Serum Vitamin D Status of Division III Football players
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Conclusion:
- These “outdoor athletes” were deficient in vitamin D by mid-November.
- College football players on average did not consume enough dietary vitamin D to meet the recommendation.
- Linemen have larger BMIs and lower serum vitamin D compared to non-linemen.
- Nutritional counseling may be advised to correct large waist circumference and low serum vitamin D during the winter months.
- To avoid becoming deficient these athletes should consider beginning a vitamin D supplement in the fall.

Introduction:
Athletes who train indoors are at a higher risk of vitamin D deficiency than those who engage in outdoor sports. Vitamin D inadequacy and deficiency in athletes increase risk for injury (1).

Purpose:
Determine the serum vitamin D status of Division III football players (outdoor sport) in mid-November and assess dietary intake of vitamin D.

Methods:
Football players (n=22) age 18-22.
- Subjects completed a 3 day food log tracking food and beverage intake.
- Data collection recorded:
  - weight, height, waist circumference, and blood pressure, blood samples were collected for 25-Hydroxy Vitamin D assay and lipid profiles.
  - Subjects discussed food logs with student researcher and completed medical history questionnaires.
- Statistical procedures were conducted using Pearson Correlation and ANOVA.

Results: Serum Vitamin D
- 91% had less than optimal serum vitamin D levels (optimal > 75 nmol/L) (2).
- Only 9% (2/22) had optimal serum vitamin D levels.
  - 1 was taking a vitamin D supplement
  - Average serum vitamin D was 56 ± 26 nmol/L
  - 10 of 22 subjects were Vitamin D deficient (< 50 nmol/L)
  - Serum vitamin D did not correlate with: TC, HDL, LDL, TG, weight, BMI, fasting blood glucose or blood pressure.
  - Waist circumference was significantly correlated with serum vitamin D.

Dietary Vitamin D
- Average intake 12 µg (±11 µg) (RDA of 15 µg for men age 18-50).
- 27% met the RDA (6/22)
  - 3 of the 6 supplemented with a Multivitamin
  - 73% failed to obtain the RDA
  - one had an optimal serum D.

Conclusion:
- These “outdoor athletes” were deficient in vitamin D by mid-November.
- College football players on average did not consume enough dietary vitamin D to meet the recommendation.
- Dietary vitamin D did not correlate with serum vitamin D.
- Linemen have larger BMIs and lower serum vitamin D compared to non-linemen.
- Nutritional counseling may be advised to correct large waist circumference and low serum vitamin D during the winter months.
- To avoid becoming deficient these athletes should consider beginning a vitamin D supplement in the fall.

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