TrueNorth Health Center Study Shows Water-only Fasting Is Safe!

by Toshia Myers, Ph.D. and Mary Zittel

Results from a recently peer-reviewed study in the *BMC Complimentary and Alternative Medicine Journal* suggest what NHA members have long known, that fasting—during which only water is consumed—can be done safely in a medical setting. Hopefully, this data will ease unsubstantiated fears about the safety of medically supervised, water-only fasting, and facilitate future studies on the safety and benefits of water-only fasting.

The study entitled "Is Fasting Safe? A chart review of adverse events during medically supervised, water-only fasting," was conducted by researchers John Finnell, Bradley Saul, Alan Goldhamer, and Toshia Myers. Specifically, the study found that the water-fasting protocol used at our clinic, TrueNorth Health Center (TNHC) in Santa Rosa, California, can be safely implemented in a medical setting with minimal risk of serious adverse events.[1]

The belief that therapeutic, water-only fasting is unsafe stems from a period when extreme forms of water-only fasting were used to treat obesity. During this time there were several deaths reported, which were likely the result of unintentionally harmful fasting practices. Despite the decline in research on water-only fasting (due to serious adverse events in the obesity cases), water-only fasting was not entirely put aside. Water fasting has been utilized by several clinicians since the 1970s, but the safety of the practice was never methodically researched. We reported on the severity, frequency, and nature of patient adverse events that occurred during and after their medically supervised fast.

Fasting at TrueNorth

TNHC is an integrative medical facility that offers a residential health education program specializing in water-only fasting and dietary intervention. Our patients have access to medical, naturopathic, and chiropractic doctors. Private rooms, 24-hour supervision, and daily educational activities are also provided.

The water-only fasting protocol is based on the guidelines set forth by the International Association of Hygienic Physicians and has been improved over 30 years of water fasting thousands of patients at TNHC. Patients choosing to undergo a water-only fast at TNHC routinely undergo a comprehensive physical, neurological, and psychological examination that includes a medical history, urinalysis, and blood work. Patients with contraindications or who are unable to safely phase out most medications are not admitted for water-only fasting.

Patients are instructed to eat a diet of fresh raw fruits and vegetables and steamed vegetables only for at least two days before fasting. This includes eliminating all alcohol and caffeinated beverages. While fasting, patients are instructed to drink a minimum of 40 ounces of distilled water per day, minimize physical activity, and remain on the premises. Patients are monitored twice daily by medical staff, with blood tests and urinalysis repeated weekly.

Water-only fasts are discontinued when symptoms stabilize, the patient requests termination, or the clinician deems it necessary for medical reasons. It has been found that refeeding half of the length of the fast is necessary and sufficient to prevent "refeeding syndrome." For example, a 14-day fast would be followed by a 7-day period of refeeding, beginning with juice and followed by a gradual introduction of solid plant foods (free from added salt, oil, and sugar, including refined carbohydrates). The addition of moderate exercise is allowed once a patient is eating solid food. During the refeeding process, patients are monitored twice daily by medical staff.

THE STUDY

Population and Visit Characteristics

Over a period of five years, we identified 768 patient visits to TNHC that met inclusion criteria for the study. The study included visits by patients who water-only fasted for at least two consecutive days and refed for at least half the length of the fast; were over 21 years old; and did not interrupt the fast with vegetable broth or fruit or vegetable juice. Data on adverse events were collected from clinical chart notes of self-reported symptoms, clinical and diagnostic findings, and medical management of symptoms.

The median fasting length was 7 days, with the shortest being 2 days and the longest lasting 41 days. The median age at first fast was 55 years old, and 63% of fasters were female. The most common reasons patients reported for coming to TNHC were disease prevention (358 visits), hypertension (152 visits), dyslipidemia (59 visits), thyroid disorders (52 visits), diabetes (46 visits), and arthritis (45 visits) (Figure 1 - next page). There were many other reasons patients visited TNHC, ranging from environmental toxicity to lymphoma.

Adverse Events

Adverse events experienced during fasting and refeeding were classified on a graded scale of 1-5 according to specified guidelines set forth by the National Cancer Institute. During the entire protocol period, which includes fasting and refeeding, the highest grade adverse event (HGAE) experienced in the majority (65.8%) of fasting visits was grade 1 or 2, and there were no adverse events in 6.5% of visits. There was only 1 grade 4 adverse event (0.1%). Notably, and not surprisingly, there were no grade 5 adverse events (death).

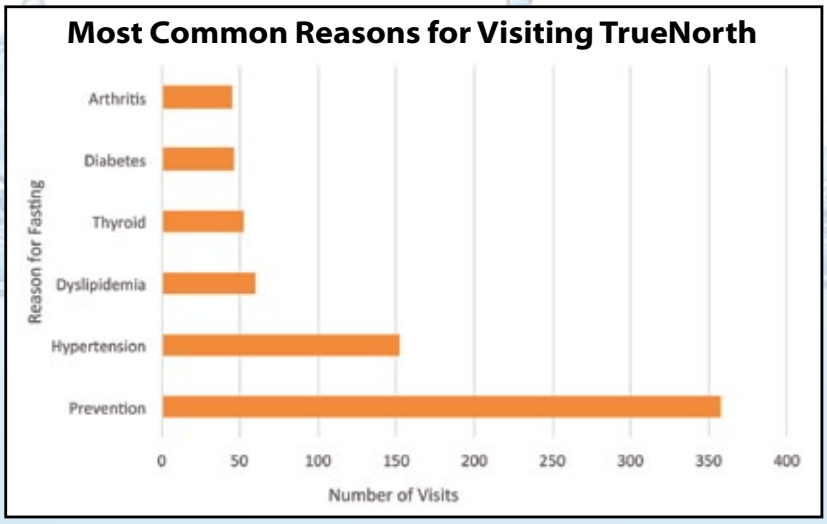

Figure 1: *The most common reasons that patients fasted at TNHC. (Patients could have reported more than one reason.)*

The most common (more than 25% of all visits) adverse events of all grades experienced by patients were classified as fatigue, nausea, insomnia, headache, hypertension, presyncope (dizziness), dyspepsia (indigestion), and back pain (Figure 2). For a list of all of the adverse events observed in greater than 10% of visits see Figure 2. Patients could have experienced more than one type of adverse event on any given day of their fast. These events were predominately mild, grade 1 events and are known to occur during fasting. The exceptions are presyncope, which is known to occur during fasting but is always classified as a grade 2 event, and hypertension, which is not caused by fasting (see discussion below).

Even though we've repeatedly seen blood pressure reduce during water-only fasting at TNHC, hypertension was found to be the largest category of all grade 3 events. Upon closer analysis, we found that in 97% of visits with a hypertensive grade 3 adverse event, the patient had hypertension as a chief complaint when they arrived. This indicates that the hypertensive events occurred in patients presenting as hypertensive to begin with and that water-only fasting is not the cause. The idea that hypertension is not an adverse effect caused by water-only fasting is further supported by a study showing that water-only fasting reduces blood pressure in hypertensive patients. In 174 consecutive patients with high blood pressure, an average of 10 days of water-only fasting resulted in more than 90% of patients becoming normotensive. In patients with systolic blood pressure greater than 180 mmHg, the average reduction in systolic BP exceeded 60 mmHg.[2]

There were two serious adverse events identified in this study. One was a grade 3 dehydration event that occurred in a 73-year-old male on fasting day 3. The other was a grade 4 hyponatremia (low sodium) event that occurred in a 70-year-old male on fasting day 9. Both patients were hospitalized and received intravenous fluids and recovered fully.

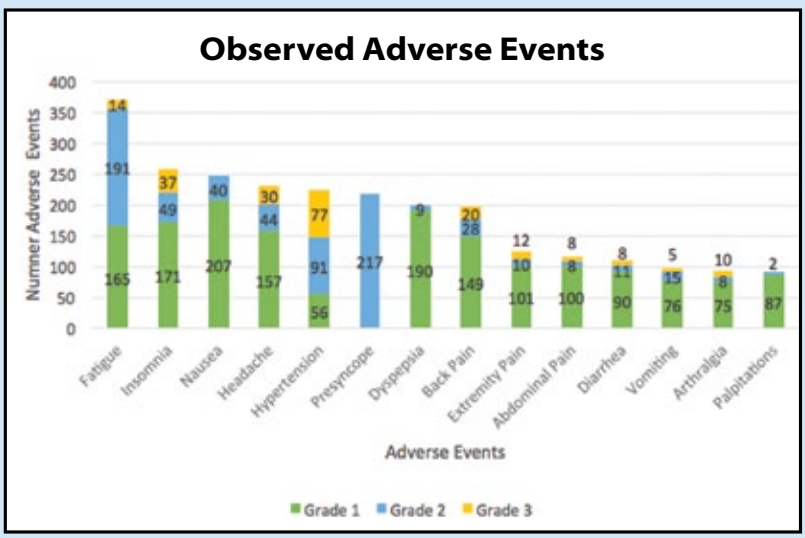

Figure 2: *Adverse events (all grades) experienced in 10% or more of visits. Patients could experience more than 1 event per visit. Green – Grade 1; Blue – Grade 2; Orange Grade 3*

Conclusion

The majority of adverse events identified in this study were mild to moderate in nature and known reactions to fasting. These data suggest that the adverse events experienced by patients following the TNHC water-only fasting protocol are tolerable. Furthermore, it suggests that the TNHC protocol can be implemented in a medical setting with minimal risk of serious adverse events.

The greater medical and fasting communities have both made claims—that are unsupported by peer-reviewed research—that water-only fasting is unsafe. This has resulted in bias against water-only fasting as a therapy, as well as difficulty obtaining approval and funding for human sub-

jects research. Nonetheless, the clinical research that has been published suggests that water-only fasting is therapeutically beneficial for hypertension, rheumatoid arthritis, fibromyalgia, chronic pain, and several other conditions, which provides a strong rationale for using it as a therapy.

This study not only provides a basis for further research into the safety and benefits of this intervention in humans, but will hopefully allow researchers to get the approval and funding needed to conduct that research.

References:

1. *Finnell, J. S., Saul, B. C., Goldhamer, A. C. & Myers, T. R. "Is fasting safe? A chart review of adverse events during medically-supervised, water-only fasting." Manuscript submitted for publication (2018). Study link: http://rdcu.be/HpEr*

2. *Goldhamer, A., Lisle, D., Parpia, B., Anderson, S. V. & Campbell, T. C. "Medically supervised water-only fasting in the treatment of hypertension." Journal of Manipulative and Physiological Therapeutics 24, 335-339, doi:10.1067/mmt.2001.115263 (2001).*

Dr. Toshia Myers is the research director at the TrueNorth Health Foundation in Santa Rosa, California. TrueNorth's aim is to conduct and facilitate rigorous, peer-reviewed research on the health effects of therapeutic water-only fasting and an exclusively plant foods diet. Dr. Myers obtained a Ph.D. at Columbia University in New York and completed postdoctoral training at the Centers for Disease Control and Prevention in Atlanta, Georgia and University of Copenhagen in Denmark. She has published her research in the journals *Developmental Cell, Proceedings of the National Academy of Sciences,* and *Stem Cell Reports.*

Mary Zittel is a science writer for TrueNorth Health Foundation. She is passionate about natural health and is currently pursuing a medical degree. Upon degree completion she intends to practice medicine, intent on helping patients adopt a healthy, balanced lifestyle to both prevent and treat their chronic illnesses.