

Assessment of dietary consumption in adolescents during and after Ramadan.

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A dietary survey was conducted in schools (El Bayadh, primary boarding-school, southern Algeria) on 12–14 yr-old adolescents, in order to investigate dietary consumption during and after Ramadan, which is known to be a period of fasting. Ramadan is characterized by the absence of any dietary consumption from sunrise to sunset.

Data were collected for 10 d during Ramadan (R) and also for 10 normal d (N). The amounts actually absorbed were weighed using a dietetic balance, whenever possible. When unfeasible, the amounts of food consumed were estimated via common domestic units (*eg* soup spoon, glass).

The total energy intake during Ramadan was significantly increased compared with that dur-

ing a normal period ($P < 0.001$) in spite of marked interindividual changes. During both phases R and N respectively, an imbalance was noted in the distribution of percentages of carbohydrates and proteins whereas the lipid intake was similar. Greater amounts of animal rather than vegetable proteins, were consumed during the R and N phase, respectively. A high consumption of "rapid assimilation" carbohydrates was observed during and after Ramadan respectively, at the expense of "slow assimilation carbohydrates". Saturated fatty acids were consumed in larger quantities than polyunsaturated fatty acids during both phases. Iron intake was sufficient, whereas calcium intake was inadequate during the R and N phases respectively, compared with recommended intakes. The distribution of meals during Ramadan was more imbalanced compared with that during normal periods. Indeed, the first meal constituted 67% of the total intake and was consumed at 19.00 h, whereas the second meal constituted only 33% and took place within 4 to 5 h of the first meal.

In conclusion, in this population Ramadan was characterized by an increase in energy intake over the 2 meals < 5 h apart, and dietary imbalance was increased to the benefit of sucrose, animal proteins and saturated fatty acids.

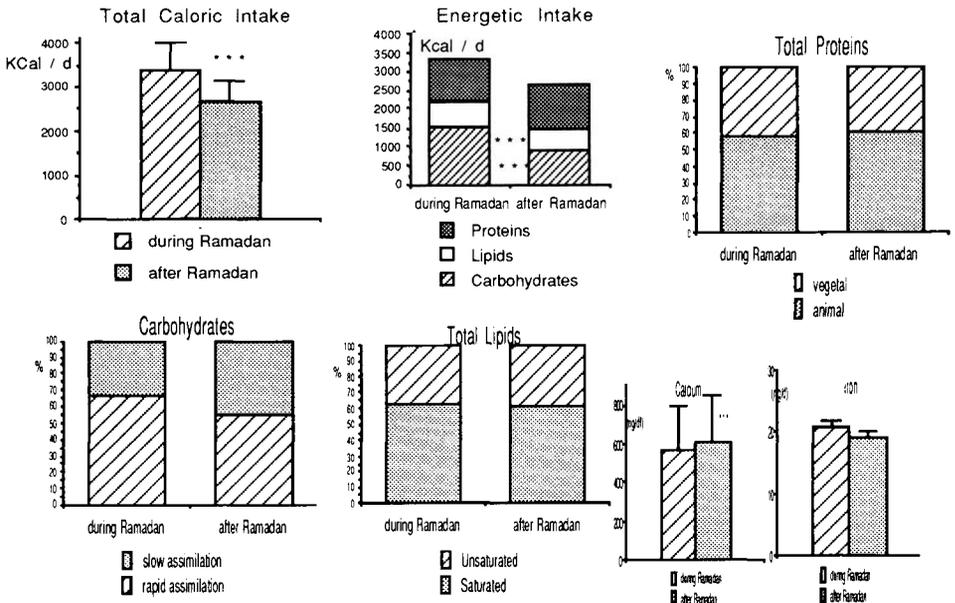


Fig 1. Composition and amounts of dietary consumption in adolescents during and after Ramadan. Each value represents means \pm SEM for 10 adolescents. *** $P < 0.01$.