ABSTRACT

TITLE:	A Comparison of Serum TNF- Concentrations in Native American and BMI-Matched Caucasian Students at Fort Lewis College
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PRESENTED AT:	5th Annual Natural & Behavioral Sciences Undergraduate Research Symposium, Fort Lewis College

ABSTRACT: TNF-, a pro-inflammatory cytokine, is associated with insulin resistance, and may be the cellular instigator in the progression to Type II diabetes. Incidence of insulin resistance is higher in most Native American (NA) populations, but little is known about their cellular indicators. We examined TNF- serum levels in NA college students who were matched by body mass index (BMI) to Caucasian (CA) peers. BMI, waist-to-hip ratio, and percent body fat were determined, as well as lifestyle parameters related to the incidence of insulin resistance. Ten ml of blood was collected and separated into serum and cells. Serum TNF- concentrations were determined through the use of a quantitative sandwich ELISA. Results from 14 matched pairs showed a trend for higher TNF- levels in NA students when compared to their CA counterparts (40.65pg/ml + 1.01 vs. 38.12pg/ml + 1.51, respectively), but were not significantly different (p=0.07). For this sample size, we conclude that NA college students do not have significantly higher levels of pro-inflammatory TNF- than their BMI-matched Caucasian peers.