

# A Report on the First International Congress on Health and Ramadān

*Shahid Athar, M.D.  
Indianapolis, IN*

I was invited to a conference held in Casablanca, Morocco in January 1994 under the auspices of the King Hassan II Foundation for Scientific and Medical Research on Ramadān. This foundation was established to scientifically study, for the first time, issues affecting both healthy Muslims, as well as those suffering from chronic illnesses such as diabetes, peptic ulcers, hypertension, asthma, etc., during Ramadān fasting.

During this month, Muslims live at a different biological rhythm. This change in biological behavior causes a change in activity, rest, eating, and sleeping patterns. Thus, the human organism gets into chronobiological adaptation in order to go through this training program. Never in the past has there been a total scientific evaluation of this biological adaptation on the human body, though individual researchers world-wide have conducted some studies. Close to 50 different papers were presented from researchers on human nutrition, fasting, endocrinology and other fields.<sup>1</sup>

The thrust of some non-Muslim research has been, to date, that Ramadān fasting is not good for the health, it is unphysiologic, and it disturbs the biological clocks, as well as hormonal secretions. Using non-Muslim volunteers undergoing total fasting, they showed that fasting actually elevates serum cholesterol and disturbs sleep patterns. For example, the truck drivers in California who do not sleep well at night have a higher rate of auto accidents on the highway, as are Muslim people liable to have if they fast. Similarly, these researchers, mostly of the United States, England, and France, have proposed that fasting in Ramadān will affect the outcome of a pregnancy, worsen diabetes, and

impairs the performance of Muslim office workers during the day because of their lack of sleep at night. However, such poor performance has not been documented in Muslim countries where work continues as usual in Ramadān. On the other hand, Muslim researchers showed that Islamic fasting is different from other types of fasting because it is intermittent, and the body adapts to these changes very well. If any adverse effect is seen at all, it is due to con-compliance to the "prescribed" dietary regime, i.e., overeat after Iftar, do not sleep at night or sleep the whole day, "fasting" will adversely affect their health and physical performance.

### Summary of presentations in English

Dr. Sulimān from Jordan showed, in 60 healthy Muslim volunteers, that body weight decreased significantly at the end of fasting, while there was no effect on cortisol, testosterone, electrolytes, cholesterol, or triglycerides. In his study, blood glucose increased slightly. Dr. Azizi from Iran confirmed these findings showing that in the first half of Ramadān, there was a decrease in body weight. However, it became steady during the second half. He also showed that serum glucose decrease in the first ten days but slightly increased at the end and reach the pre-Ramadān level. Dr. Ching from Malaysia confirmed these findings using body mass index and blood electrolytes. The conclusion of such a study is that Ramadān fasting does not adversely affect the health of healthy individuals. Dr. Aybak from Turkey, conducting a hematological study on healthy volunteers, showed that Ramadān fasting led to a decrease in platelet response to aggregating agents and an increase in bleeding and coagulation time. Dr. Ching from Malaysia showed that Ramadān decreased fructosamine and total protein ratio without causing hypoglycemia. Dr. Hader from Jordan, studying normal subjects and type II diabetic patients, showed that triglycerides and uric acid increased during fasting in normal subjects while it decreased in diabetic patients, while there was no significant difference in cholesterol, fructosamine and hemoglobin A<sub>1</sub>C, nor did it have any significant glycemic effect in normal or type II diabetics. The Moroccan Ramadān study, which was a

---

*From the Department of Endocrinology  
St. Vincent Hospital  
Indianapolis, IN*

*Reprint Requests: Dr. Shahid Athar  
8424 Naab Road  
Suite 1C  
Indianapolis, IN 46260*

multicenter study using 483 diabetic patients, had several outcomes. Of these patients, 68.5% maintained their weight, while 21.5% gained and 12.6% lost more than 2 kilograms. Dr. Ayyildiz from Turkey also confirmed that fasting decreased the responsiveness of platelets to aggregators and, thus, decreased the risk of thrombosis and atherosclerosis formation in type II diabetics. Dr. Deniz, also from Turkey, studied the levels of different hormones in fasting subjects and showed that there was an increase in plasma cortisol on day 28. However, the concentration of glucose, insulin and glucagon were in the normal physiological range during fasting. Dr. Bagraicik from Turkey, studying type II diabetics, found no adverse affect on blood glucose, serum insulin, C-peptide and fructosamine levels and concluded that diabetic patients on oral agents should be allowed to fast during Ramadān if otherwise not contraindicated.

In contradiction to European researchers who had said that fasting increases cholesterol, Dr. Nomani from West Virginia confirmed that changes in serum cholesterol was negatively correlated to fat intake and total calorie count. Thus, he suggested changing the fat content to vegetable fat only and increasing it to 36% from the current recommendation of 30%. Dr. Rashed from Qatar and his associates analyzed data on 2,337 patients admitted to hospital during Ramadān and showed no significant difference in admissions related to angina, hypertension, duodenal ulcer or bronchial asthma in Ramadān as compared to the previous month, Shābān. Dr. Al-Marri from U.A.E., doing studies on 150 untreated peptic ulcer patients, noted that there was a higher incidence of perforation in Ramadān. The question is why were these patients with peptic ulcer disease not diagnosed or treated before Ramadān and were allowed to fast as medical conditions like acute peptic ulcer disease would contraindicate fasting. Peptic ulcer perforations are relatively uncommon in developed western countries where it is diagnosed and treated much before perforation occurs. Nevertheless, the message is that those Muslims who do have peptic ulcer disease should not fast. Dr. Saour from Saudi Arabia conducted studies on 300 patients with prosthetic heart valves, oral anti-coagulation therapy, and under medical supervision, and concluded that they could safely fast without any significant increase in bleeding tendency. Dr. Farid from Iran did pulmonary function tests on patients with bronchial asthma during Ramadān, and he noted that in many patients asthma got worse during fasting. Again, those patients with serious medical problems, who were dependent on medications, should have been exempted from fasting. Dr. Abdel Rahim, from Egypt, studied urological patients who fasted during Ramadān. He showed that fasting had a protective action on stone formation, and that there was no worsening of renal insufficiency. Thus, it is suggested that patients with kidney stones or urinary tract infection can be allowed to fast. Similar conclu-

sions were made on renal failure patients on hemodialysis by Dr. Rashed from Qatar, who did not notice any worsening of renal function during fasting in such patients. Dr. Duncan from Malaysia, doing cardiovascular performance tests during Ramadān fasting, confirmed that there was improvement in many parameters in healthy individuals. Dr. Ramadān from Kuwait did extensive study of physiological parameters in healthy males during Ramadān and concluded that Ramadān fasting has a positive effect on physical performance throughout the duration of fasting. Dr. Ali from Kuwait showed that there was reduced recall score during fasting in healthy individuals. However, the general experience that people are able to memorize more Qur'ān during the month of Ramadān contradicts such a study. Dr. Monastiri from Tunis and his associate showed that fetal growth was affected during fasting. However, pregnancy is an exemption from fasting and these women should not have been allowed to fast.

#### Posters in English

There were several posters. Dr. Aslam from the United Kingdom, showed that patients taking multi-dose medications in the daytime should have difficulty during fasting because of changes in stomach pH, and that may affect their compliance with drug regimes. Therefore, physicians should attempt to switch their patients to a single agent preferably taken after breaking the fast.

I presented data revealing that stable diabetic patients, who are otherwise healthy, could fast in Ramadān under medical supervision without any worsening of the diabetes and with some beneficial effects. Most of the adverse effects of fasting are seen in patients who overindulge in food, drink or do not take appropriate rest at night.<sup>2</sup>

My overall impression of this conference was excellent. At least many researchers were able to present their studies and talked to each other and discuss the effects of fasting and make recommendations for healthy individuals, as well as for patients with medical illnesses. We need to coordinate our research and develop some methodology of research during Ramadān with more scientific criteria and outcome. Non-Muslim researchers must understand that Islamic fasting is different from all other forms of fasting as it is intermittent, with no restriction on the variety of food, but with a restriction on total quantity of food.

#### References

1. International Congress, "Health and Ramadān," Foundation Hassan II for Scientific and medical research on Ramadān, Casablanca, Morocco, 1994.
2. Athar S, Habib BA: Management of Stable Type 2 Diabetes Mellitus (NIDDM) During Islamic Fasting in Ramadān. *J Islam Med Assoc* 1995;27:68-76.