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# Disturbed sleep patterns negate Ramadan fasting benefits

Disturbed sleep offsets the health benefits from fasting in the holy month.

Modern Ramadan practices in Saudi Arabia, where fasting is combined with a radical shift in sleeping schedules, are probably detrimental to health, according to a recent study. Saudis fasting during Ramadan stay up at night and sleep through much of the day, mimicking the patterns of shift workers.

“I had read so much about the benefits of intermittent fasting, but I’d also read about the adverse effects of disturbed sleep patterns from shift work. I wanted to study the two together, which nobody has done,” explains Suhad Bahijri of the Saudi Diabetes Research Group at King Abdulaziz University in Jeddah.

Bahijri and colleagues studied 23 Saudis before the start of Ramadan and again two weeks into the holy month. They measured the levels of several cardiovascular risk factors and the expression of three genes related to our biological clock. While some risk factors improved

during Ramadan, others worsened. “Even though we found some benefits from fasting, they are masked by the disturbance in sleep patterns which introduce adverse effects,” says Bahijri. “Also, very few people restrict caloric intake in Ramadan. In fact they eat more, increasing their health risk.”

According to Bahijri, sleep patterns during Ramadan changed in the 1980s, as malls and restaurants became more common in the country and young, fasting Saudis began looking for all-night entertainment. “Our changing lifestyle is increasing the risk of chronic diseases because our genes are not evolving fast enough to cope with it,” she says, linking the rise in chronic diseases such as type II diabetes and metabolic syndrome to eating and sleeping habits during Ramadan, as well as more general lifestyle changes.

Bahijri recommends a return to a more traditional way of practicing Ramadan.

“During Ramadan, have a light breakfast, a snack before going to bed at around midnight, and wake up before dawn to have a light meal, pray, and get some more sleep,” she advises.

Bahijri planned a follow-up study to disentangle the consequences of sleep disturbance and Ramadan fasting, which is different from intermittent fasting, but found it difficult to find participants who fast “the right way.” Instead, her next project will focus on the metabolic effects of shift work in Saudi nurses. “Hopefully, we’ll come up with recommendations to help plan shift work so it doesn’t affect their metabolism adversely.”

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Ajabnoor, G. M. A., Bahijri, S., Shaik, N. A., Borai, A., Alamoudi, A. A., et al. Ramadan fasting in Saudi Arabia is associated with altered expression of CLOCK, DUSP and IL-1alpha genes, as well as changes in cardiometabolic risk factors. *PLoS ONE* 12:e0174342 (2017).