

Abstract

Iron Status of Postpartum Women 6 Months after Delivery [†]

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Iron deficiency (ID) is one of the most common nutritional disorders, even in developed countries. In the most recent New Zealand Adult Nutrition Survey, the highest prevalence of ID was observed among females aged 31 to 50 years old, measured at 12%. However, there is little research concerning postpartum women's iron status in New Zealand. This observational follow-up cohort study recruited 87 breastfeeding women, aged 16 years and over, with a healthy term singleton infant, in the Manawatu region, New Zealand. Women were recruited at 3 months postpartum and followed up at 6 and 12 months postpartum. Maternal iron intake was assessed via a four-day dietary diary at 4 months postpartum. At 6 months postpartum, 93% of women were still lactating; blood haemoglobin (Hb) concentrations were assessed by capillary blood analysed on the handheld Hemocue Hb 201+ device. Non-fasting venous blood samples were collected to measure soluble transferrin receptor (sTfR) and serum ferritin (using the CMIA method). The inflammatory marker, C-reactive protein was also measured. The median iron intake was 13.9 mg (11.3, 16.3) which is higher than the Recommended Dietary Intake (9 mg/day) for lactating women. Mean Hb was 132.5 ± 9.00 g/L, with 8% below 120 g/L. Three serum ferritin results were excluded due to C-reactive protein greater than 8 mg/l, suggesting inflammation. Median serum ferritin was 41 (27, 78) µg/L, with 14% below the normal range (20–500 µg/L) (11% of lactating women) and with 4% below 12 µg/L (3% of lactating women). Median sTfR was 1.12 (1.00, 1.26) mg/L, with 4% having elevated values (4% of lactating women). Dietary iron intake was adequate for the breastfeeding women. There were low levels of iron deficiency amongst this group of postpartum women, possibly due to the protective effect of lactation sparing iron through amenorrhea.



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