

with selenium and zinc at a concentration of 100 g /day, the WBC count in mice increased to $8.320 \times 10^3/\text{ml}$ from a pre-supplementation level of $5.990 \times 10^3/\text{ml}$. Zinc and selenium, especially at the recommended dosage, boost the immune response, increase immune globulins, and enhance the overall picture of the blood and its many components [50]. When comparing treatments, treatment B2 had the highest hemoglobin concentration (12.2 g/dL), while treatment C+ had the lowest (9.7 g/dL; $P > 0.05$). Treatment B1 resulted in 11.4 g/dL, while treatment C- resulted in 12.1 g/dL.

A statistically significant difference ($P > 0.05$) was found between the various treatments. This suggests

that selenium, as compared to the C+ therapy given a high-fat diet, boosted the hemoglobin percentage to the normal limit. Along with iron and vitamin B12, zinc plays a crucial role in RBC development [51]. showing a link between zinc deficiency and anemia, particularly in pregnant women and young children [52-54]. Patients with iron-deficiency anemia benefited more from a combination of zinc and iron supplementation than from iron alone [55]. Patients with chronic renal disease have benefited from zinc treatment. Zinc supplementation, however, has been shown to enhance hemoglobin levels in dialysis patients [56].

Table5. The WBC count and Hb for the experimental rat group after 28 days

| Treatment | WBC count cells/mm ³ | g/L |
|---|---------------------------------|--------|
| Negative control C- fed a standard diet | 7.9×10^3 | 12.1 |
| Positive control C+ fed a diet with fat | 11.3×10^3 | 9.7 |
| B1 Fed on a high-fat diet +7.5 mg of zinc acetate/day | 12.7×10^3 | 11.4 |
| B2 Fed on a high-fat diet + 15 mg of zinc acetate/day | 13.9×10^3 | 12.2 |
| LSD value | 3.082* | 2.116* |
| (P0.05) | | |

Zinc acetate fortification at 7.5 and 15 mg/day was associated with higher hemoglobin percentages compared to the C+ treatment and normal hemoglobin levels compared to the C- treatment, according to the current study. Since this had a beneficial effect and is a

sign of excellent health, the importance of zinc acetate is increased. Zinc supplementation increased hemoglobin and red blood cell counts in pregnant women with anemia [57]. Zinc deficiency in rats, mice, and humans may be associated with anemia, and zinc

supplementation influences hemoglobin synthesis [58]. They found that fish with added zinc boosted erythrocyte production [59,61].

CONCLUSION

This study indicates that fortification with zinc salts did not affect the values of the proportions of nitrogen substances and fortification with zinc salts led to a reduction in the whiteness of the labneh balls. Fortification influenced the microstructure of the treatments, and the nutritional experiment on mice showed clear effects. The addition of zinc salts helped maintain the weight gain of the experimental animals and played a role in strengthening their immune system.

Abbreviations: WBC: White blood cells; Hb: Hemoglobin; SEM: Scanning Electron Microscopy; CRD: Complete Random Design; nw: nitrogen water; NPN: non-protein nitrogen.

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