



Mid Atlantic Regional Chapter of the American College of Sports Medicine

Annual Scientific Meeting, November 5th - 6th, 2021
Conference Proceedings
International Journal of Exercise Science, Issue 9, Volume 10



Oral Health in Division 1 Female Athletes

Keerthana Arjuna, Savannah Bryner, Megan Pycraft, Renee Engle, Brian K Leary, Miriam E Leary, Randy W Bryner. West Virginia University, Morgantown, WV

A direct correlation exists between overall health and oral health. Previous findings suggest significant oral health issues in athletes which, for Division 1 (D1) college athletes, could negatively impact their performance and overall wellbeing. **PURPOSE:** To assess if D1 athletes are at an increased risk of developing decay compared to non-athletes by evaluating dental practices, decay causing foods, and salivary protective factors. **METHODS:** Fifty-four female athletes [32 rowers (R) and 22 soccer players (S)] and 34 female college age-matched controls (C) participated. All subjects completed a Dental Health Questionnaire to assess current dental habits, history of orofacial trauma, and dietary patterns as well as the International Physical Activity Questionnaire (IPAQ) to assess physical activity levels. All subjects underwent a brief dental examination using the Dental Epidemiologic Study: Decay, Missing, Filled Surfaces Index (DMFS). Resting saliva samples were collected and analyzed for salivary IgA using standard ELISA kits. **RESULTS:** While C were shorter compared to athletes (C: 166 ± 1 cm; R: 169 ± 1 cm; S: 169 ± 1 cm; $p < 0.05$), there were no differences in weight (C: 71 ± 3 kg; R: 72 ± 1 kg; S: 65 ± 2 kg; $p > 0.05$). Controls had lower levels of physical activity compared with both the R and S groups (C: 945 ± 182 MET/min/wk; R: $3,246 \pm 968$ MET/min/wk; S: $10,413 \pm 2,499$ MET/min/wk; $p < 0.05$). Visits to the dentist in the last year were reported by 70% of C, 75% of R, and 81% of S groups. 68% of C, 64% of R, and 63% of S groups self-reported consuming < 3 servings of sugar (CHO)/day. Rowers had lower DMFS (%Total Surface Area) compared with (C: $6.2\% \pm 0.9\%$, R: $3.2\% \pm 0.6\%$; $p < 0.05$); however, there were no differences between S and any other group (S: $4.8\% \pm 0.9\%$) ($p > 0.05$). Soccer players tended to have more decay than rowers (S: 3.5 ± 0.87 ; R: 1.4 ± 0.33 ; $p = 0.07$) and had lower resting IgA levels versus C and R (C: 105 ± 13 mg/dL; S: 31 ± 3.7 mg/dL; R: 77 ± 11 mg/dL; $p < 0.05$). **CONCLUSION:** Despite similar dental practices, differences in dental health exist between cohorts of female collegiate athletes suggesting less elite athletes exhibit better dental health. In addition, elite soccer players had a reduced resting salivary IgA level, a known dental protective factor.