

## Correspondence

We try to publish authors' responses in the same edition with readers' comments. Time constraints might prevent this in some cases. The problem is compounded in a bimonthly journal where continuity of comment and redress are difficult to achieve. When the redress appears 2 months after the comment, 4 months will have passed since the article was published. Therefore, we would suggest to our readers that their correspondence about published papers be submitted as soon as possible after the article appears.

### Haste in Starting Therapy for Depression

*To the Editor:* The article titled "Depression Treatment in Primary Care" by Robinson et al<sup>1</sup> is very well written and comprehensively scores the need to reassess the type of therapy offered. Having gone through the article, we are impelled to write a few of our observations, in the hope that we might contribute to the research on treatment of the geriatric population.

Is there a haste involved in starting the therapy for depression, especially in the geriatric population? There should be a need to reflect why less than 5% of the patients were grouped into the "watchful waiting" and "support group" categories.<sup>1</sup> Moreover, for the geriatric age group, multifaceted interventions and principles of collaborative care result in best outcomes.<sup>1,2</sup> Were the patients given a choice or was it that the interplay of the capacity to pay and the type of insurance held that had determined the modality of treatment. We propose introspection by the readers on the above issues, in the backdrop of a research finding expressing the preference of geriatric patients for psychological interventions.<sup>3</sup>

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The above letter was referred to the authors of the article in question, who offer the following reply.

*To the Editor:* We appreciate the comments regarding our article, and agree with the authors of the letter that treatment of depression in the elderly is an important area that warrants further research. Our study did not specifically look at the treatment of depression in the elderly, and we do not have sufficient numbers in our data to address this topic specifically. We would encourage researchers to address this topic. The biological comorbidities, the psychological adjustments, the social stressors, and the existential search for meaning that occur through the aging process make depression more likely to occur and more complicated to treat.

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### Fish Oil versus Cod Liver Oil: Is Vitamin D a Reason to Go Back to the Future

*To the Editor:* As Dr. Oh<sup>1</sup> points out in his article, fish oil supplementation has gained popularity in recent years because of the many health benefits of omega-3 long-chain polyunsaturated fatty acids (LCPUFAs). Dr. Oh's article provides a thorough review of the literature on this topic and recommendations for fish oil supplementation. However, although fish oil is an excellent source of omega-3 LCPUFAs, it doesn't provide the significant levels of vitamin D that cod liver oil does.<sup>2</sup> Vitamin D is concentrated in the liver of the fish and thus plentiful in cod liver oil, a time-honored source of vitamin D. Fish oil is made from the whole body of the fish and has an insignificant amount of vitamin D.

Hypovitaminosis D is a significant public health concern.<sup>3–5</sup> In a study of healthy adolescents, Gordon et al<sup>5</sup> found that 24.1% were vitamin D deficient and 42.0% were vitamin D insufficient. LeBoff et al<sup>4</sup> found an association between hip fractures in older women and lower levels of 25-hydroxyvitamin D. Vitamin D deficiency may contribute to metabolic syndrome.<sup>6,7</sup> Vitamin D seems to play a protective role against breast, prostate, and colon cancer.<sup>8</sup> Animal experiments link vitamin D deficiency to abnormal brain development. The broad spectrum of effects from suboptimal levels of vitamin D reflect its varied functions. Vitamin D plays important roles in bone health and mineral homeostasis, immune modulation, muscle function, nervous system function, control of the renin-angiotensin system, con-

trol of insulin secretion, skin function, regulation of apoptosis, and regulation of cell growth.

Cod liver oil contains both vitamin D and omega-3 LCPUFAs.<sup>2</sup> Individuals at higher risk for vitamin D deficiency may wish to consider substituting cod liver oil for fish oil supplementation.

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## References

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The above letter was referred to the authors of the article in question, who offer the following reply.

*To the Editor:* I thank Ms. Ross for the comments on my article. I too feel strongly that physicians under-appreciate and under-recognize mild vitamin D deficiency.<sup>1</sup> Although cod liver oil is rich in vitamin D, most formulations do not have enough omega-3 fatty acids (FA) for it to be practical in clinical use. In an informal survey I performed, I found that typical preparations contain approximately 50 to 90 mg of omega-3 FA (compared with 300 mg in fish oil).<sup>2</sup> To reach 1 to 4 g of omega-3 FA (doses needed for secondary prevention of cardiovascular disease, rheumatoid arthritis, and hypertriglyceridemia)<sup>2</sup>

one would have to ingest 10 to 40 capsules of cod liver oil daily.

In addition, cod liver oil contains approximately 135 IU of vitamin D and 2500 IU of vitamin A in each capsule. Toxic doses of vitamin A can occur if cod liver oil is given in doses typical for treatment of hypertriglyceridemia and rheumatoid arthritis (2 to 4 g). Studies have also linked chronic daily vitamin A intake to increased fracture risk and teratogenicity.<sup>3–5</sup> Cod liver oil may potentially be used for conditions requiring supplementation of vitamin A and D but should generally be avoided for conditions requiring high levels of omega-3 FA. Other formulations may contain higher levels of omega-3 FA, but consumers and physicians must be especially cognizant of the amount of vitamin D and vitamin A that are contained in the preparation to avoid toxicity.

Even typical fish oil supplements may be difficult to provide 2 to 3 g of omega-3 FA, and physicians should consider prescribing highly concentrated formulations. Recently, the Food and Drug Administration has approved a prescription form of omega-3 FA containing approximately 900 mg of omega-3 FA in each capsule.<sup>6</sup> Although only approved for the treatment of hypertriglyceridemia, physicians can also consider this formulation in off-label uses for secondary prevention of cardiovascular disease and rheumatoid arthritis to minimize the number of capsules that patients have to take.

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