Online Supporting Material

Supplemental Figure 1  Study designs and sample collection times for study 1 (A) and study 2 (B) in male Mongolian gerbils.

(A) Study 1 design: on study d 0, 29-35 d old male Mongolian gerbils were randomized and weight adjusted into Whole White or Refined White dietary groups, both devoid of preformed vitamin A (VA), carotenoids, and zinc sources except that coming from the maize in the feed. At d 28, a midline kill was performed (n = 7). Gerbils were then randomized into VA treatments: VA-: white maize and placebo oil; orange: orange maize and placebo oil; VA+: white maize and VA+ in oil, equimolar to β-carotene consumed in orange groups on the previous day in approximately 50 µL. Feces were collected preceding midline (d 27) and endline (d 55).

(B) Study 2 design: on study d 0, 31-34 d old male Mongolian gerbils were randomized and weight adjusted into four treatment groups: Whole Zn-, Refined Zn-, Whole Zn+, and Refined Zn+. All gerbils consumed white maize from day 0-15, then all groups were switched to orange maize maintaining their respective milling and Zn assignments until d 36. Zn+ groups received 152 µg Zn/d in 50 µL orally in an aqueous sucrose solution (6% w/v); Zn- groups received a 50 µL placebo sucrose solution (6% w/v). Feces were collected at baseline (d 0), early (d 2-3), and endline (d 35).