

Personal Activity Intelligence (PAI) - a Novel Activity Metric - Reveals Health Risk in a Large US Population Study

PAI algorithm further validated in the Aerobics Center Longitudinal Study as an effective means of physical activity recommendation to maximize heart disease prevention

Vancouver, British Columbia – June 17, 2020 – A [new study](#) utilizing data from a large American population confirms that Personal Activity Intelligence (PAI) is a superior metric to guide people on how much exercise they need to achieve and maintain optimal heart health. In fact, achieving a weekly PAI score of 100 or more is associated with 4 to 5 years longer life when compared to those who are physically inactive.

The PAI algorithm was conceived by the [Cardiac Exercise Research Group](#) at the Norwegian University of Science and Technology, and it was derived from one of the most comprehensive health studies ever performed, the Nord-Trøndelag Health Study (HUNT). PAI uses heart rate data from wearable devices to assess current levels of activity, with the ideal goal of 100 PAI over a rolling 7-day period.

Healthy men and women followed for decades

For almost 15 years, over 56,000 participants have been followed as part of the Aerobics Center Longitudinal Study in Dallas, Texas – where relatively healthy men and women have gone through complete health check-ups and answered questions regarding their physical activity habits. Researchers calculated PAI scores for all participants based on these answers.

By the end of the study period, more than 3,000 of the participants had died. Individuals who had maintained at least 100 PAI had approximately 20% reduced risk for all-cause mortality compared with those who were physically inactive with 0 PAI. The benefits of 100 PAI were present in both men and women, and in all age groups.

The risk of mortality from cardiovascular disease, such as heart attacks and strokes, was even more profoundly reduced with those who maintained 100 PAI. In fact, there was more than 50% risk reduction for women and nearly 30% for men.

All participants were free from cardiovascular diseases when they entered the study, but some had risk factors such as high blood pressure, unhealthy lipid levels, obesity or high blood sugar. Even among these groups, obtaining 100 PAI or more was linked to reduced risk of death and disease by up to 50%.

Easy to track, easy to understand

PAI is a personal activity score that counts all forms of activity as it is based on heart rate. It considers a person's age, sex and fitness level, and all one needs to track the score is the [PAI Health](#) app and a compatible smartwatch or fitness band that measures heart rate. The PAI score is also featured on Amazfit devices produced by leading wearables manufacturer Huami. The number of PAI points earned depends on effort based on heart rate intensity. The higher the heart rate, the faster one can reach their weekly goal of 100.

While most people are aware that they should be physically active, they are often misled or unclear about what they should be doing, or they lack the motivation to prioritize it. PAI sheds light on the type and quality of activity that will most effectively impact heart health, helping people understand what to focus on when time-pressed and optimize their routines to get the most health benefits. Clinicians and the general population can incorporate PAI recommendations and thresholds in their

physical activity prescriptions and weekly physical activity assessments, respectively, to maximize health outcomes. Importantly, earning 100 PAI or more per week was associated with maximal protection regardless of fulfilling today's [recommendations for physical activity](#).

PAI has the potential to become the new standard for physical activity, addressing the global health problem of inactivity that has reached concerning proportions. Given that PAI is adaptable to all fitness levels, easy to track and includes all forms of physical activity, it could motivate more people to become sufficiently physically active, resulting in profound improvements in public health.

About PAI Health

PAI Health allows organizations to assess, monitor and guide their people to better health to reduce risk and costs, while providing individuals with motivational guidance on recommended physical activity levels for better health. Our mission is to optimize anyone's path to better health by making the science-backed Personal Activity Intelligence (PAI) metric available world-wide through partnerships with insurers, employee wellness programs, technology platforms, health care providers and other industry partners. For more information, visit www.paihealth.com.

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