**High Dose Biotin**  
**Patient Information**  
**Updated: 10.2019**

| **USED FOR** | - Multiple sclerosis (MS), including relapsing-remitting and progressive MS.  
- Biotin will not cure MS. It may help to improve walking distance and slow disease progression. |
| **HOW IT WORKS** | - Biotin may help support nerve cells under stress. It also aids fatty acid synthesis, which may lead to myelin production.  
- Biotin is Vitamin H or B7, a water soluble vitamin that supports energy metabolism and production in the body. |
| **DOSE** | - Biotin 300 mg capsule by mouth once daily or 100 mg by mouth 3 times a day.  
  - In 3 randomized controlled trials, Biotin 100 mg 3 times a day was the dose found to be effective in reducing disability in progressive MS.  
  - A smaller open label trial found that doses lower than this did not appear to be effective. |
| **HOW IT IS SUPPLIED** | - Biotin is available over-the-counter (OTC) in various forms without a prescription at local and online drug stores. Look for "High-Dose" Biotin formulations with at least 100 mg per capsule or tablet.  
- Products that have the United States Pharmacopeia (USP) Verified Mark on the label guarantee its safety and quality.  
- Biotin can also be obtained at a compounding pharmacy with a prescription. |
| **HOW IT IS GIVEN** | - Biotin may be taken with or without food. |
| **OTHER SOURCES OF BIOTIN** | - Biotin can be found in brewer’s yeast; cooked eggs, especially egg yolk; sardines; nuts (almonds, peanuts, pecans, walnuts) and nut butters; soybeans; other legumes (beans, black-eyed peas); whole grains; cauliflower; bananas; and mushrooms.  
- Raw egg whites contain a protein called Avidin that interferes with the body’s absorption of biotin. |
| **STORAGE** | - Biotin may be kept at room temperature. Keep the medication away from direct sunlight, extreme heat, or cold. |
| **COMMON SIDE EFFECTS** | - Generally, there are no side effects or minimal side effects with taking Biotin. |

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This information is for educational purposes only and is not intended to replace the advice of your doctor or health care provider. We encourage you to discuss with your doctor any questions or concerns you may have.
### DRUG INTERACTIONS
- Before starting or stopping ANY medication or supplements, please notify your pharmacist to check for interactions.
- Certain anticonvulsants, antibiotics, and cholesterol medications can lower body biotin levels.

### LAB INTERACTIONS
- High dose Biotin can affect the accuracy of MANY blood tests including common tests for a heart attack (Troponin level), Hepatitis B serologies and thyroid function (TSH). Inform any all health care providers you are taking Biotin especially if there is a concern for a heart attack.
- We recommend holding Biotin for 3 days BEFORE lab tests and resuming following the blood draw.

### MONITORING
- Lab work is not required for Biotin.

### MORE INFORMATION
- Websites: [www.nationalmssociety.org](http://www.nationalmssociety.org)
- Clinical Trials:
- Research study:
  - If you are a patient at UCSF MS center, we may be interested in having you participate in research to better understand the effects of biotin in MS patients.
  - A larger confirmatory study with 600 patients with progressive MS is currently underway: [clinicaltrials.gov/ct2/show/NCT02936037](https://clinicaltrials.gov/ct2/show/NCT02936037)
  - If you are interested in participating, please contact the clinical trial coordinator at UCSF: Naomi Okinishi, Ph: 415-502-7604.