

Reduction of radiocesium load – reply

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I am sincerely grateful to Prof. Andreas Nidecker for his response [1] to my letter [2]. I agree to all his remarks, in particular to the following: "Several critiques expressed in the letter to the editor make no sense, especially the one indicating that elimination of Cs-137 is only effective when the food continues to be contaminated with Cs-137. This is clearly wrong; the principal reason for the efficacy in this case is due to the important biliary excretion of Cs-137, where it would be immediately reabsorbed: in the absence of pectin in the bowel, the elimination of Cs-137 is only 13.9% within three weeks, which would allow the calculation of the biological half-life of radiocesium in these children; (The biological half-life of radiocesium varies from 60 to 150 days, depending on the publications and could be calculated from the findings of the group receiving placebo)." [1]

This comment is correct, and it was caused by an omission on my part. It should have also been written in my letter [2]: "The sorbents such as pectin, if they are indeed efficient, would absorb all cesium isotopes equally, as the isotopes have the same chemical properties and only slight differences in atomic weight. Possibly, the experts for isotope separation would add something to the following statement, but it seems to be evident that pectin would not efficiently separate isotopes in the intestinal contents.)If in doubt, it could be checked *in vitro*, instead of by experimentation on children [3, 4], inserting sorbents on hard carriers into liquid excrements enriched with ¹³⁷Cs, stirring mimicking peristalsis, and measuring corresponding activ-

ity concentrations thereafter." An analogous passage was written in a manuscript in Russian not accepted for publication by the journal Medical Radiology and Radiation Safety (Moscow) [5]. Moreover, considering the above, the biological half-life of the stable and radioactive cesium must be practically equal.)

If the sorbent treatment is efficient, then, after the return to contaminated territories, the assimilation of Cs including Cs-137 would possibly be enhanced.

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References

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- 2 Jargin SV. Reduction of radiocesium load: supplementation of Cs versus it's depletion by enterosorbents. *Swiss Med Wkly.* 2011;141:w13166.
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- 5 Jargin SV. On the overestimation of Chernobyl consequences: motives and mechanisms. *Med Radiol and Radiation Safety (Moscow)* 2011;56(5):74–9 (in Russian).