

# The Medical Letter®

## On Drugs and Therapeutics

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### IN BRIEF

#### Vitamin B<sub>12</sub> Nasal Spray

A nasal spray formulation of cyanocobalamin (*Nascobal* – Questcor) has been approved by the FDA for maintenance treatment of vitamin B<sub>12</sub> deficiency. *Nascobal* is already available as an intranasal gel. Vitamin B<sub>12</sub> deficiency, diagnosed by elevated serum concentrations of methylmalonic acid with or without elevated serum homocysteine and low serum B<sub>12</sub> concentrations (<200 pg/mL), is common in older patients.<sup>1</sup>

Since intestinal absorption of B<sub>12</sub> may be impaired, the usual maintenance treatment of deficiency is intramuscular injection of the vitamin in doses of 1 mg every 4 weeks (after more frequent doses have restored serum concentrations to normal levels). However, in patients with atrophic gastritis and even in those with pernicious anemia, some oral cyanocobalamin (about 1%) is absorbed by diffusion.<sup>2</sup> A randomized, controlled trial comparing oral to parenteral cyanocobalamin therapy in deficient patients found daily oral 2-mg doses of the vitamin as effective as monthly injections.<sup>3</sup>

#### MAINTENANCE TREATMENT OF B<sub>12</sub> DEFICIENCY

DELIVERY FORM	DOSAGE	COST <sup>1</sup>
IM Injection	1 mg once/mo	\$1.30
Oral	2 mg once/d	4.80
Nasal spray ( <i>Nascobal</i> )	500 mcg once/wk	121.30 <sup>2</sup>

1. Cost of the drug for 2 months' treatment based on most recent data (June 30, 2005) available from NDCHealth, a healthcare information services company. IM injection may require additional cost.
2. Cost of 1 bottle of *Nascobal* (2.3 mL), which delivers 8 doses.

No studies have been reported with the expensive new formulation. Medical surveillance is recommended, no matter what treatment is used, to document normalization of hematologic indices.

1. R Clarke et al. Prevention of vitamin B-12 deficiency in old age. *Am J Clin Nutr* 2001; 73:151.
2. FA Lederle. Oral cobalamin for pernicious anemia. *Medicine's best kept secret?* *JAMA* 1991; 265:94.
3. AM Kuzminski et al. Effective treatment of cobalamin deficiency with oral cobalamin. *Blood* 1998; 4:1191.

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