

- **Article: Preventive effects of zinc sulfate on taste alterations in patients under irradiation for head and neck cancers: A randomized placebo-controlled trial.**

Nadia Najafizade, Simin Hemati, Abbas Gookizade, Nezameddin Berjis, Mostafa Hashemi, Soheil Vejdani, Alireza Ghannadi, Armindokht Shahsanaee, Nafise Arbab
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ABSTRACT: Taste abnormalities are common among cancer patients after starting radiotherapy or chemotherapy. Considering the role of zinc and reports on its beneficial effects in taste perception, we evaluated the preventive effects of zinc sulfate on radiation-induced taste alterations. In a randomized, placebo-controlled trial, adult patients with head and neck cancers who were on schedule for radiotherapy, with or without chemotherapy, were allocated to receive zinc sulfate (50 mg, three times a day) or placebo; started with beginning of radiotherapy and continued for one month later. Taste acuity was determined by measuring detection and recognition thresholds for four taste qualities at baseline, at the end of radiotherapy, and a month later using the Henkin method. Thirty-five patients (mean age = 59.2 ± 16.5 , 60% male) completed the trial. The two groups were similar at baseline. After radiotherapy, and one month later, there was a significant increase in taste perception threshold for bitter, salty, sweet, and sour tastes in the placebo group ($P = 0.001$). In those who received zinc, there was only slight increase in threshold for perception of the salty taste ($P = 0.046$). No relevant side effects due to zinc sulfate were reported. Zinc supplementation in head/neck cancer patients under radiotherapy can prevent radiation-induced taste alterations. Further studies with longer follow-ups and with different doses of zinc supplementation are warranted in this regard.

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