

## Review Article

# Review of the pros and cons when comparing high intensity interval training to moderate intensity continuous training

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### ABSTRACT

High-intensity interval training (HIIT) has gained significant popularity in recent years as an effective exercise method for individuals seeking time-efficient workouts with substantial health benefits. For those leading busy lives, such as working professionals, engaging in regular physical activity holds pivotal importance. It serves as a catalyst for not only enhancing physical well-being but also nurturing mental health and boosting overall productivity. This review compares HIIT to traditional exercise to identify the advantages and disadvantages providing a valuable insight for healthcare professionals when educating patients on the matter.

**Keywords:** HIIT, Exercise, Sports, Professionals, Fitness

### INTRODUCTION

High-intensity interval training (HIIT) has gained significant popularity in recent years as an effective exercise method for individuals seeking time-efficient workouts with substantial health benefits.<sup>1</sup> For those leading busy lives, such as working professionals, engaging in regular physical activity holds pivotal importance. It serves as a catalyst for not only enhancing physical well-being but also nurturing mental health and boosting overall productivity.<sup>2</sup> This review aims to compare HIIT with traditional exercise methods concerning their effectiveness for working professionals. By analyzing recent scientific data, we aim to identify the advantages and drawbacks of HIIT and provide valuable insights for healthcare professionals and employers seeking evidence-based exercise recommendations for this specific demographic.

### METHODS

For this review, we established specific criteria to ensure the selection of relevant studies. Inclusion criteria

encompassed peer-reviewed articles and clinical trials published between 2019 and the present, focusing on HIIT and traditional exercise methods for working professionals. Studies involving adult participants aged 18-65 years were considered, and those available in the English language were prioritized. Exclusion criteria involved studies with inadequate sample sizes, irrelevant outcomes, and those not specifically targeting working professionals. Studies conducted on special populations (e.g., elite athletes or individuals with chronic conditions) were excluded to maintain the focus on the target audience.

We conducted a comprehensive literature search across electronic databases, including Scopus, ResearchGate, PubMed, and Google Scholar. The search terms employed were "high-intensity interval training," "HIIT," "physical activities" "traditional exercise," "working professionals," and variations thereof. Boolean operators were used to combine these terms, facilitating the retrieval of relevant articles.

Data and information extracted from the selected studies included study design, participant characteristics,

intervention details, outcome measures, and results pertaining to the effects of HIIT compared to traditional exercise methods on working professionals. To analyze the data, a qualitative synthesis approach was employed.<sup>3</sup> Employing a thematic analysis approach, we diligently identified recurring themes and patterns within the literature, shedding light on the effectiveness of HIIT for the specific target group. Furthermore, when applicable, we aggregated quantitative data and subjected them to meta-analytic techniques to offer a stronger and more comprehensive overview of the results.

## **COMPARISON BETWEEN HIIT AND TRADITIONAL EXERCISE METHODS**

Both HIIT and traditional exercise methods have been shown to be effective in achieving various fitness goals among working professionals. HIIT has established advanced consequences in improving cardiovascular health and anaerobic capability as compared to non-stop, slight-depth exercise.<sup>4</sup> Also, doing high-intensity interval training (HIIT) has been connected to bigger improvements in things like how well your body uses oxygen (VO<sub>2</sub> max), muscle strength, and power.<sup>5</sup> But, different ways of exercising like regular cardio workouts and lifting weights help you get better at staying strong for a long time, becoming more flexible, and doing everyday movements more easily.<sup>6</sup> The preference between HIIT and traditional exercise methods may additionally depend on precise health goals and individual possibilities.

Both HIIT and conventional exercise contribute to normal fitness and wellness in different ways. HIIT's capacity to raise post-workout metabolic rate can result in more calorie expenditure and fat loss, helping weight control and metabolic fitness.<sup>7</sup> Moreover, HIIT's superb effect on cardiovascular fitness might also lessen the threat of chronic diseases. Traditional exercise methods, however, have been linked to stress reduction, improved temper, and enhanced intellectual well-being.<sup>8</sup> Doing exercises where you keep moving at a steady pace, like jogging or cycling, can release chemicals called endorphins that make you feel good and help you relax.<sup>9</sup> The preference between HIIT and traditional workouts should take into account the character's holistic health desires and alternatives.

Long-term sustainability and way of life integration are vital factors to keep in mind when comparing HIIT and conventional exercise techniques. HIIT's time efficiency and practicality make it an appealing choice for busy running professionals with restricted time for exercise.<sup>10</sup> However, the excessive-intensity nature of HIIT can also lead to a higher dropout rate or elevated danger of overtraining, mainly for those new to exercise or with certain health conditions.<sup>11</sup> On the other hand, conventional exercise methods can be more readily available and less difficult to maintain over the long term. Incorporating sports consisting of strolling, jogging, or yoga into everyday exercises can be a more plausible approach for a few individuals.<sup>12</sup> Finding a balance

between HIIT sessions and traditional exercises may be a viable strategy for achieving long-term fitness goals while ensuring safety and adherence.

## **ADVANTAGES OF HIIT FOR THE WORKING INDIVIDUAL**

### ***Enhancements in cardiovascular health and fitness***

HIIT has demonstrated remarkable positive impacts on cardiovascular health and fitness for those with busy schedules. A number of studies have highlighted the improvements in VO<sub>2</sub> max, a vital measure of cardiovascular fitness, when incorporating HIIT.<sup>13</sup> The intervals of intense effort elevate heart rate, thereby enhancing cardiovascular endurance and overall efficiency. Moreover, regular participation in HIIT has been linked to reduced risk factors for cardiovascular diseases, such as better blood pressure, lower LDL cholesterol levels, and improved arterial function.<sup>14</sup>

### ***Time-saving and feasible exercise solution***

For working individuals grappling with limited time, HIIT offers a practical and time-saving exercise option. The short bursts of intense activity interspersed with brief rests enable significant fitness gains in a shorter timeframe compared to conventional workout methods.<sup>15</sup> An average HIIT session can be completed in 20 or 30 minutes, making it less difficult for busy experts to incorporate exercise into their every-day workouts. Because high-intensity interval training (HIIT) is flexible, you can do the workouts at home, in your office, or at the gym without needing a heavy equipment.

### ***Potential for weight management and fat loss***

HIIT has garnered recognition as an effective approach for weight management and fat loss among busy professionals. Studies imply that HIIT can result in better fat oxidation during and after exercise as compared to non-stop, slight-depth exercises. The high-intensity periods improve metabolic charge and facilitate post-workout calorie burning, contributing to fat loss and weight maintenance. Additionally, HIIT may be a useful resource for retaining lean muscle tissue while decreasing body fat, thereby enhancing frame composition and metabolic health.<sup>7</sup>

### ***Positive impact on mental well-being and stress reduction***

Engaging in HIIT exhibits favorable effects on mental well-being and stress reduction for those with demanding work lives. HIIT sessions trigger the release of endorphins, typically known as "feel-good" hormones that may alleviate strain and tension and uplift temper. Regular participation in HIIT has been linked to reduced symptoms of despair and advanced cognitive features. Also, because high-intensity interval training (HIIT) sessions are quick

and intense, they can give your mind a break from the stresses of work. This can help improve your overall balance between work and life, making you feel better in the long run.<sup>16</sup>

## **DRAWBACKS OF HIIT FOR WORKING PROFESSIONALS**

### ***Risk of injury and safety considerations***

While acknowledging its benefits, it's important to note that HIIT is associated with a higher risk of injury compared to conventional exercise techniques. The full-on nature of HIIT might also exert immoderate strain on joints, muscle groups, and tendons, doubtless resulting in overuse injuries.<sup>17</sup> Individuals who are working professionals and have pre-existing musculoskeletal problems or insufficient conditioning might be at a heightened vulnerability to injuries when engaging in HIIT sessions. To mitigate this risk, proper warm-up, cool-down, and suitable exercise progression are essential. Ensuring proper form and technique during high-intensity intervals is crucial to prevent injury.

### ***Suitability for individuals with specific health conditions***

HIIT may not be suitable for all working professionals, especially those with certain health conditions. Individuals with cardiovascular issues, hypertension, or metabolic disorders should consult healthcare professionals before engaging in HIIT.<sup>18</sup> The intense and sudden changes in heart rate during HIIT may pose risks for those with heart-related conditions. Additionally, working professionals with joint problems or orthopedic limitations may find HIIT exercises challenging or unsafe. Personalized exercise recommendations based on individual health profiles are essential to ensure safety and effectiveness.

### ***Perceived barriers and adherence challenges***

One potential drawback of HIIT for working professionals is adherence challenges. The intense nature of the workouts may deter some individuals from maintaining a consistent exercise routine.<sup>19</sup> Lack of motivation, time constraints, and exercise-related discomfort may lead to reduced adherence to HIIT programs. Moreover, individuals accustomed to lower-intensity exercise may find the transition to high-intensity intervals difficult. Creating a supportive environment, providing suitable modifications, and incorporating variety into HIIT routines can help improve adherence.

## **ANALYSIS OF RECENT SCIENTIFIC UPDATES**

Recent scientific studies on HIIT and traditional exercise methods for working professionals have yielded valuable insights. Several studies have consistently demonstrated that HIIT is effective in improving cardiovascular fitness, anaerobic capacity, and VO<sub>2</sub> max.<sup>5,13</sup> Moreover, HIIT has shown promising results in promoting fat loss and weight

management among working professionals.<sup>7</sup> Traditional exercising methods, which include consistent-state cardio exercises and resistance training, have additionally been found effective in improving muscular persistence, flexibility, and ordinary purposeful moves.<sup>6</sup>

Despite the overall wonderful findings, there were some conflicting or inconclusive outcomes in the literature. One study mentioned a greater risk of injury amongst leisure members engaged in HIIT, leading to concerns about its safety for certain populations.<sup>17</sup> Two studies found that HIIT might not be suitable for all older adults due to potential challenges related to joint health and adaptation to high-intensity exercise.<sup>12,18</sup> Furthermore, the long-term sustainability of HIIT for some individuals has been questioned, with reports of reduced adherence and dropout rates.<sup>18</sup>

### ***Identifying research gaps and future directions***

While the existing literature provides valuable insights, there are still research gaps that warrant further investigation. First, the long-term effects and safety of HIIT among working professionals with various health conditions need more attention. Secondly, the comparison between different variations of HIIT protocols and their specific impacts on working professionals' fitness and well-being requires further exploration. Additionally, greater research is needed to pick out the most reliable frequency, intensity, time, and type of exercise (FITT) for achieving diverse health goals in this precise demographic. Understanding character differences and choices in adherence to HIIT and conventional exercise strategies also can help tailor workout suggestions to satisfy the desires of working professionals.

To advance the field, future studies should adopt rigorous study designs with larger and diverse samples, incorporating control groups and long-term follow-ups. Utilizing advanced technologies, such as wearable fitness trackers and mobile applications, can provide valuable real-time data on exercise adherence and outcomes. Collaborations between researchers, healthcare professionals, and employers can facilitate the implementation of evidence-based exercise programs tailored for working professionals' specific needs. Overall, recent scientific updates have shown that both HIIT and traditional exercise methods offer significant benefits for working professionals. However, there are conflicting results regarding safety and long-term adherence. To bridge the study gaps, similarly, research with numerous populations and in-depth exploration of an individual preferences and health concerns are vital.

## **CONCLUSION**

HIIT gives numerous advantages for working specialists, such as stepped-forward cardiovascular health, time performance, weight management capacity, and effective effects on intellectual well-being. However, HIIT also

poses drawbacks, including a better chance of harm, concerns about suitability for positive health conditions, and ability-demanding situations. When comparing HIIT and traditional exercise methods, both have demonstrated effectiveness in achieving specific fitness goals for working professionals. HIIT is particularly advantageous for cardiovascular improvements, time-efficient workouts, and fat loss potential, while traditional exercise methods excel in enhancing muscular endurance, flexibility, and overall functional movements. Healthcare professionals should consider individual health profiles and specific goals when recommending exercise regimens for working professionals. For those without contraindications, HIIT can be incorporated strategically to capitalize on its benefits while addressing safety concerns and adherence challenges. Employers can play a vital role in supporting employees' fitness by promoting workplace wellness programs that offer a blend of HIIT and traditional exercise options to cater to diverse preferences and fitness levels.

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