CENTER FOR RESEARCH IN HUMAN MOVEMENT VARIABILITY

INTENSITY AND PATTERN OF DAILY PHYSICAL ACTIVITY OF CLAUDICATING PATIENTS

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PURPOSE

- To investigate the intensity level and daily pattern of physical activity among community-dwelling claudicating patients.

INTRODUCTION

- Peripheral artery disease (PAD) shows a prevalence of 3-10% in the general population and as high as 20% in populations older than 70 years[1,2].
- PAD is caused by atherosclerotic plaques that limit blood flow to the lower extremities[3].
- Claudication, pain in the legs during walking, is the most common manifestation of PAD[1].
- Limited information exists on the free-living physical activity of claudicating patients[2].

METHODS

- Patients were recruited from the Vascular Surgery Clinic at the Veterans Affairs Nebraska-Western Iowa Healthcare System in Omaha, Nebraska.
- Physical activity of patients was recorded with Actigraph GT1M activity monitors worn on the hip.
- The activity monitor measured changes in acceleration, measured as activity counts over one-minute time periods.
- Data was collected for seven consecutive days and processed using the ActiLife software program.

Table 1. Patients Demographics

n	Age (years)	ABI	BMI (kg/m²)
44	64.16 ± 6.55	0.46 ± 0.04	28.59 ± 4.725

RESULTS

Table 2. Physical activity measures in claudicating patients

Average Total Daily Steps	Mean (+ SD) Median 95% Confidence Interval	3586.44 (298.02) 3260.36 2985.44 - 4187.44
Average Daily METs per Minute	Mean (+ SD) Median 95% Confidence Interval	1.4549 (0.0011) 1.4537 1.4527 - 1.4570
Average Daily Peak MET per Minute	Mean (+ SD) Median 95% Confidence Interval	1.5783 (0.0068) 1.5644 1.5649 – 1.5917

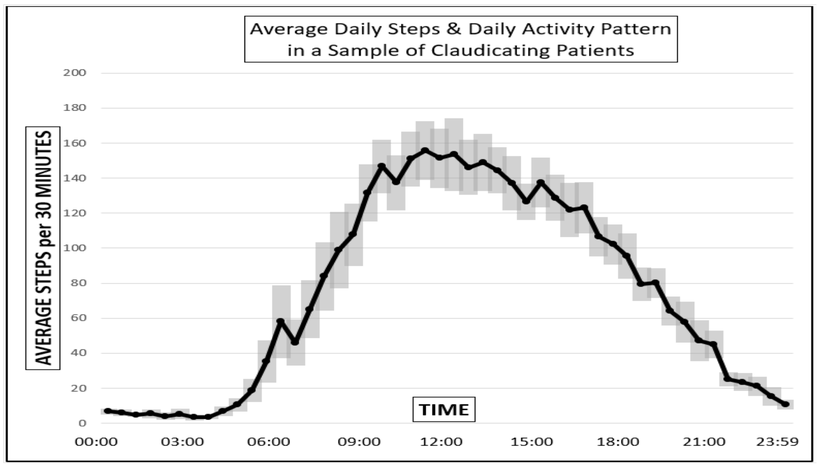

Figure 1. Average daily steps and daily activity pattern in claudicating patients. The black line is the average and the gray shaded bars represent standard error.

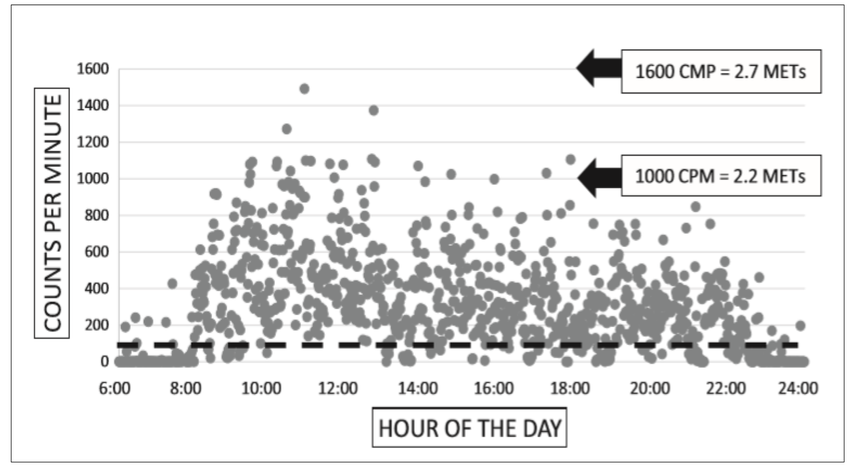

Figure 2. The counts per minute recorded during awake hours of one median-achieving patient. The black dashed line designates 100 counts per minute; any marks below the black dashed line indicate minutes in sedentary activity.

CONCLUSION

- The intensity and peak intensity of the physical activity of the average claudicating patient fluctuate very little during the day and rarely exceed above a light intensity level.
- The average total steps per day of claudicating patients is much lower than the recommendation of 6500 steps per day for individuals living with disability/chronic disease[4].

REFERENCES

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