

Editorial

Role of Intermittent Fasting on Improving Health and Reducing Diseases

Nutritional status is the major contributors to self-sufficiency, disease recovery and quality of life. Obesity may result from overfeeding, dietetic errors or other multiple genetic, metabolic and behavioral abnormalities, it induce both insulin resistance and pancreatic beta-cell dysfunction and therefore consider as the cornerstone of type 2 diabetes. ⁽¹⁾

Intermittent fasting, in which individuals fast on consecutive or alternate days, has been reported to facilitate weight loss preventing the progression of type 2 diabetes ⁽²⁾ and consequently improve cardiovascular risk. ⁽³⁾ Moreover, Extensive evidence suggests that imposing fasting periods upon experimental laboratory animals increases longevity, improves health and reduces disease, including such diverse morbidities with cancer ⁽⁴⁾ neurological disorders ⁽⁵⁾ and disorders of circadian rhythm. ⁽⁶⁾ Fasting has been used in religion for centuries. The Daniel fast is a biblical partial fast that is typically undertaken for 3 weeks, and during Ramadan (9th month of Muslim calendar), all Muslims across the world fast during daylight hours of this month where this consider as one of the five main pillars of Islam.

Such periods of fasting can limit inflammation, ⁽⁷⁾ attenuates proinflammatory cytokines and immune cells, ⁽⁸⁾ improve circulating glucose ⁽⁹⁾ and lipid levels ⁽¹⁰⁾ and reduce blood pressure. ⁽¹¹⁾ In addition to that, studies undertaken in animals and humans have suggested that fuel selection is altered and efficiency of metabolism is improved while oxidative stress is reduced.

Intermittent fasting in animal models induce some cardiovascular benefits such as improving blood pressure and heart rate, ⁽¹²⁾ as well as circulating cholesterol and triglycerides, and reduce carotid intima-media thickness. ⁽¹³⁾ Moreover, it improves survival from myocardial ischemia through pro-angiogenic, anti-apoptotic and anti-remodelling effects.

Intermittent fasting also appears to be cardioprotective, providing experimental animals with resistance to ischemic injury ⁽¹⁴⁾ in a manner possibly associated with increases in levels of the adipokine adiponectin. ⁽¹⁵⁾ Adiponectin is a unique adipokine that appears to have beneficial effects but has circulating levels that are negatively correlated with body composition. ⁽¹⁶⁾ However, intermittent fasting modulates the levels of visceral fat and several additional adipokines, including leptin, IL-6, TNF- α and IGF-1. ⁽¹⁷⁾

Although fasting of Ramadan is obligatory for all Muslims who enjoy the spiritual atmosphere during that month, the Qur'an exempts those who are ill, travelling, pregnant women, during breastfeeding or women during their menses from fasting. However, many of that cases who cannot fast feel they miss a great deal but those who don't follow the Doctor's advice in this regard may be associated with health troubles. Fasting of that cases may be risky especially with diabetes as it may increase frequency of hypoglycemia, postprandial hyperglycemia with or without diabetic ketoacidosis, along with dehydration and thrombosis. ⁽¹⁸⁾

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Salah Mesalhy Aly, Ph.D.;

Prof. of Pathology & Head of Med. Labs Dept,
Faculty of Applied Medical Sciences,
Editor, International Journal of Health Sciences,
Qassim University, KSA.
Email: Salahaly@hotmail.com