFIED FOODS HELP CONSUMERS FAST MORE EASILY & HEALTHILY?
FOCUS ON GCC (GULF COOPERATIVE COUNCIL)
Abstract no. 149/809
TOPIC: FOOD & NUTRIENT INTAKE, DIETARY PATTERNS, DIETARY GUIDELINES
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INTRODUCTION
The Gulf Cooperative Council (GCC) is a political & economic alliance of 6 middle east countries with a population of about 48 million who are predominantly Muslim.

The nutritional status in the GCC has dramatically changed over the last 50 years & 6 paradoxes of diet related diseases exist. During the holy month of Ramadan, all Muslims—except children, travellers & the sick fast (water & food) from early dawn to sunset. Depending on the country, 76-95% of GCC are Muslims & the majority fast during Ramadan which is a time of spiritual growth & an opportunity to improve physical health. However, there is concern that diet quality can be compromised during Ramadan in the GCC.

OBJECTIVES
During Ramadan, can high fibre fortified foods help consumers living in GCC countries fast more easily & healthily?

METHODS/DESIGN
A systematic review of published data was conducted to evaluate the quality of diet & nutritional status of people living in the GCC countries & the effect of Ramadan fasting on nutritional health.

RESULTS
NUTRITIONAL STATUS IN GCC

NUTRITION RELATED DISEASES MANIFESTED BY HIGH OBESITY RATES & SUBSTANTIAL NUTRIENT DEFICIENCIES ARE COMMON AS A CONSEQUENCE OF LIFESTYLE CHANGES & TRANSITION FROM TRADITIONAL DIETS

- 25-38% of men & 28-83% of women are overweight or obese.
- 10-12% diabetic & 40-60% undiagnosed as diabetic.
- 23-54% of women of child bearing age are anemic.
- 23% iodine deficiency.
- 28-89% of Saudi Arabian adults are vitamin D deficient.

DIET ADEQUACY IN GCC

POOR DIETARY INTAKES ARE COMMON IN GCC

- Fibre intakes inadequate.
- RNIs for vitamin E, C, folate, calcium & fibre met by <50% of the population in Kuwait with a significantly low intake of most nutrients by women.
- Low intakes of calcium, vitamin D & folate amongst adolescents in Saudi, Qatar & UAE.

EFFECT OF RAMADAN FASTING ON DIET QUALITY & NUTRITIONAL STATUS

DURING RAMADAN, DIETARY DEFICIENCIES MAY WORSEN

- Ramadan: incorporates fasting with feasting periods.
- Al-Suhab meal at dawn (Breakfast)
- Aliftar at sunset (50-60% of daily nutrients) followed by a snack eaten after iftaar & Tarawih prayers (approx. 9-10 pm).

CONCLUSIONS

- Eating pattern, habits & food choice greatly altered; meal frequency may be reduced, but there can be significant increases in energy, fat, carbohydrate & protein intakes.
- 35% report increased food intake, 80% having “imbalanced diet” during Ramadan.
- Common ailments include hunger, irritability & digestive discomfort

- Amongst Saudis 59% report weight gain.
- Poor vitamin, mineral & fibre intakes reported.

HIGH FIBRE FORTIFIED BREAKFAST CEREALS COULD HELP CONSUMERS FEAST MORE EASILY & HEALTHILY

- HUNGER
- Fibre suppresses appetite & short term food intake.

- GLYCEMIC CONTROL
- Fibre lowers post & post-prandial glycemic response & improve glucose handling immediately after lunch.

- DIGESTIVE HEALTH
- Fibre relieves & prevents constipation by increasing fecal bulk & reducing transit time within 3 days.
- Reduces symptoms of digestive discomfort such as bloating & feelings of sluggishness as well as improves psychological.

- FORTICATION

Provides important amounts of vitamins & minerals often lacking in GCC diets.

POOR DIETARY STATUS IS COMMON IN GCC COUNTRIES & MAY WORSEN DURING RAMADAN.

COMMON SIDE EFFECTS SUCH AS DIGESTIVE DISCOMFORT & HUNGER COULD BE RELIEVED BY INCREASING FIBRE CONSUMPTION.

LOCAL RAMADAN GUIDELINES RECOMMEND SUITABLE FIBRE INTAKE TO REDUCE CONSTIPATION & GASTRIC ACIDITY.

FORTIFIED FOODS CAN HELP TO IMPROVE MICRONUTRIENT INTAKE & STATUS OF CONSUMERS IN GCC.

MORE RESEARCH IS WARRANTED IN DIFFERENT COUNTRIES & AMONGST DIFFERENT ETHNIC GROUPS.

HIGH FIBRE FORTIFIED BREAKFAST CEREALS CAN HELP CONSUMERS LIVING IN THE GCC HAVE HEALTHIER DIETS & SPECIFICALLY DURING RAMADAN FAST MORE EASILY & HEALTHILY BY PROVIDING FIBRE, VITAMINS & MINERALS OFTEN NOT OPTIMAL IN THE DILT.

FOOD DOME

DIETARY GUIDELINES FOR ARAB COUNTRIES

FIG. Food Dome recommends fruits, vegetables & wholegrains to improve fibre intake. At least half of grain intake is recommended to be from whole grains. To improve micronutrient intakes, fortified grains should be added in preference to non-fortified products. To increase intakes of nutrients such as D vitamins, calcium and vitamin E.

REFERENCE:

Kathryn O’Sullivan has received a financial grant on behalf of the Kelloggi’s Company.