

| <b>Vitamin</b>                                             | <b>MVW<br/>Modulator<br/>Formulation®</b>                      | <b>RDA<sup>1</sup><br/>%</b> | <b>Centrum Adult</b>     | <b>RDA<br/>%</b> | <b>Once-A-Day<br/>Adult</b> | <b>RDA<br/>%</b> |
|------------------------------------------------------------|----------------------------------------------------------------|------------------------------|--------------------------|------------------|-----------------------------|------------------|
| Serving Size                                               | 2 tablets or<br>softgels, twice<br>daily                       |                              | 1 tablet, once<br>daily  |                  | 1 tablet, once<br>daily     |                  |
| 1. Vitamin A                                               | 6000 mcg <sup>2 3</sup>                                        | 667                          | 1050 mcg                 | 117              | 900 mcg                     | 100              |
| Preformed<br>Vitamin A <sup>4</sup><br>(retinyl palmitate) | 3.5% and<br>210 mcg RAE 4-10<br>420 mcg RAE<br>10 and older    | 23%                          | 71% and<br>745.5 mcg RAE |                  | 90% and<br>810 mcg RAE      |                  |
| Pro-Vitamin A <sup>4</sup><br>(beta-carotene)              | 96.5%                                                          |                              | 29%                      |                  | 10%                         |                  |
| 2. Vitamin D3                                              | 37.5 mcg<br>(1500 IU) 4-10<br>75 mcg (3000 IU)<br>10 and older | 188                          | 25 mcg<br>(1000 IU)      | 125              | 25 mcg<br>(1000 IU)         | 125              |
| 3. Vitamin E                                               | 80 mg 4-10<br>160 mg<br>10 and older                           | 533                          | 20.3 mg                  | 135              | 15 mg                       | 100              |
| 4. Vitamin K                                               | 800 mcg 4-10<br>1600 mcg<br>10 and older                       | 667                          | 60 mg                    | 50               | 0 mg                        | 0                |
| Cost                                                       |                                                                |                              | \$23.99/200              |                  | \$23.62/300                 |                  |

<sup>1</sup> Percent RDA is “Per Serving” and represents the recommended daily allowance for healthy individuals.

<sup>2</sup> Pro-vitamin A content. Pro-vitamin A is only converted to the active form of vitamin A as needed by the body.

<sup>3</sup> Formulated to address BCMO1 gene variation. Up to 45% of the general population may have variation in the BCMO1 gene that reduces the enzyme’s activity. The BCMO1 gene is responsible for the enzyme that converts beta-carotene into the active form of vitamin A. People with T allele genetic variation on both SNPs (rs12934922 and rs7501331) have a 69% reduction in conversion efficiency of beta-carotene (pro-vitamin A) to retinol (active form). For people with only a single T (rs7501331 SNP), conversion is reduced by 32%.

<sup>4</sup> % readily available to be absorbed.

## What options do healthcare professionals

A. Reduce the serving size of our multivitamin [e.g., from two (2) Softgel or Chewable Tablets per serving to one (1) per serving].

While this approach may be effective in lowering the total amount of preformed Vitamin A intake; Vitamin D, E and K intakes are also reduced by half, and individuals may require additional vitamin pills (e.g., vitamin D) to achieve desired target serum fat-soluble vitamin levels.

B. Switch to another product. Most other products contain a higher percentage of preformed vitamin A and total amount of preformed vitamin A than the MVW Modulator Formulation. Switching to another product may actually “be going in the wrong direction” if the objective is to lower vitamin A intake and serum levels.

Finally, if a patient selects another product, it is essential to be aware of its content. For instance, one well-known multivitamin brand does not include any vitamin K.

C. Stopping vitamin supplementation. This approach would appear to be inconsistent with the need to address low Vitamin A, D, E, or K based on diet alone.

For more information about the MVW Modulator Formulation, which includes Softgels Mini's, Chewable Tablets, and Liquid Drops, please contact MVW Nutritionals®.