Author’s response to reviews

Title: Magnesium Deficiency: Effect on Bone Mineral Density in the Mouse Appendicular Skeleton

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Response to Dr. Singer:

We thank Dr. Singer for his careful reading of the manuscript and helpful comments.
1) The requested data have now been discussed relative to bone mineral density of the metaphysis (mg/cm3) in the Results as follows: "Bone mineral density (mg/cm3) in the metaphysis was similar in controls and Mg-deficient mice at 2 weeks [171.4 + 25.5 (8) for controls vs 162.1 + 47.0 (7) for Mg-deficient animals (means + S.D. (n))]. At 6 weeks, however, the mean bone mineral density Mg-deficient animals was significantly lower than controls (146.8 + 37.9 (7) vs control level of 153.3 + 28 (10), p=0.02)." The text later explains for the reader that "Since there is little trabecular bone in the femoral midshaft, trabecular bone mineral content was not evaluated at this site."

2) We have now included a new table (Table 1) which presents body weights for all groups at all time points. New text related to this is presented in the new first paragraph of the Results section. The text also now reads (end of the first paragraph): "It is unlikely that these body weight differences influenced bone mineral density since changes seen in trabecular bone mineral content between controls and Mg-deficient animals were already present in the 4 week group, a time at which there was no difference in mean weights of these groups."

Response to Dr. Howard:

We thank Dr. Howard for his careful reading of the manuscript and helpful comments.

1) The text on page 4 now reads "mg Mg/dl"
2) The noted text now reads "In contrast to the metaphyseal compartment, no significant difference could be detected in BMD between controls and Mg-deficient mice at the midshaft..."
3) The noted text now reads "Femoral BMD, however, and femoral cortical..."
4) The noted text now reads "...has been previously noted..."
5) The text on page 8 now reads "...trabecular bone not only has greater surface area and greater bone turnover..."
6) The text on page 8 now reads "It is of interest to note..."
7) The citation format of reference 10 has been corrected.
8) The citation format of reference 13 has been corrected.
9) The legends now refer to table 1 for animal numbers.
10) Comments on body weights were also requested by Dr. Singer. A new first paragraph of the Results section now addresses this issue. Table 1 presents all weight data for all groups.
The suggested rewording of the legend to Figure 1 has been done.