

*Aktuelne teme /  
Current topics*

WATER FASTING DETOXIFICATION  
DETOKSIKACIJA POSTOM POMOĆU VODE

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*Abstract*

Water fasting has been used for health recovery for thousands of years. Hippocrates, Socrates, and Plato all recommended fasting for health recovery.

Water fasting offers the quickest detoxification and strongest therapeutic effect. It is also the most challenging fast to perform in the first few days. Careful preparation in the days before a water fast can make all the difference in your level of comfort, but the emotional challenge will still be great. Getting professional supervision is an option and is recommended for water fast longer than 3 days.

Fasting is powerful therapeutic processes that can help people recover from mild to severe health conditions. Some of the most common ones are high blood pressure, asthma, allergies, chronic headaches, inflammatory bowel disease (ulcerative colitis and Crohn's disease), irritable bowel syndrome, adult onset diabetes, heart disease, degenerative arthritis, rheumatoid arthritis, psoriasis, eczema, acne, uterine fibroids, benign tumours, and systemic lupus erythematosus.

We present several possible water fasting protocols, under full medical supervision with different time duration.

*“Everyone has a doctor in him; we just have to help him in his work. The natural healing force within each one of us is the greatest force in getting well. ...to eat when you are sick, is to feed your sickness.”*

Hippocrates

*“Fasting is the greatest remedy, the physician within.”*

Philippus Paracelsus (1493-1541)

Water fasting has been used for health recovery for thousands of years. Hippocrates, Socrates, and Plato all recommended water fasting for health recovery. A record from the Bible tells us that Jesus fasted for 40 days for his spiritual renewal. Mahatma Gandhi, the father of India, fasted for 21 days to promote respect and peace between people with different religions. (1)

Main benefits of fasting are to allow the body to rest, detoxify, renew and to heal. Water fasting moves the body into the similar state of detoxification that normally happens during sleep. Most of the energy during waterfast is used

only for cleansing the body of accumulated toxins. As a fast progress the body digests everything that is not essential for functioning. This includes bacteria, viruses, fibroid tumors, waste products in the blood, any build up around the joints, and stored fat. (2)

*The Physiological Changes of Fasting*

Most of the changes during water fasting take place on the first three days of the water fast. These occur as the body switches from one energy source to another. Normally, the primary form of energy for metabolism is glucose. Most of this is extracted or converted from the food we eat. Throughout the day, the liver stores excess sugar in glycogen. There is enough of this sugar source for 8-12 hours of energy and it is completely exhausted within the first 24 hours of water fasting. Once the liver's stores of glycogen are gone, the body begins to shift over to ketosis. This shift starts on the second day of water fasting and completed by the third. In this period there is no glucose available and energy from fat conversion is insufficient, so it accesses glucose from two sources. It first converts glycerol but this is still insufficient. So it makes the rest that it needs from

catabolizing the amino acids in muscles, using them in the liver for gluconeogenesis. (3)

Between 60 and 84 grams of protein are lost on this second day. By the third day ketone production is sufficient to provide nearly all the energy the body needs and protein begins to be strongly conserved. Over 30 day water fast a person generally loses a maximum of 0.5-1.0 kg of muscle mass. (4)

From the third day onward the rate of the breakdown of fatty acids from adipose or fat tissue continues to increase, hitting its peak on the tenth day. This seven day period, after the body has shifted completely over to ketosis, is where the maximum breakdown of fat tissue occurs. As part of protein conservation, the body also begins seeking out all non-body-protein sources of energy: fibroid tumors and degenerative tissues, bacteria, viruses, or any other compounds that can be used for energy. (3) This is part of the reason that water fasting produces the kind of health effects it does. Also, during this period of heightened ketosis the body is in a similar state as the one that occurs during sleep. The body begins to focus on the removal of toxins and the healing and regeneration of damaged tissues and organs.(3)

#### *Short term effects of water fasting detoxification*

- More energy
- Healthier skin
- Healthier teeth and gums
- Better quality sleep
- A clean and healthy cardiovascular system
- A decrease in anxiety and tension
- Dramatic reduction or complete elimination of aches and pains in muscles and joints

#### *Long term effects of water fasting detoxification*

- Decrease of headaches
- Stabilization of blood pressure
- Stronger and more efficient digestion
- Stabilization of bowel movements
- Loss of excess weight
- Elimination of stored toxins
- Improvement with a wide variety of chronic degenerative health conditions, including autoimmune disorders

#### *What Modern Science Tells Us about Water Fasting*

As with the most other controversial issues, there are two groups of doctors and researchers. Opponents say that food contains essential nutrients that the body need on every day base. These doctors claim that water fasting lowers the body's metabolism so that when re-feeding occurs the body will rapidly store calories depleted during the fast. The doctors who oppose the practice of water fasting conclude that it is an unsafe method for weight loss. (4)

Supporters of water fasting detoxification based their arguments into one of two categories. These arguments are supported with modern, scientific understandings of human physiology. Pre-industrial man did not have the convenience of every day food supplies. Because of this it was often necessary for humans to spend long periods without food. Fasting, in the physiological sense of the word, is a biological

adaptation that enables the body to function without food. Fasting clinics routinely observe water-only fasts lasting up to 40 days. In addition to these arguments, there are a growing number of clinical researches that supports the claims of the fasters. Experiments on laboratory rats have shown that calorie restriction and intermittent fasting can extend the lifespan of rats by 25%. (6) Other study entitled Medically Supervised Water-Only fasting in the Treatment of Hypertension observed *humans* in a clinical trial. The experiment was conducted on 154 subjects suffering from severe hypertension. After a treatment of water-only fasting for 10-11 days 90% of the subjects had achieved blood-pressure levels in the normal range without the use of medication. (7)

Finally, fasting supporters have the clinical observations of medically supervised fasts in facilities designed for that purpose. Conditions that have been observed to have a healing response to water-only fasting include high blood pressure, chronic headaches, allergies, asthma, inflammatory bowel disease, diabetes, irritable bowel syndrome, degenerative arthritis, heart disease, rheumatoid arthritis, psoriasis, uterine fibroids, acne, eczema, systemic lupus erythematosus, benign tumors, and others.(8)

#### *Heart disease, Cholesterol, Diabetes, and Human Growth Hormone*

In 2011, researchers at the Intermountain Medical Center Heart Institute reported that water fasting not only lowers the risk of coronary artery disease and diabetes, but also produces significant beneficial changes in blood cholesterol levels.(9) According to the researchers, „Fasting causes hunger or stress. In response, the body releases more cholesterol, allowing it to utilize fat as a source of fuel, instead of glucose. This decreases the number of fat cells in the body. This is important because the fewer fat cells a body have, the less likely it will experience insulin resistance, or diabetes.” Another study found that simply disrupting normal eating cycles through intermittent fasting improved the ability of the body to process, sense, and recognize the nutrients it was consuming. (10) In addition, intermittent fasting raised bile acid production, which is essential for properly digesting fats, and energy expenditure and reduced inflammation.

#### *Brain aging*

Study published in 2006 found that intermittent fasting can prolong the health-span of the nervous system by affecting fundamental metabolic and cellular signaling pathways that regulate life-span.(11) Specifically, the researchers found that both intermittent fasting induce a mild stress response in brain cells, which results in the activation of compensating mechanisms. (12) Intermittent water fasting regimens have previously been demonstrated to lessen damage to neurons and improve outcomes of both neurological trauma such as stroke and also age-related neurodegenerative disorders such as Parkinson's disease (13) and Huntington's disease. (14)

#### *Cancer*

Basing on previous work that had found that fasting for as little as two days protects healthy cells against chemotherapy, a new study published in 2012 found that fasting may

actually retard tumors, while at the same time protecting against the harmful side effects of chemotherapy. (15) This study found that five out of eight cancer types responded to water fasting. Another study found that cycles of starvation were as effective as chemotherapy drugs in delaying the progression of different tumors and increased the effectiveness of these drugs against melanoma, glioma, and breast cancer cells. (16)

### *Diabetes and Brain Damage*

It has been known for many years that calorie restricted diets have been shown to have several health benefits including increased insulin sensitivity, stress resistance and reduced morbidity. The mechanism still remains unknown. Study published in 2002 found that intermittent water fasting is more beneficial than caloric restriction. (17)

### *Main leading world centers for Water Fasting Detoxification*

The Goriachinsk sanatorium in Russia has a dedicated fasting center, founded in 1995. Under a strict supervision, patients drink only water during 2 weeks on average while exercising regularly.

In Western Europe, fasting is not so popular except in Germany, where Doctor Buchinger has founded the Juice fasting therapy. This method is not as rough as the Russian one, but it is also efficient.

The longest water fast treatment, under full medical control was 382 days. A 27-year-old male patient fasted under supervision for 382 days and had subsequently maintained his normal weight. (18)

Macedonian Association of Toxicologists recently accepted Guidance for short and long term water fasting detoxification for out hospital patients (19)

### *General Water fast advises of the Macedonian Association of Toxicologists*

- Select a length of time to do your water fast. While many regular fasters can do water fast from 3 to 30 days, beginners should experiment by trying several shorter fasts first to see how their bodies react. Try 2 day water fast; just to see how things go, and if things go well continue.

- Plan your water fast for a period during which you will not be under a lot of stress or during which fasting might interfere with your daily routine.

- Prepare yourself for the many side effects you may experience during fasting, like headaches, dizziness and nausea. Be prepared to stop the fast before any of these symptoms become overwhelming. Remember, during the next couple days, if you don't clean out your body, your body will clean out itself by urination and bowel movements and it could be a rough couple of days.

- Get plenty of rest during your water fast. You may experience a drop in stamina and energy during this time. Don't overexert yourself. Maintain healthy sleep patterns. Fasting is all about rest – physical, emotional, sensory and physiological.

- Break your fast with the cleanest and easiest foods to digest. This means fruits as a primary, and vegetables secondary.

### *Short term (3-5 days) Water Fasting Detoxification Guidance of the Macedonian Association of Toxicologists*

- Consult Clinical Toxicologist before you start your water fast detoxification.

- Drink at least 7 to 10 glasses, each 200 ml, every day. Natural spring water is the best option, but if you don't have access to that, then whatever you need to do to drink enough water is what you'll have to do. The first two glasses have to be consumed no longer than half an hour after waking up.

- Avoid intense exercise during this time. Instead, try yoga. But it must be a quietening restorative yoga. It's a calming way of stretching the body's muscles, and getting the good exercise that a fasting body needs.

- You may also do light walking (up to 45 minutes) to keep your muscles strong and to aid in the detoxification process.

### *Long term (10-21 days) Water Fasting Detoxification Guidance of the Macedonian Association of Toxicologists*

- Make complete laboratory testing before water fast.

- Consult Clinical Toxicologist before you start your water fast detoxification.

- Drink at least 7 to 10 glasses, each 200 ml, every day. Natural spring water is the best option, but if you don't have access to that, then whatever you need to do to drink enough water is what you'll have to do. The first two glasses have to be consumed no longer than half an hour after waking up.

- After 7<sup>th</sup> day of fasting two extra glasses of fruit or vegetable homemade juices are allowed. The maximum calorie value has not to be higher than 200 calories. Only homemade natural juices, without any added sugar or preservatives are allowed.

- Make control laboratory test after tenth day of fasting.

- Avoid intense exercise during this time. Instead, try yoga. But it must be a quietening restorative yoga. It's a calming way of stretching the body's muscles, and getting the good exercise that a fasting body needs.

- You may also do light walking (up to 30 minutes) to keep your muscles strong and to aid in the detoxification process.

- Water fast longer than 3 weeks have to be continuously observed of Clinical Toxicologist.

### *Contraindications for Water Fasting Detoxification*

There are a handful of exceptional circumstances in which it is not advisable to fast.

- Inborn error of metabolism whereby they lack an enzyme that is needed to process fatty acids

- Intake of certain medications
- Severe liver and kidney disorders
- Malnutrition
- PREGNANCY

## CONCLUSION

Fasting is powerful therapeutic processes that can help people recover from mild to severe health conditions. Getting professional supervision is an option and is recommended for water fast longer than 3 days.

## Sažetak

Post vodom je bio korišćen u zdravstvene svrhe nekoliko hiljada godina. Još Hipokrat, Sokrat i Platon su ga preporučivali u cilju oporavka.

Post vodom omogućuje brzu detoksifikaciju sa snažnim terapijskim efektom. Najveći izazov tokom posta je prebroditi prve dane. Pažljiva priprema, nekoliko dana pre posta, doprinosi lakšem prilagođavanju postu u smislu stepena neprijatnosti, ali emotivni izazov ostaje značajan. Zbog svega toga profesionalna pomoć je preporučljiva opcija kod postova dužih od tri dana.

Post vodom je moćan terapijski proces, koji pomaže ljudima da se oporave od različitih bolesti. Neke od najčešćih su povećani krvni pritisak, astma, alergije, hronične glavobolje, inflamatorne bolesti digestivnog trakta (ulcerozni kolitis, Kronova bolest), iritabilni kolon, adultni dijabet, bolesti srca, degenerativni artritis, reumatoidni artritis, psorijaza, egcem, fibroidni tumori materice i sistemski lupus erythematosus.

U radu je prezentovano nekoliko protokola za post vodom pod punim medicinskim nadzorom, za vremenske periode različite dužine.

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