



**AMERICAN  
COLLEGE of  
CARDIOLOGY®**

# BE ACTIVE

Effect of Gamification, Financial Incentives, or Both to Increase Physical Activity Among Patients at High Risk of Cardiovascular (CV) Events

## Single-Center, Pragmatic, Randomized, Controlled Trial

**OBJECTIVE:** To evaluate the effect of behavioral economic approaches on physical activity levels in patients with elevated risk of CV disease.

**1,062**  
PATIENTS

**INCLUSION CRITERIA:**

Patients with clinical atherosclerotic CV disease or 10-year risk of myocardial infarction, stroke or CV death  $\geq 7.5\%$ .

**ATTENTION  
CONTROL  
(N=151)**

vs.

**GAMIFICATION  
(N=304)**

vs.

**FINANCIAL  
INCENTIVES  
(N=302)**

vs.

**GAMIFICATION  
+  
FINANCIAL  
INCENTIVES  
(N=305)**

## PRIMARY ENDPOINT

**CHANGE IN DAILY STEPS FROM BASELINE  
THROUGH 12 MONTHS (ADJUSTED DIFFERENCE)**

**CONTROL: 1,418**

**GAMIFICATION: 538 (95% CI, 186.2-89.9; P=0.0027)**

**FINANCIAL INCENTIVES: 491.8 (95% CI, 139.6-844.1; P=0.0062)**

**COMBINED APPROACH: 868 (95% CI, 516.3-1219.7; P<0.0001)**

## CONCLUSION

In patients at increased risk of CV disease, gamification and financial incentives, especially when combined, resulted in increased physical activity over 12 months, and this was sustained over six months of post intervention follow-up.

Fanaroff AC, Patel MS, Chokshi N, et al. Effect of Gamification, Financial Incentives, or Both to Increase Physical Activity Among Patients at High Risk of Cardiovascular Events. The BE ACTIVE Randomized Controlled Trial. Circulation 2024. Presented at ACC.24.

Developed and reviewed by: Heather Wheat, MD, and Kent Brummel, MD