

Fasting

قال تعالى (وأن تصوموا خير لكم إن كنتم تعلمون) .
صدق الله العظيم البقرة : 184

With start of Ramadan we thought it'd be apt to put up a guide to the benefits of fasting.

Fasting is an integral part of many of the major religions including Islam, Judaism and Christianity. Many are dubious as to whether the physiological effects are as beneficial as the spiritual promoted by these religions.

Fasting technically commences within the first twelve hours of the fast. A fast does not chemically begin until the carbohydrate stores in the body begin to be used as an energy source. The fast will continue as long as fat and carbohydrate stores are used for energy, as opposed to protein stores. Once protein stores begin to be depleted for energy (resulting in loss of muscle mass) a person is technically starving. The benefits of fasting must be preceded by a look at the body's



progression when deprived of food. Due to the lack of incoming energy, the body must turn to its own resources, a function called autolysis. Autolysis is the breaking down of fat stores in the body in order to produce energy. The liver is in charge of converting the fats into a chemical called a ketone body, the metabolic substances acetoacetic acid and beta-hydroxybutyric acid", and then distributing these bodies throughout the body via the blood stream. "When this fat utilization occurs, free fatty acids are released into the blood stream and are used by the liver for energy The less one eats, the more the body turns to these stored fats and creates these ketone bodies,

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قال رسول الله صلى الله عليه و سلم ((صوموا تصحوا)) .
و قال كذلك ((لو تعلموا ما في رمضان لتمنيتم الدهر كله رمضان))



the accumulation of which is referred to as ketosis.

A first prescribed benefit of fasting is

Detoxification "Detoxification is a normal body process of eliminating or neutralizing toxins through the colon, liver, kidneys, lungs, lymph glands, and skin." This process is precipitated by fasting because when food is no longer entering the body, the body turns to fat reserves for energy Human fat is valued at **3,500** calories per pound," a number that would lead one to believe that surviving on one pound of fat every day would provide a body with enough energy to function normally. These fat reserves were created when excess glucose and carbohydrates were not used for energy or growth, not excreted, and therefore converted into fat. When the fat reserves are used for energy during a fast, it releases the chemicals from the fatty acids into the system which are then eliminated through the aforementioned organs. Chemicals not found in food but absorbed from one's environment, such as **DDT**, are also stored in fat reserves that may be released during a fast. One fasting advocate tested his own urine, feces and sweat during an extended fast and found traces of **DDT** in each.

A second prescribed benefit of fasting is

the healing process that begins in the body during a fast. During a fast energy is diverted away from the digestive system due to its lack of use and towards the metabolism and immune system. The healing process during a fast is precipitated by the body's search for energy sources. Abnormal growths within the body, tumors and the like, do not have the full support of the body's supplies and therefore are more susceptible to autolysis. Furthermore, "production of protein for replacement of damaged cells (protein synthesis) occurs more efficiently because fewer 'mistakes' are made by the **DNA/RNA** genetic controls which govern this process."

A higher efficiency in protein synthesis results in healthier cells, tissues and organs. This is one reason that animals stop eating when they are wounded, and why humans lose hunger during influenza. Hunger has been proven absent in illnesses such as gastritis, tonsillitis and colds. Therefore, when one is fasting, the person is consciously diverting energy from the digestive system to the immune system.

In addition, there is a reduction in core body temperature. This is a direct result of the slower metabolic rate and general bodily functions. Following a drop in blood sugar level and using the reserves of glucose found in liver glycogen, the basal metabolic rate (**BMR**) is reduced in order to conserve as much energy within the body as can be provided. Growth hormones are also released during a fast, due to the greater efficiency in hormone production.

Finally, the most scientifically proven advantage to fasting is the feeling of rejuvenation and extended life expectancy. Part of this phenomenon is caused by a number of the benefits mentioned above. A slower metabolic rate, more efficient protein production, an improved immune system, and the increased production of hormones contributes to this long-term benefit of fasting. In addition to the Human Growth Hormone that is released more frequently during a fast, an anti-aging hormone is also produced more efficiently.

In conclusion, it seems that there are many reasons to consider fasting as a benefit to one's health. The body rids itself of the toxins that have built up in our fat stores throughout the years. The body heals itself, repairs all the damaged organs during a fast. And finally there is good evidence to show that regulated fasting contributes to longer life.

References

1. www.serendip.brynmawr.edu.
2. "Ketosis by Sue Reith" .
3. "Nutriquest, March 11th, 2000 – Ketosis and Low Carbohydrate Diets" .
4. "WebMD – Detox Diets: Cleansing the Body" .



Warfarin Use in Patients With End-Stage Renal Disease May Increase Stroke Risk

Use of warfarin as chemoprophylaxis in patients with atrial fibrillation and End-Stage Renal Disease (**ESRD**) may paradoxically increase stroke risk, according to the results of a cohort study reported in the August 27 Online First issue of the *Journal of the American Society of Nephrology*.

"Use of warfarin, clopidogrel, or aspirin associates with mortality among patients with **ESRD**, but the risk-benefit ratio may depend on underlying comorbidities," write Kevin E. Chan, MD, from Fresenius Medical Care NA in Waltham, Massachusetts, and colleagues. "We previously reported a significant excess mortality associated with anticoagulation and/or antiplatelet use in a large, heterogeneous population of incident hemodialysis (**HD**) patients."

The purpose of this follow-up study was to evaluate the potential risk-benefit ratio of warfarin, clopidogrel, and aspirin specifically in dialysis patients with coexisting atrial fibrillation. The investigators looked at the association between these medications and new stroke, mortality, and hospitalization in a retrospective cohort of 1671 patients with preexisting atrial fibrillation who were receiving hemodialysis. Average follow-up of patient outcomes was 1.6 years from the time dialysis was started.



Patients receiving warfarin therapy had a significantly increased risk for new stroke vs patients not taking warfarin (hazard ratio [HR], 1.93; 95% confidence interval [CI], 1.29 - 2.90). Risk for new stroke was not associated with clopidogrel or aspirin use.

There appeared to be a dose-response relationship between the degree of anticoagulation and new stroke in patients receiving warfarin, based on an analysis using international normalized ratio (INR; P = .02 for trend). Compared with nonusers of warfarin, those users who had no INR monitoring in the first 90 days of dialysis had the highest risk for stroke (HR, 2.79; 95% CI, 1.65 - 4.70). Use of warfarin was not statistically significantly associated with any increases in all-cause mortality or hospitalization rates.

"Warfarin use among patients with both ESRD and atrial fibrillation associates with an increased risk for stroke," the study authors write. "The risk is greatest in warfarin users who do not receive in-facility INR monitoring."

Limitations of this study include retrospective design, potential misclassification bias, confounding by indication, survivorship bias, ascertainment bias, and selection bias from missing data.

Before definitive conclusions can be drawn, large, prospective, randomized, controlled trials are required," the study authors conclude. "Until then, physicians should be cognizant of the possible risks associated with warfarin use for atrial fibrillation in patients with ESRD, with careful evaluation of the risks and benefits of intervention at the individual patient level. Close monitoring of the degree of anticoagulation (INR) in patients who are on warfarin would also be a reasonable recommendation to minimize the risk for hemorrhagic complications."

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References

1. *J Am Soc Nephrol. Published online August 27, 2009.*



Warfarin Tablets

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