

Geophagy was studied among 827 pregnant women in western Kenya, during and after pregnancy. The women were recruited at a gestational age of 14–24 weeks and followed-up to 6 months post-partum. The median age (range) of the women was 23 years and median parity 2. At recruitment, 378 were eating earth, of which most (65%) reported earth-eating before pregnancy. The preferred type of earth eaten was soft stone, known locally as *odowa* (54.2%) and earth from termite mounds (42.8%). The prevalence remained high during pregnancy, and then declined to 34.5% and 29.6% at 3 and 6 months post-partum respectively ($P < 0.001$). The mean daily earth intake was 44.5 g during pregnancy, which declined to 25.5 g during lactation ($P < 0.001$). A random sample of 204 stools was collected from the women and analysed for silica content as a tracer for earth-eating. The mean silica content was 2.1% of the dry weight of stool. Geophagous women had a higher mean silica content than the non-geophagous ones (3.1% vs. 1.4%, $P < 0.001$). Faecal silica and reported geophagy were strongly correlated ($P < 0.001$).