

# Changes in Physical Activity, Movement, and Sleep During the Pandemic

## Pre-Pandemic

76% of children were not meeting the nationally recommended 60 minutes of daily to moderate vigorous physical activity.<sup>1</sup>

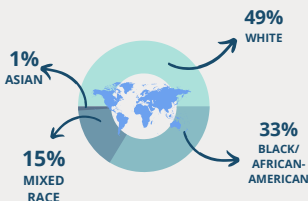
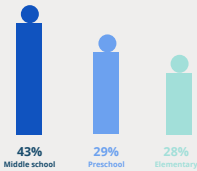
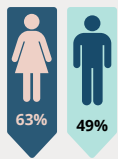


## March 2020

Schools and recreational facilities **closed**, limiting access to physical activity opportunities.

# COVID-19 Family Study

## Demographics



## Our Data

### How The Data Was Collected

Participants wore actuals, or physical activity bands, for 7 days to track daily movement and activity. Caregivers and children also took surveys.



### What We Looked At

Changes in moderate to vigorous physical activity, light intensity physical activity, and sedentary behavior/sleep from pre-pandemic (2017- March 2020) to early-pandemic (May 2020 to July 2020). We also compared activity and sedentary behaviors on weekdays vs weekends.

## What We Found

### Preschoolers

Sitting and sleeping **decreased** slightly.

Moderate-vigorous physical activity **increased** by **8.5 minutes** per day on weekdays.

### Elementary Schoolers

Sitting and sleeping **increased** by **31 minutes** per day during the weekday.

Moderate-vigorous physical activity **increased** by **1 minute** per day during the weekday.

### Middle Schoolers

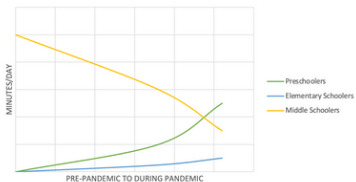
Sitting and sleeping **increased** by **94 minutes** per day during the weekday.

Moderate-vigorous physical activity **decreased** by **15 minutes** per day during the weekday.

Middle schoolers showed **greater** changes compared to preschoolers and elementary schoolers.

Graph 1.

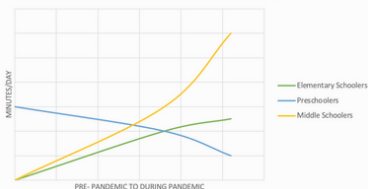
CHANGES IN MODERATE TO VIGOROUS PHYSICAL ACTIVITY (MVPA)



Changes in moderate to vigorous physical activity from pre-pandemic to during pandemic among preschoolers, elementary, and middle schoolers.

Graph 2.

CHANGES IN SEDENTARY BEHAVIORS & SLEEP (SS)



Changes in sedentary behavior & sleep from pre-pandemic to during pandemic among preschoolers, elementary, and middle schoolers.

## What This Means

- Middle schoolers are more **dependent** on school & recreational facilities for physical activity.
- Without access to **structured activities**, they engage in more sedentary behavior.



## Moving Forward

- Let's begin to address these changes so children can **practice healthy behaviors**, now and in the future.
- Let's be **more active** now since COVID-19 restrictions have eased.



## Why It Matters

- We many continue to see **larger gaps** in physical activity by age.
- Structured activities encourage physical activity and may **protect** against behaviors that lead to **obesity**.

**Thank you for participating in our study!**



For question or to learn more, please email: [rdeitch1@jhu.edu](mailto:rdeitch1@jhu.edu)

1. The Child & Adolescent Health Measurement Initiative. 2016 National Survey of Children's Health; Department of Health and Human Services: Washington, DC, USA, 2016.

Link to full article: <https://doi.org/10.3390/ijerph19010286>

Project Website: <http://marylandschoolwellness.org/>

Resources: [https://www.maryland.gov/pages/residents.aspx?view=Children%20and%20Parenting\\_](https://www.maryland.gov/pages/residents.aspx?view=Children%20and%20Parenting_)