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| **Fasting Renews Immune System** |
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| 07 July 2014, Monday / RABIA SPIKER, LONDON, Zaman Weekly |
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| While many look forward to Ramadan as a sort of yearly MOT for the soul, it is also an opportunity to get your physical health in order. “To fast is best for you, if you only knew.” Qur’an 2:184. The word Ramadan comes from the Arabic root ramida, meaning scorching heat or dryness. |
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| It can be seen as a time to burn away sins, bad habits and distractions, but also as an opportunity for burning away extra fat and addressing health issues. A recent study found that prolonged fasting from food can renew the entire immune system, killing damaged immune cells, boosting health and improving outcomes for chemotherapy treatment. The new research was published on 5 June by a team led by Professor Valter Longo of the University of Southern California.“The good news is that the body got rid of the parts of the system that might be damaged or old, the inefficient parts, during the fasting. Now, if you start with a system heavily damaged by chemotherapy or ageing, fasting cycles can generate, literally, a new immune system,” he said. Results were observed in mice and in a phase 1 human clinical trial where patients fasted for 72 hours while undergoing chemotherapy. Explaining the protocol, Longo told Zaman UK, “They fast, water only, for two days before and one day after chemo.” Asked how someone might go about incorporating such fasting into their lives to reap the health benefits, he said to “fast for four days every one to six months, depending on the need.” Longo emphasised that any such fasting must be medically supervised. “Only a physician can decide whether they can fast. For example diabetics receiving insulin cannot fast unless as part of a clinical trial.” In previous ground-breaking research Longo found that fasting during chemotherapy was much more effective at targeting cancer, and that fasting on its own was effective in treating many cancers, with five out of eight cancer types in mice responding to fasting alone in the same way that they might respond to chemotherapy.In a University of California video interview, Longo explained a possible reason that fasting is so effective against cancer, “One way to go after the cancer cells specifically is by creating extreme environments that a normal cell can respond to and a cancer cell is unable to respond to. With each mutation that a tumour acquires the tumour has to give up something, and we think that something is the ability to deal with extreme environments. Fasting is certainly one of the most extreme environments that you can encounter and that’s why we think the cancer cells have such a difficult time dealing with it, because there’s a major reduction in glucose, major reduction in growth factors, and so many things outside of the cell change.”Commenting on fasting in Ramadan, Longo told Weekly Zaman, “Ramadan fasting is great. However, people should not overeat at night, since it nullifies the effect of the daily fast.” Mark Mattson, Professor of neuroscience at John Hopkins University in Baltimore suggests that fasting is also very good for your brain. He recommends intermittent fasting, restricting calories for two days a week, as an effective measure against neurodegenerative disorders such as Alzheimer’s. He has found intermittent fasting is beneficial for health because of the challenge it poses to cells, which respond adaptively, enhancing their ability to cope with stress and resist disease. This bi-weekly fast is similar to the Islamic recommendation to fast on Mondays and Thursdays. Specific studies looking at fasting during Ramadan have found it to have considerable medical benefits, reducing inflammatory markers which are implicated in many serious diseases such as cancer, heart disease, diabetes and autoimmune conditions. Aksungar, Topkayab and Akyildizc of Maltepe University in Istanbul found in a 2007 paper that “prolonged intermittent fasting in a model like Ramadan has some positive effects on the inflammatory status of the body and on the risk factors for cardiovascular diseases”. An Iranian study published in December 2013 by Mohajeri et al concluded that “Ramadan fasting is quite safe for normal healthy adults and so very useful in reduction of cholesterol…fasting is important in controlling of inflammation”.**Resting the digestive system**Dr. Anis Ansari of Clinton, Iowa, considers Ramadan to be a good opportunity for the treatment of mild to moderate stable, non-insulin diabetes, diabetes, obesity and essential hypertension, as it leads to lower blood sugar, cholesterol and systolic blood pressure. “There are other benefits as well,” he told Zaman UK. “On normal days we eat practically all day. Our digestive track never gets a rest, and the stomach and pancreas are continuously working. During fasting they get a 15 or 16 hour rest for the whole 29 or 30 days. That has a lot of beneficial effects on the body. If somebody has inflammation of the stomach, pancreatitis, inflammatory bowel disease, irritable bowel syndrome, it can be very helpful, these can all be treated.”Ansari warns that not everyone should attempt to fast. He told Zaman UK, “It is not for everybody. If somebody has very severe diabetes, and is on a very high dose of insulin, we would not advise them to fast because they have to be really micromanaged. They have to check their blood sugar several times a day and insulin is based on eating. Similarly if somebody has coronary artery disease, heart problems, kidney stones… if they have kidney stones they have to have continuous hydration.”A 1984 study by Prentice et al looked at 10 Gambian mothers who were breastfeeding and 10 women who were not, all of whom continued to carry out strenuous agricultural work for about 7 hours a day in high temperatures during Ramadan fasting. Surprisingly total body water content for the breastfeeding mothers remained the same and may have increased slightly during Ramadan. Both sets of women developed acute dehydration before breaking the fast each day but morning urine collections indicated that no chronic dehydration developed in either group. While the amount of milk the women produced did not change, the composition did, leading the researchers to recommend that breastfeeding mothers do not fast. Similarly fasting during pregnancy has been shown by some studies to be linked to low birth weight, and is therefore also not recommended.**Going without water can be a remedy**Dehydration is often assumed to be inherently bad for health. Some scientists challenge the idea that we should be drinking 8 glasses of water a day though, or that mild dehydration is a health issue. Dr. Stanley Goldfarb and Dr. Dan Negoianu of the University of Pennsylvania in Philadelphia published a review in the Journal of the American Society of Nephrology in 2008 debunking myths about water. “The kidneys clear toxins. This is what the kidneys do. They do it very effectively. And they do it independently of how much water you take in. When you take in a lot of water, all you do is put out more urine but not more toxins in the urine,” Goldfarb said, adding, “A little mild dehydration for the most part is OK and a little mild water excess for the most part is OK. It’s the extremes that one needs to avoid.”Tim Noakes, a medical doctor and professor of exercise and sports science at the University of Cape Town, is also of the opinion that there is nothing wrong with a bit of dehydration. According to Noakes, dehydration is not a major factor in heat stroke, which can occur even when an athlete is well-hydrated, and which is more dependent on the heat of the body due to ambient temperatures and the intensity of exercise. “We evolved from hunters - we had to run and chase animals on the hot African plains. We didn’t have time to pause for a drink! Physiologists who did not understand either humans’ prehistory or the history of running then came along with the unproven hypothesis that to become even the slightest bit dehydrated during exercise would kill you. And then the sports drinks industry in the United States used this bad, indeed non-existent science to market their products,” he said. Some athletes are now using training while dehydrated as a way to improve performance in the same way that altitude training is used for this end.Ansari told Zaman UK that some dehydration can actually be good for certain health conditions. “Going without water can be helpful in treating hypertension. Of course we advise people to drink plenty of water for breakfast in the morning, before they start out, and then when they break the fast, so they should not be dehydrated that much. In fact studies have shown that the dehydration caused by fasting is less than if someone exercised for one hour on the treadmill. So it’s not really that bad - of course it depends on the weather and what conditions you are working in as well.” |
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