

Special issue related to the effects of Ramadan fasting on health: synthesis of accepted studies

Numéro spécial consacré aux effets du jeûne du Ramadan sur la santé: synthèse des études acceptées

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Most world's great religions recommend episodes of fasting (1-4). The model of Ramadan intermittent fasting (RIF) is probably the most extensively researched religious fasting (1). RIF is rigorously observed by billions of Muslims (2-4). Ramadan, the 9th month of the Islamic lunar (Hejira) calendar, is particularly blessed and of great value and significance among Muslims, representing the month of the descent of the Qur'an (3-5). RIF, a religious obligation of all healthy adult Muslims, consisted of alternating fasting and feasting periods (3-5). The Verses 183-185 of Surat "Al-Baqarah" (6) mention the following: "O you who have believed, decreed upon you is fasting as it was decreed upon those before you that you may become righteous - [Fasting for] a limited number of days".

RIF in Ramadan is not only the abstinence (from dawn to sunset) from all types of liquid and solid nutrient intake, but also from smoking, medication and sexual intercourse (3, 4). The restriction also includes medications given via oral and parenteral route, but not drugs used via inhalation route (3-5). The fasting is broken, taking two good-sized meals, suhoor (just before dawn) and iftar (immediately after sunset) meals (7, 8). RIF is not compulsory for prepubescent children, menstruating females, travels and sick subjects (7-15). Pregnant and lactating females are also exempt and allowed to delay their fasting to a suitable period when it can be performed without it disturbing their maternal obligations (3-5). Since the Islamic calendar is established on a lunar cycle, the Ramadan month lasts from 29 to 30 days based on the lunar crescent visibility (11). In addition, since Ramadan moves ahead 11 days each year compared to the Gregorian calendar,

therefore, it may fall during any of the four seasons (11). This implies that fasting duration can be as long as 18 h/day in the summer in temperate locations, and is even longer in countries situated nearer the poles (7-16). From a physiological sight, RIF is an exceptional model of intermittent fasting daily for one month (3, 4). Moreover, it is different from other fasting models (eg, experimental fasting, regular voluntary fasting), in that the faster does not drink during fasting hours (3, 4). Therefore, it is assumed that physiological changes occurring during RIF differ from those observed during an experimental fast (5).

The impacts of RIF on human physiology and physiopathology is of interests for all physician overall the world, and has clinically implications (10). In one hand, in a globalized society, physicians may be consulted by Muslim patients with chronic diseases who want to fast or insist to fast during Ramadan (10). In the other hand, since many sport events have been (and will be) scheduled during or just after Ramadan (eg, 2018-FIFA football world cup), and since Muslim athletes had to choose whether to decline or to observe fasting during training and/or competition days, the scientific world needs to be informed about the impacts of RIF on athletes some metabolic and physical aptitudes data. For that reasons, in December 2018, Tunis Med launched a call to welcome submission of manuscripts for a special issue related to the effects of RIF on health.

Several papers were submitted, but only 15 studies (16-30) were retained in this special issue. Thirteen (16-24, 26-29) and two (25, 30) papers were written in English and French, respectively. Eight papers

were original studies (17-20, 23, 24-26, 30), five papers were systematic reviews (16, 21, 22, 28, 29), one paper was a reflection (24), and one paper was a point of view (27). Eighty-nine authors contributed in this special issue. The authors were from different countries: Tunisia, Qatar, Singapore, Italia, France, Canada, New Zealand, Vietnam, USA, Pakistan, Syria and Morocco. The following 10 areas were treated in this special issue: athletes' body composition, training and competitions, physical performances, sleep, and hematological indices (16, 21, 22, 28, 29), diabetes mellitus (18, 27), asthma (24), fetal development (30), anticoagulation by vitamin K antagonists (23), physical workload (26), positive and negative feelings (20), intensive care admission patterns and outcomes (19), prognosis factors of recurrent urinary tract infections (17), and profile of biomedical publications related to the theme "RIF and Health" (25).

The two coordinators of this special issue thank the authors of the retained papers, for the quality of their scientific production. We are confident that the content of this special issue will be well received by the global scientific community.

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