

## INTISARI

**Latar belakang:** Pembinaan atlet sejak usia dini dilakukan untuk mengetahui bakat serta kemampuannya dalam mendapatkan prestasi setinggi-tingginya. Berbagai aspek perlu diperhatikan guna mendukung performa atlet sedari awal, salah satunya adalah aspek gizi. Pemenuhan gizi pada atlet remaja tidak hanya memperhatikan pengeluaran energi basal metabolik, faktor aktivitas, dan faktor termal makanan saja tetapi juga faktor pertumbuhan. **Tujuan:** Mengetahui hubungan asupan makronutrien, vitamin D, kalsium terhadap status gizi dan pertumbuhan linear atlet remaja di Indonesia. **Metode:** Penelitian ini merupakan penelitian potong lintang retrospektif dengan menggunakan data sekunder dari kajian deskriptif Dr. Mirza Hapsari Sakti TP, S.Gz, RD, MPH pada tahun 2016-2021 yang diperoleh sejumlah 335 atlet remaja yang memenuhi kriteria inklusi. Uji statistik menggunakan uji *Spearman Correlation* dengan interval kepercayaan (IK) 95%. **Hasil:** rata-rata seluruh asupan zat gizi atlet remaja berada dibawah rekomendasi AKG kecuali asupan protein. hasil rerata IMT/U dan TB/U tergolong normal. Hasil korelasi menunjukkan tidak terdapat hubungan yang signifikan antara asupan kalori ( $p=0,291$ ), protein ( $p=0,960$ ), lemak ( $p=0,483$ ), vitamin D ( $p=0,589$ ) dan kalsium ( $p=0,798$ ) dengan status gizi IMT/U. Namun terdapat hubungan yang signifikan negatif antara karbohidrat ( $p=0,024$ ) dengan IMT/U. Tidak terdapat hubungan yang signifikan antara asupan kalori ( $p=0,262$ ), karbohidrat ( $p=0,262$ ) protein ( $p=0,626$ ), lemak ( $p=0,407$ ), vitamin D ( $p=0,953$ ) dan kalsium ( $p=0,483$ ) dengan TB/U. Akan tetapi terdapat hubungan yang positif antara asupan kalori ( $p=0,002$ ), karbohidrat ( $p=0,000$ ), dan protein ( $p=0,049$ ) dengan TB atlet remaja. Kesimpulan: Asupan karbohidrat berhubungan negatif dengan IMT/U. Asupan kalori, karbohidrat, dan protein berhubungan positif dengan TB atlet remaja.

Kata Kunci: Atlet Remaja; Asupan Zat Gizi; Status Gizi; Pertumbuhan Linear

## ABSTRACT

**Background:** Early Athletic development is carried out to determine their talents and abilities for the highest achievements. Many aspects must be taken into account particularly nutritional aspect to support an athlete's performance from the beginning. In addition to basal metabolic energy expenditure, food thermal factors, and activity factors; growth factors need to be considered to meet the nutritional needs of adolescent athlete.

**Objective:** To determine the relationship between intake of macronutrients, vitamin D, calcium on nutritional status and achievement of linear growth in Indonesian adolescent athletes. **Methods:** an analytical observational study and retrospective cross-sectional design using secondary data from Dr. Mirza Hapsari Sakti TP, S.Gz, RD, MPH studies in 2016-2021. There are 335 adolescent athletes who met the inclusion criteria were obtained. The statistical test used the *Spearman Correlation* test with a 95% confidence interval (CI). **Result:** the average of all the nutritional intake of adolescent athletes is below the daily recommendation, except the protein intake. Even though the results of the average BAZ and HAZ are classified as normal. The correlation showed there was no relationship between energy ( $p=0.291$ ), protein ( $p=0.960$ ), fat ( $p=0.483$ ), vitamin D ( $p=0.589$ ) and calcium ( $p=0.798$ ) intake with nutritional status of BAZ. However, there was a negative relationship between carbohydrates ( $p=0.024$ ) and BAZ. There is no relationship between energy ( $p=0.262$ ), carbohydrates ( $p=0.262$ ), protein ( $p=0.626$ ), fat ( $p=0.407$ ), vitamin D ( $p=0.953$ ) and calcium ( $p=0.483$ ) intake with HAZ. However, there was a positive relationship between energy ( $p=0.002$ ), carbohydrates ( $p=0.000$ ), and protein ( $p=0.049$ ) intake with height (cm) in adolescent athletes. **Conclusion:** Carbohydrate intake is negatively related to BAZ. While energy, carbohydrates, and protein intake are positively related to height in Indonesian adolescent athletes.

**Keywords:** Adolescent Athlete; Sport nutrition; Nutritional status; Linear Growth