

N-95 Masks Have No Effect on Spontaneous Physical Activity

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ABSTRACT

In recent years, the use of facemasks has greatly increased, especially due to the onset of the COVID-19 pandemic. Many individuals were required to wear a face mask for long durations. The impact of mask wearing on spontaneous physical activity (PA) is unknown. **PURPOSE:** This study seeks to determine if wearing an N-95 mask for extended duration would have any impact on spontaneous physical activity. **METHODS:** 12 total participants aged 18-21 yr. were recruited for this experimental cross-over study. Subjects reported to the lab twice, separated by one week, to receive a wrist-worn accelerometer. One condition was control (CON) and subjects did not wear masks. During the second condition, subjects wore an N-95 mask (MASK) for 10-h over the day. Starting condition was randomized for the first subject and the following subjects were assigned alternating starting conditions for a possible ordering effect. Subjects were asked to keep a food and drink log and asked to replicate the results during the second condition. The subjects wore the accelerometer for the entirety of the 10-h with activity counts being taken over 60-s epochs during both conditions. Time spent in sedentary, light, and moderate-to-vigorous PA was calculated according to Freedson 1998 cut-points. Data expressed as means \pm SE. **RESULTS:** 12 college-aged (20.5 \pm 1.5 yr.) male (n=5) and female (n=7) healthy individuals completed the study. There was no statistically significant difference between conditions in the percent of time spent in sedentary (CON: 33.8 \pm 25.2% vs. MASK: 33.7 \pm 26.2%, $P = .996$), light (CON: 49.2 \pm 20.7% vs. MASK: 48.9 \pm 21.2%, $P = .974$), and moderate-to-vigorous (CON: 16.9 \pm 8.7% vs. MASK: 17.4 \pm 9.8%, $P = .909$), behaviors. **CONCLUSION:** The data suggest that wearing a mask for an extended period does not affect spontaneous PA.