

PSYCHOLOGICAL EFFECTS OF FASTING



BOOKLET 2

وَرَفَعْنَا لَكُمْ ذِكْرَكَ يَا أَرْحَمَ الرَّاحِمِينَ

“...AND FASTING IS GOOD FOR YOU, ONLY IF
YOU KNEW.”

QUR'AN 2:184

Designed by @ilmspiration
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ICNA
Relief

MUSLIM FAMILY SERVICES

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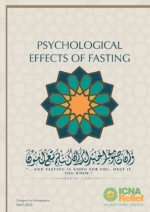
<https://muslimmentalhealth.psychiatry.msu.edu/researchers/amber-haque-phd>

MENTAL HEALTH SERIES



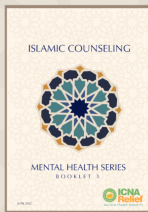
Booklet 1

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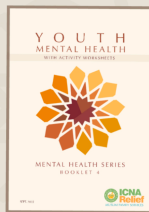
Booklet 2

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PSYCHOLOGICAL EFFECTS OF FASTING

The Muslim month of Ramadan is here, and over a billion Muslims worldwide will fast in this month. The Muslims fast because there is an injunction in the Quran telling them to do so. The Quran reminds Muslims that many prophets and their followers before Muhammad (Peace be upon him) were also ordained fasting. Although their nature and duration may differ from Muslim fasting, the Jewish Passover and Christian Lent are also examples of fasting. The verse that ordains Muslims to fast ends with the sentence, "... and fasting is good for you only if you knew." (Q2:184).

This article explores some recent findings on the changes in the human brain and their effects on the human mind and behaviors during fasting.

In today's time and age, we usually eat three meals a day but never ask why. There is no biological rule requiring us to eat so often except that we have been conditioned to become hungry if we do not eat for a few hours. Homo sapiens came to exist about 250,000 years ago, but agriculture developed just over 10,000 years ago. This means that for about 240,000 years, humans did not eat three meals a day. They killed a gazelle or other animals, ate it with their clan over a couple of days, and then went hungry for the next few days. They did not die from not eating three times a day. However, modern times are different as we have all the food we want, and we live in a culture of eating that has made our bodies lazy and turned off their abilities to run on their own energy sources.



EFFECTS OF FASTING ON THE BRAIN



fuel source for the brain, allowing it to function during extended hours of fasting and, at the same time, decrease dependence on gluconeogenesis, providing relief to the muscles from which they are derived. This process of the brain also makes itself more cognitively alert than when it acts from the source of body glucose.

An average human brain has one hundred billion cells and consumes 22% or more of our total body's energy, but the unique thing is that the brain becomes more active during food deprivation. Typically, the brain gets its energy from glucose (blood sugar) between meals by breaking down glycogen stored in the liver and muscles. As glycogen energy depletes from fasting, humans are endowed with a mechanism to create new bits of glucose through a process called gluconeogenesis that adversely affects the muscles. But when we fast, after about 3-4 days, the liver starts to convert our body fat to create chemicals called ketones. One of these ketones (beta-HBA) is a highly efficient

As fasting increases the production of the protein called Brain Derived Neurotrophic Factor (BDNF), the brain also builds more neurons (brain cells) to help itself work efficiently. Studies show that building neurons delay the onset of decline in motor skills and spatial memory and restore mental ability.



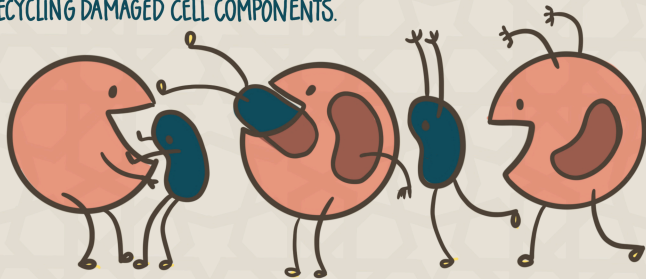
During fasting, the number of mitochondria in the nerve cells increases to enhance the ability of neurons to form and keep connections, which results in improved learning and memory. A fascinating phenomenon discovered during fasting is known as autophagy, as the brain breaks down old and damaged cells and recycles them into new ones. Through this self-eating process, the toxins are removed from the brain delaying the development of neurodegenerative diseases like Alzheimer's, Parkinson's, and Huntington's. Most of

these findings have been confirmed on lab animals because controlled studies on the human brain are difficult.

Experiments with rats have shown a clear link of autophagy soon after food restriction and improved mental functioning in aging animals. Behavioral Psychologists experimenting with lab rats have shown that fasting animals had better balance and learned skilled behavior faster than those that were free to eat as much as they wanted.

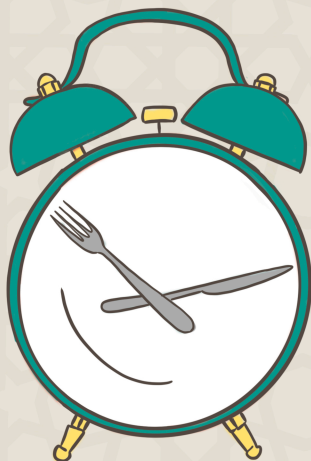
AUTOPHAGY

YOUR BODY'S WAY TO CLEANSE ITSELF BY REMOVING COLLECTED TOXINS AND RECYCLING DAMAGED CELL COMPONENTS.



Scientists have also seen that after a few days of fasting, the body adapts to starvation and releases high amounts of catecholamines, including adrenalin, norepinephrine, and dopamine, into the brain. These hormones and neurotransmitters are produced because of fight or flight response preparing the body for the exertion, and they act as mood enhancers.

For people with depression, doctors prescribe medication that augments these feel-good chemicals produced naturally through fasting. Some studies have shown improvement of depression and anxiety symptom scores in 80% of the patients after a few days of fasting. This is because of the increased amount of endorphin release that begins after fasting.



Studies have shown improved sleep patterns in patients with insomnia compared to pre-fasting levels and a possible decrease in migraine due to serotonin levels going up. Studies have also shown that children suffering from epileptic seizures had fewer seizures when placed on a calorie restriction diet or intermittent fasting, as fasting may counteract the overexcited signals exhibited in the epileptic brain. These findings are evident from studies done in the last twenty years and published in some top international research journals.



MALAYSIANS WEAR COLORFUL MODEST ATTIRE



A ROSE-FLAVORED DRINK COMMON DURING IFTAR (WHEN BREAKING FAST)

Having observed so many benefits of fasting on both body and brain, Mark Mattson, Chief of Neurosciences Lab at the National Institute of Aging and Professor of Neuroscience at Johns Hopkins University, wrote in many of his articles and books about the biological benefits of fasting and even went on to say that we should make a society-wide effort to re-introduce intermittent fasting to save humanity from an epidemic of diseases. Likewise, much ongoing research shows the positive effects of fasting on the human brain. It is important to realize that when fasting starts, the brain is deprived

of immediate glucose intake and may experience weakness, hunger, and headaches for the first few days, but just in a few days, the brain eases up, and the body finds a new set point making us feel less hungry. Not only do our body and brain adapt to the new set point, but we also feel comfortable with a lower weight. With all these obvious benefits of fasting, medical researchers have introduced a 5:2 diet plan in which the participants eat regular meals five days a week and fast or follow a strict diet regimen two days a week. This regimen was a standard practice of Prophet Muhammad (S) over 1400 years ago and is still followed by some Muslims worldwide.

EFFECTS OF FASTING ON PSYCHOLOGICAL WELLBEING

The psychology behind fasting is to create a love of God who asked humans to fast for their own benefit. This exercise should train the fasting person to love their fellow human beings as fasting requires the person to feel for those who cannot put food on their tables. Fasting fosters hope and optimism as God promises a reward for fasting like no other act of worship. This is because others can see other acts of worship but cannot see when someone is fasting, as one can eat or drink when no one is around. Fasting, therefore, is solely to please the creator to show one's self-sacrifice towards Him. The psychological outcome of this sacrifice is enhanced coping and resilience and a sense of control that one can extend to manage more difficult things in life.

It teaches adaptability and the act of giving, which research shows raise a person's sense of worth. That is why fasting is also known as the month of giving. Research by humanitarian agencies has shown that Muslims in Ramadan give their alms and donations like no other month of the year. In fact, many humanitarian organizations and schools for the orphans and needy in Muslim countries run on money received during Ramadan.

Psychological research demonstrates positive outcomes of fasting on both cognition and memory. For all those who fast, patience is learned to withstand the temptation of food and other environmental stimuli.



اللَّهُ مَعَ الَّذِينَ يَبْتَغُونَ الْوَدْعَانَ إِذْ حَضَرَ الرَّجُلُ أَنْ يَمْدُدَ إِلَيْهِ الْمَخِيلَ يُغْضِي بِيَدِهِ وَيَنْزِعُ إِلَيْهِ السَّيْلَ أَلَمْ نَجْعَلِ لَهُ يَدَيْنَهُ بِيَدِنَا وَلَئِنْ أَرَادَ أَنْ يُبْرِئْ لَمْ يَكُنْ فِي أَمْرِنَا حَوْلًا

"ALLAH IS WITH THOSE WHO RESTRAIN THEMSELVES."

QUR'AN 16:128

The ability to hold off enhances the virtue of self-sacrifice, enabling a person to be humbled and gain maturity. Fasting becomes training in self-control and self-regulation as a fasting person learns to regulate their daily routine in a prescribed manner, thus teaching discipline. Fasting makes us realize our strengths and weaknesses, and we learn to tame ourselves in ways that can lead to self-improvement. This learning of being able to do things that can otherwise be quite difficult for many people develop confidence and a sense of self-efficacy.

In other words, a fasting person may say, "If I can fast, I can also do other difficult things in life."

Another psychological benefit of fasting for many people is increasing a sense of belongingness to a group or community. During Ramadan, Muslim families and friends eat and share food with others, especially with the less fortunate. This practice of sharing and caring encourages altruistic qualities and a sense of gratitude for what one has that one can give to others.

EFFECTS OF FASTING ON SPIRITUALITY

Fasting is prescribed not only for the body and mind but also for elevating one's level of spirituality. The person fasting is encouraged to expel the impurities of thought and character within oneself. In a way, this practice releases oneself from earthly bonds and joins the person with the sacred. The time spent otherwise in eating and drinking can now be spent reflecting on the purpose of life and making efforts toward reaching the ultimate goals in life, leading to self-actualization in this world and the hereafter. The metaphysical belief is that the ego part of the soul drags oneself to earthly desires, while fasting restrains the ego and elevates the status of the soul. Followers of many faiths hold this view, so fasting is encouraged and practiced by people around the world.

Muslims are also expected to do Muhasaba or a constant self-examination to note if fasting resulted in weight reduction, improved character, increased self-purification, knowledge enhancement, and a better connection with God. These annual practices and reminders are training for continued self-learning and living a life beyond oneself.

Fasting is a month of cleansing and purification of the soul that yearns for a better self and perseverance of spiritual practices throughout the year. The month-long nightly prayers seeking forgiveness from sins and seeking guidance humbles oneself in front of the creator. If one does not climb that spiritual ladder after a whole month of fasting, one should question the sincerity and effectiveness of one's fasting.



It is reported that the righteous predecessors cried with happiness when Ramadan arrived and wept out of sadness when it left. This is because they knew the essence of fasting; hence they loved Ramadan and made great efforts and sacrifices in it. They stayed up during its nights, bowing and prostrating themselves in humility. They passed their days in remembrance, recitation, and learning. Numerous accounts confirm that they sat with their Qurans in the masjids, crying. They also protected their limbs, eyes, ears, and tongues from unlawful things.

The Prophet (S) said that “From Jumu’ah to Jumu’ah, ‘Umrah to ‘Umrah, and Ramadan to Ramadan there is atonement for what occurred between them as long as no major sin was committed.” It is important to know also that while fasting is mandated for all Muslims, there are exceptions for children, persons with serious medical conditions, pregnant women, breastfeeding mothers, and travelers. However, there are prescriptions for compensating for the missed days of fasting so that the person is recompensed for its benefits.



