Health is a reflection of an individual's ability to adapt to their environment by biological or behavioral means. Tropical rainforest cultures have tolerated many hardships and persisted, despite ravages to their natural and social environments. Traditional “sustainable economies” (shifting cultivation, hunting, fishing, and gathering) are no longer the norm for these groups. Governmental movements to develop tropical rainforests present new obstacles to overcome. Some indigenous groups are implementing ecotourism projects as a means to protect their traditional lands and lifestyles; however, few studies have examined the impact these ventures have on indigenous health. To further explore this issue, physiological and lifestyle data were collected in two Cofán villages, located in the Amazonian region of Ecuador. The village of Zabalo, located in the Cuyabeno Reserve, implemented an ecotourism program; whereas the village of Dureno and its surrounding territory are too ecologically degraded to support such a venture. A segment of each village participated in household food frequency’s, individual physiological measures (anthropometrics, blood pressure, cholesterol, hemoglobin dental exams, and general health and lifestyle surveys (64%-D; 89% Zabalo). A subset in both villages participated in individual 24-h food recalls (20%). Ecotourism is helping the Cofán of Zabalo protect their remaining traditional land base and may be buffering individuals from some stressors that negatively impact health. The issues of culture change, development, and health raised by this study, illuminates the need to investigate modern adaptive measures undertaken by indigenous populations, which may be essential to cultural survival, but may be negatively affecting various aspects of individual health.

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Shuar sleep patterns: A preliminary study of sleep duration and quality in an Indigenous Amazonian society. TR Gandolfo1,2, JJ Snodgrass1,2, AD Blackwell1,2, FC Madison1,2, TJ Cepon1,2, LS Sugiyama1,2,3 1Department of Anthropology, University of Oregon, Oregon; 2Institute of Cognitive and Decision Sciences, University of Oregon, Oregon; 3Center for Evolutionary Psychology, University of California, Santa Barbara, California.

Sleep duration and quality has implications for many health issues such as immune function, obesity, and cognitive performance. However, surprisingly, little is known about sleep in Western populations and there is almost no data available on sleep patterns in subsistence-level populations. Such data are critical for understanding health issues in developing nations, as well as for allowing a basis for understanding sleep as it varies with local ecology. Further, information on sleep patterns in subsistence populations is important for understanding the evolution of sleep among humans, because many of our present assumptions about sleep are based exclusively on Western, industrialized populations. Shuar are traditionally swidden horticulturalists from the Amazonas region of Ecuador and currently occupy a range of environments from traditional to urban. We present preliminary data on Shuar sleep patterns from a small sample of individuals in a subsistence agricultural village, gathered using wrist-worn accelerometers. Adult participants wore Actiwatch monitors that continuously recorded movement for 3 consecutive days and nights. Morning interviews were conducted with participants to obtain information on various aspects of the previous night’s sleep, including the quality of sleep, sleep interruptions, amount of dreaming, ease of falling asleep and waking, and the extent to which they felt rested upon waking. Additional interviews, health data, and anthropometry were collected for each participant, as well as qualitative daytime behavioral observation for a subsample of individuals.

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Sexual behavior, dopaminergic sensation-seeking, and perceived mate quality among college students. JR Garcia, AE Huard, DW Steadman, EL Aller, RS Zamore, AM Merriwether, DS Wilson, JK Lum. Binghamton University, New York.

Sexual behaviors can be influenced by individual genetic differences as well as ecological conditions. One such condition that influence sexual behaviors with conspecifics is perceived attractiveness. Specifically, symmetry is considered a proxy for genetic quality and health, while morphological characteristics such as masculinity in males and neotony in females are presumed indices of reproductive potential in a mate. This study investigates the role of “attractiveness” in mediating availability of various sexual encounters, thus potentially restricting ideal sexual activity. Previous findings from this same sample suggest that the dopamine receptor polymorphisms DRD4 and DRD2 influence sexual behavior. At the same time, perceived mate quality based on facial morphological characteristics should have an impact on expression of sexual behaviors. DNA was used to genotype DRD4 and DRD2, which have been associated with risk and sensation-seeking. Photographs, self-reported survey data, and genetic material of 180 undergraduates were collected as part of the study on self-reported risk-taking and sensation-seeking behaviors, including experiences in intimate relationships, uncommitted sexual activities, and ideal sexual behaviors. Sixteen landmarks were digitized on photographs using TPSDIG2 2.12 (2008), creating 32 “x” and “y” coordinates. The coordinates were normalized in morphologika 2.5 (2006) using a generalized procrustes superimposition, to remove the effects of size, rotation, and position of image. The procrustes residuals were then subjected to principal component analysis. Facial morphology components were compared to the previously genotyped loci to assess the relation of the dopamine receptor polymorphisms as a genetic association in sexual behavior and the evolution of mate-choice.

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A: 8:45 a.m.

It is not how you sleep, but how you think you sleep. LM Gerber1, TG Pickering2, K Warren3, JE Schwartz2,3.