Abstract Template

Abstract Title: Comparison of muscle strength, aerobic capacity and body Composition between healthy adolescents and those living with HIV: a systematic review

Rafaela Catherine da Silva Cunha de Medeiros, MD[1]*
Isis Kelly dos Santos, MD[1];
Anna Luiza Vasconcelos de Oliveira[2];
Carlos Jean Damasceno de Goes, MS[3];
Jason Azevedo de Medeiros, MD[1];
Juliany de Souza Araujo, MD[3]
Tatiane Andreza Lima da Silva, PhD[1;]
Phelipe Wilde de Alcântara Varela[3]
Ricardo Ney Cobucci, PhD[1;]
Breno Guilherme de Araújo Tinoco Cabral, PhD[1,3];
Paulo Moreira Silva Dantas, PhD[1,3]

[1] Postgraduate Program in Health Science (Federal University of Rio Grande do Norte, BR)
[2] Department of Nutrition (Federal University of Rio Grande do Norte, BR)
[3]Postgraduate Program in Physical Education (Federal University of Rio Grande do Norte, BR)

Abstract (not more than 300 words)

Adverse effects of antiretroviral therapy associated with complications generated by HIV promote impairments in physical fitness in adolescents. We performed a systematic review with studies aimed at analyzing the aerobic capacity, muscle strength and body composition of adolescents living with HIV compared to the same healthy population. **Methods:** Searches were performed in the MEDLINE, Embase, Web of Science, Scopus and SportDiscus databases until July 2019. Interreviewer's agrément was calculated using the Kappa index for each phase of article selection (kappa = 0.74). **Results:** A total of 5 articles were included, involving 197 adolescents living with HIV and 185 without infection, with the sample in each study ranging from 15 to 65 adolescents. The age of the HIV group ranged from 16 to 18 years and the age between healthy controls ranged from 13 to 18 years. Aerobic capacity and muscle strength were reduced in adolescents infected with HIV, and body mass index was significantly lower in this group. It is concluded that adolescents living with HIV have impaired cardiorespiratory fitness and muscle strength, as well as a lower body mass index when compared to the uninfected population in the same age group. Additional studies are needed to define which strategies can be applied to improve the physical capacity and body composition of HIV-infected adolescents. The protocol for this review was registered in the PROSPERO database under code CRD42019140955.

Keywords— physical fitness, pediatrics, Human immunodeficiency virus.

Professional Biography (100-150 words)

Rafaela Catherine da Silva Cunha de Medeiros is 30 years old, is a professor at the State University of Rio Grande do Norte - UERN and at the University Center of Rio Grande do Norte - UNI-RN, Brazil; Doctoral student of the Postgraduate Program in Health Sciences, line of research: Human health and care of people at the Federal University of Rio Grande do Norte (UFRN). Master's Degree in Physical Education by the Postgraduate Program in Physical Education, research line: Human Performance Assessment - UFRN (2015); Specialist in Physical Activity, Health and Quality of Life UERN; Graduated in Physical Education (UERN). International Certification in Anthropometry - Level 1 (ISAK-2015). Member of the Physical Activity and Health research group (AFISA / UFRN and Body Culture, Education and Human Development (UERN). Research areas: Growth; metabolism; Physical exercise; Quality of life and Sleep; HIV, children, adolescents, adults; Basic Physical Skills; Maturation, motor coordination.



Photograph

Email Id: rafaelacath@hotmail.com

Any Comments:

The results found in this review have important clinical implications for the management of this adolescents living with HIV, indicating the need for future interventions that address the importance of regular physical activity from childhood to adulthood among those infected.