

How To Monitor Your Ketone for Optimal Brain Healing

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How to use your Ketone Measurements to Guide your Recovery

- Measuring blood beta-hydroxybutyrate (BHB) levels can provide you with real-time data to help determine whether you are burning glucose or fat as your primary source of fuel.
- Be sure to carefully follow the manufacturer's instructions for how to perform a ketone test. Ketone testing strips are more expensive than glucose strips. You can find less expensive options on the internet for around \$3 or less per strip. Once you've become keto-adapted (a natural physiological mechanism that occurs when the body shifts the fuel source from glucose to fat), you will learn to feel the difference and will no longer need to test on a regular basis. It's helpful to journal the changes in your cognition, mood, energy with different BHB levels.
- Wait until your fasting glucose reliably falls within the goal range of 70-90 mg/dL (3.89-5.0 mmol/L) before you begin ketone testing which may take weeks to months depending upon your level of glycototoxicity. Using coconut or MCT oil before this time is an excellent transitional option and will temporarily put you into ketosis, but you will not be truly keto-adapted at this stage.
- When your fasting blood glucose is in range, you can begin checking your fasting BHB levels at the same time that you check your fasting morning glucose. You can often use the same fingerstick if you act quickly. This will be difficult at first, but will become easier over time. Be aware that this is when BHB is typically at the lowest level for a variety of reasons. Any level above 0.5 mmol/L is in range for a fasting morning test.
- For the purpose of healing glycototoxicity and improving cognition by addressing a reduction in cerebral glucose utilization, your goal is to maintain a BHB level between 0.5-3.0 mmol/L. Lower levels may be more appropriate for those working on prevention or with mild cognitive issues. Higher levels may be necessary for those with higher risk levels or with more advanced symptoms. Ultimately, your response will help you find levels that are right for you.
- As you extend your fast, per the protocol, your BHB level will rise even higher. When glycogen stores are depleted, those who are metabolically flexible will begin creating ketone bodies as an alternative fuel. You may want to test BHB prior to breaking your fast to see the effect fasting is having on your level. It should be higher than your fasting morning level.
- When you exercise, your BHB levels may temporarily drop due to the extra glucose released by the liver to meet the demand of exercise. This is temporary and inconsequential. Exercise ultimately puts you into a higher level of ketosis after recovery.
- Eating a low carbohydrate and adequate protein diet with lots of healthy fats (as described in the Nutritional Guidelines) will help you sustain and will increase your BHB levels throughout the day.
- If your BHB levels drop after eating, that's typically a sign that you are eating too much carbohydrate or protein and not enough healthy fats.

- Testing right before bed will often yield the highest BHB level of the day. You've had the opportunity to combine multiple strategies (fasting, exercise, and diet) by that point all converging to contribute to your peak level.
- Once you've been keto-adapted for a while, pay attention to anything that feels different; a sense of being hungrier than usual, a dip in cognition or energy, or a change in mood. These may be clues that you've shifted out of ketosis back to burning glucose.
- Test your ketones to detect a change. If your levels are lower than usual or non-existent, it's likely a sign that you've had too many carbohydrates or too much protein the day before. Many other factors, such as poor sleep, stress or illness may be at play. Go back to the beginning of these guidelines to re-adapt. It's usually fairly easy once your body has become used to burning fat as fuel. Some patients report using very small amounts of coconut oil or MCT transiently during the re-adaptation process.
- It also may be helpful to periodically cycle in and out of ketosis to keep your body metabolically flexible; capable of burning both glucose and fat. Pay attention to how your cognition is affected when you are burning glucose. If you feel a decline, note it in your journal and resume your typical ketogenic diet at your next meal.
- Fat for Fuel, written by Dr. Joseph Mercola, may be helpful for those who wish to further explore this topic.