



# Weekly Practice Builder

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In response to increasing demand from our Practitioners, Biotics Research has implemented a new e-mail program to bring important, leading-edge information and literature to you, thereby helping facilitate the growth of your practice. Biotics Research products are available exclusively through Healthcare Providers.

## Our featured supplement of the week is Neutrophil Plus®

**Why will patients benefit from Neutrophil Plus®?** Neutrophils, one of the three types of granulocytic white blood cells (leukocytes), are the hallmark of acute inflammation. They serve as key components in the defense against infection and are the most abundant of the white blood cells. Neutrophils are primarily associated with acute bacterial inflammation due to their ability to ingest microorganisms or particles. However, neutrophil activity has also been correlated with coronary, pulmonary and other health issues.

Neutrophils, like all leukocytes, have a minimal life span, and thus a high turnover rate. As such, they are extremely vulnerable to minor vitamin, mineral and antioxidant deficiencies.

**Neutrophil Plus®** supplies a unique combination of select nutrients including vitamins, minerals and botanical constituents, along with RNA, to provide targeted support for neutrophils and their function. The complex interplay between multiple cell types and intercellular messengers makes nutritional status both subtle and far-reaching, particularly when it involves immune activation. As always, you can count on Biotics Research Corporation to offer superior nutritional products supplying "The Best of Science and Nature".



### Studies You Should Know About

#### Hyperhomocysteinemia May Increase the Risk of Osteoporosis.

Although no clear relationship has correlated hyperhomocysteinemia with either fracture risk or bone mineral density, recent results of both epidemiological and randomized clinical trials suggest that hyperhomocysteinemia increases the risk of fractures. Both cell culture and animal studies suggest that bone resorption is stimulated in hyperhomocysteinemic and bone quality is diminished in animals. Furthermore, hyperhomocysteinemia appears to disturb collagen crosslinking, adversely affecting the extracellular bone matrix resulting in an adverse affect on bone quality. Herrmann M, Wildemann B, Claes L, Klohs S, Ohnmacht M, Taban-Shomal O, Hübner U, Pexa A, Umanskaya N, Herrmann W. Experimental hyperhomocysteinemia reduces bone quality in rats. *Clin Chem.* 2007 Aug;53(8):1455-61. Epub 2007 Jun 22.

#### Antiepileptic Drugs and Increased Homocysteine in children.

In a study involving 25 children with idiopathic epilepsy taking antiepileptic medications, elevated levels of plasma homocysteine were found in 16% of the children. In the group of children with epilepsy, mean homocysteine level was 7.57  $\mu\text{mol/L}$ , mean folic acid was 10.19 ng/mL, and mean vitamin B12 was 428.20 pg/mL. Of the 16% (n=4) having elevated plasma homocysteine, 3 children were receiving carbamazepine and 1 was receiving valproate. The authors concluded, "Although the number of the study patients is limited, the authors recommend assessment of plasma homocysteine, serum vitamin B12, and folic acid levels in children receiving enzyme-inducing antiepileptic drugs." Kurul S, Unalp A, Yi U. Homocysteine levels in epileptic children receiving antiepileptic drugs. *J Child Neurol.* 2007 Dec;22(12):1389-92.

Questions? Concerns?  
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