of anabolic activity. The current study characterizes leptin, C-peptide of insulin, and body composition in adolescent women from a subsistence agriculturalist population in rural Gambia. Workload and energy availability are highly seasonal, with the greatest workload and lowest energy intake occurring in the rainy agricultural season and the lowest workload and highest food abundance occurring in the dry harvest season. Sixty participants between the ages of 15 and 20 were followed for one year. Data were collected in three-one-month increments during the nadir, zenith, and subsequent nadir of energy availability. In the first season, mean fat free mass was 78% (±4), mean leptin was 0.83 (±0.64) ng/ml, and mean C-peptide of insulin was 38.7 (±43.7) ng/mg creatinine.

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Headache frequency of women in Hilo, Hawaii, the Hilo Women’s Health Study. AM Reza1, LL Sievert1, LA Morrison2, N Rahberg2, DE Brown2. 1University of Massachusetts Amherst; 2University of Hawaii at Hilo.

Headache frequency has been shown to decrease in women at midlife, perhaps in relation to the changing hormonal milieu across a women’s life. The purpose of this study was to examine headache frequency among women across various age groups drawn from the multiethnic population of Hilo, Hawaii as part of the Hilo Women’s Health Study. Women aged 19 to 100 were recruited by way of a cross-sectional randomized postal survey (n=1824). From this larger sample a subsample of women aged 45-55 (n=200) was recruited to participate in a clinical study that collected hormonal data as well as more in depth information about the types of headaches experienced. In the postal survey the occurrence of headaches in the prior two weeks was recorded as a yes/no variable, whereas the clinical phase of study applied criteria from the International Headache Society to differentiate migraine from tension headaches. The frequency of headaches among women in the large sample was 46.7%, with women younger than 40 reporting the most headaches (57.5%), followed by women aged 40-60 (49.8%), and women older than 60 reporting the least (20.3%; p<0.01). In logistic regression analyses, irritability and depressed mood were significant determinates of headaches among women aged 40-60 drawn from the larger sample. In the smaller clinical study, the frequency of migraines was 11.5%; tension headaches 45.2%, and both 4.8%.

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Breastfeeding provides the best nutritional resource for a young infant and also confers invaluable immunological benefits, but breastfeeding is metabolically expensive. This energetic demand can be met by drawing on maternal fat stores and/or changing maternal food intake and activities during lactation, options that may not be feasible if food is scarce and/or maternal labor is essential. Given such constraints, life history theory posits an unavoidable trade-off (one among many) between maternal maintenance of her own soma and lactational investment in her newest offspring. We investigate this dynamic trade-off in rural Bolivian

Extensive research into the relationship between Epstein-Barr virus (EBV) antibodies and psychosocial stress has been conducted in Western populations, but there is a dearth of research in non-Western populations living in high-pathogen environments. There is also little research on the variation of EBV levels within populations and among different populations in the same region. The present study was designed to address that gap by investigating the relationship between EBV antibody levels and the extent of market integration (MI) in the Shuar, an indigenous forager-horticulturalist Ecuadorian Amazonian population, and a non-indigenous (colono) population in the same region. We focus on Shuar and colonos in the same village and Shuar across different villages in order to investigate how both ethnicity and MI—two factors known to correlate with psychosocial stress—affect EBV levels. We hypothesize that increased MI, which is linked with higher levels of psychosocial stress, will be associated with higher EBV levels. We collected dried blood spot samples that were later analyzed for EBV antibodies, as well as standard anthropometric measures and extensive lifestyle information. Our results indicate that EBV levels are positively associated with indicators of MI (p<0.01) and show a negative trend with indicators of traditional lifeways (p=0.05). These associations persist when controlled for age, sex, and ethnicity. Preliminary analyses also suggest that EBV levels are lower among traditionally-living Shuar than in the more developed Upano Valley region. These results suggest that EBV levels may be a marker of psychosocial stress in non-Western populations living in high-pathogen environments.

Support: Wenner-Gren Foundation for Anthropological Research (7970); NSF BCS-0925910; Leakey Foundation; UCSB Center for Evolutionary Psychology (via NIH 5DP1OD000516-04); University of Oregon; Center for Latino/a and Latin American Studies, University of Oregon.

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The Shuar health and life history project: Epstein-Barr virus and market integration in the indigenous Shuar of Ecuadorian Amazonia. JG Ridgeway-Diaz 1, HA Spielvogel 2, J Thornburg 3, VJ Vitzthum 1:4. 1Anthropology Department, Indiana University, Bloomington; 2Instituto Boliviano de Biología de Altura, La Paz; 3Astronomy Department, Indiana University, Bloomington; 4Kinsey Institute for Research in Sex, Gender, and Reproduction, Bloomington, Indiana.

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