

Associations between sedentary behavior, blood lipids, and glucose among individuals at high risk for colorectal cancer

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BACKGROUND

- Dyslipidemia and hyperglycemia are associated with increased risk of colorectal cancer (CRC), the third leading cancer diagnosis in the United States.
- Moderate to vigorous physical activity (MVPA) can improve dyslipidemia and hyperglycemia, but the influence of sedentary behavior (SB) is not as clear.

STUDY PURPOSE

To examine cross-sectional associations between SB, blood lipids, and glucose among individuals at high risk for CRC.

METHODS

Inclusion Criteria:

- ≥18 years, no prior cancer diagnosis
- Had ≥ 1 adenomatous polyps removed ≤3 years at scheduled colonoscopy.

Measures

activPAL™ accelerometer

Fasted blood draw



Statistical Analyses

- Pearson correlations explored associations between lipids and SB variables.
- Significant variables ($p < .10$) were included in hierarchical regression models with waist circumference and MVPA.

RESULTS

- Number of bouts of SB >30 minutes were associated with total cholesterol ($r = .353, p = .099$).
- Number of bouts of SB >60 minutes were associated with glucose ($r = .59, p = .002$).

Participant Characteristics (N=23)

	Mean ± Standard Deviation or N(%)
Age (years)	58.9 ± 9.0
BMI (kg/m ²)	27.59 ± 3.32
Waist Circumference (in)	36.61 ± 3.73
Female	12 (52.2)
White	18 (78.2)
MVPA (minutes/day)	71.22 ± 23.02
Number of bouts of SB >30 min/day	4.50 ± 1.13
Number of bouts of SB >60 min/day	1.45 ± 0.83
Total Cholesterol	195.74 ± 36.57
High Density Lipoprotein (HDL, mg/dL)	62.27 ± 11.98
Triglycerides	128.91 ± 55.36
Low Density Lipoprotein (LDL, mg/dL)	148.13 ± 187.42
Glucose (mg/dL) (N=22)	90.65 ± 22.44

CONTACT INFORMATION & FUNDING

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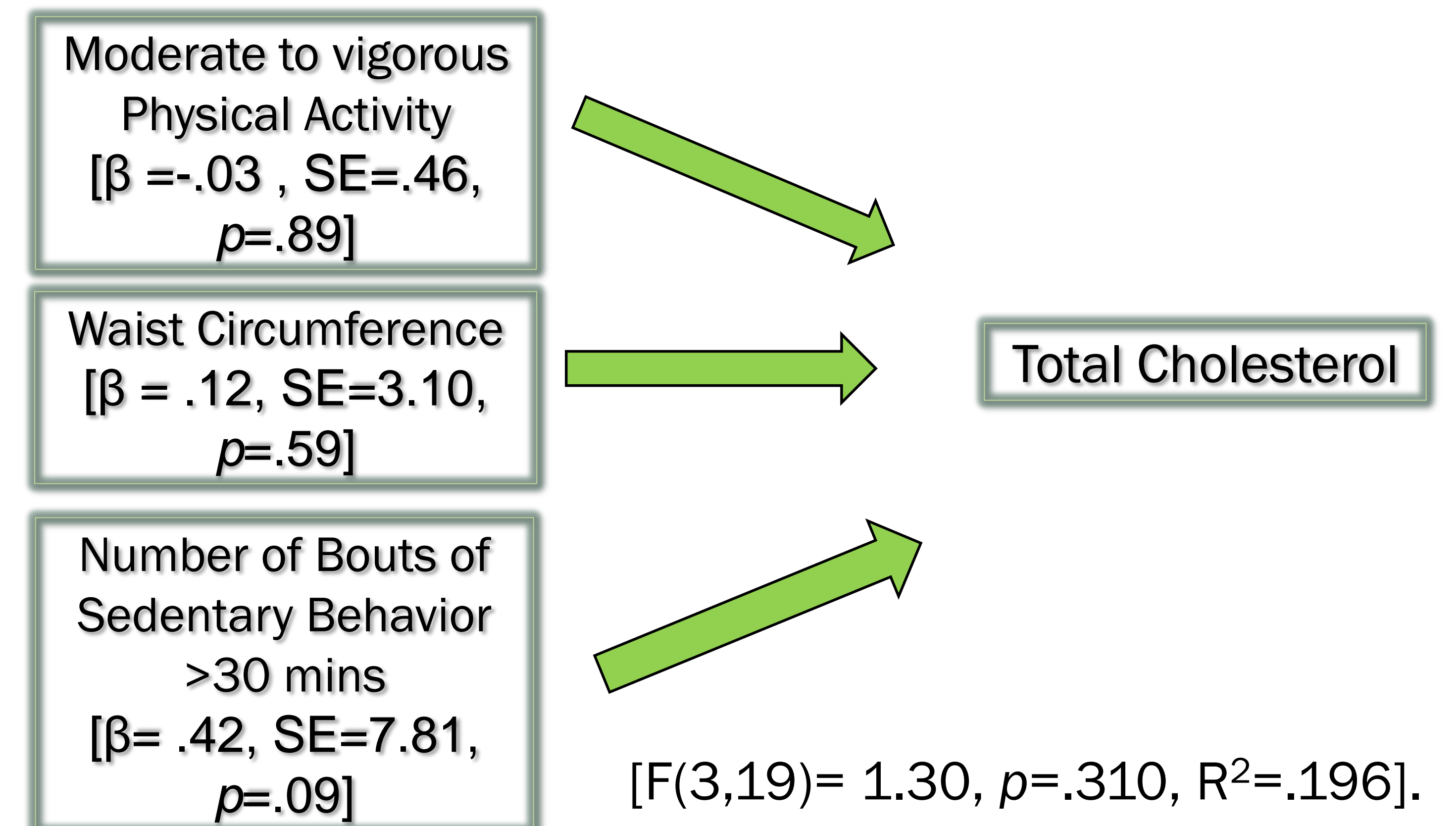
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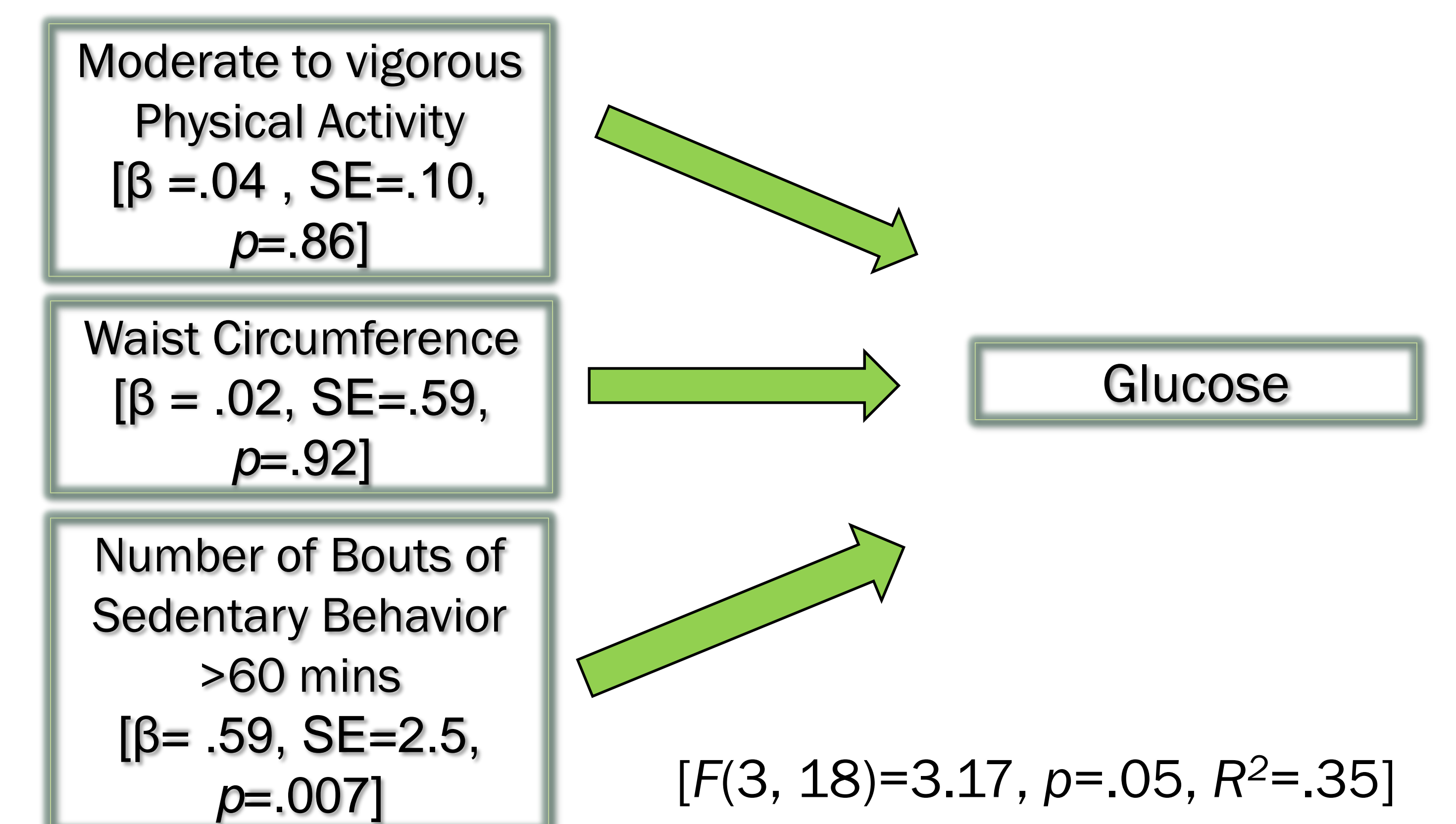
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RESULTS

Hierarchical Regression Model



Hierarchical Regression Model



CONCLUSION

- Individuals at high risk for CRC may benefit from reducing long duration bouts of SB.
- Future studies should further explore the benefits of reducing SB for blood lipid and glucose control and CRC prevention.