

## **Endocrinology: Luteinizing hormone pulsatile release and the length of lactational amenorrhoea**

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### **Abstract**

The pattern of luteinizing hormone (LH) pulsatile release and the mean concentrations of follicle-stimulating hormone, oestradiol and progesterone were studied in nursing and non-nursing women. Blood samples were drawn at 5 min intervals between 10: 00 and 14: 00 h and between 22: 00 and 02:00 h at months 3–4, 5–6, 7–8 and 9–10 post-partum in nursing women and in the follicular phase in non-nursing women. In nursing women, mean LH concentrations at months 3–4 were significantly lower than in non-nursing cycling women only in the subgroup which subsequently experienced >6 months of lactational amenorrhoea, although all were fully nursing with a similar suckling frequency. LH pulses in plasma were found at all times in nursing women. There were no significant differences in the frequency (about four pulses every 4 h), amplitude or duration of LH pulses related to the duration of amenorrhoea, nor did these parameters vary significantly between amenorrhoeic or cycling nursing women and non-nursing women. Nursing amenorrhoeic women exhibited a normal frequency of LH pulse well in advance of the resumption of the first post-partum menses, suggesting that mechanisms other than the suppression of the gonadotrophin-releasing hormone pulse generator intervened in the inhibition of ovarian function during lactation.