二零二六年三至四月雙月刊

www.hkpfa.org.hk

中國香港體適能總會

健康體適能社區期刊

HEALTH & FITNESS COMMUNITY PAGE

編者的話

近年，Hyrox迅速成為全球健身及運動科學領域備受關注的新興運動。作為結合耐力跑與功能性訓練的混合式體能賽事，Hyrox以標準化賽制為基礎，由八段一公里跑步及八個功能性訓練站交替組成，結構清晰且具可比較性，能全面評估參與者的心肺耐力、肌力、肌耐力、爆發力及核心穩定性。從生理學角度而言，Hyrox要求有氧系統、無氧糖解系統及ATP-PC系統協同供能，並動用全身主要肌群，充分反映現代體適能訓練對混合體能能力的重視。值得注意的是，Hyrox的價值並不局限於競技表現。其公開組、精英組、雙人組及接力組等分層參與模式，有助降低不同年齡、能力水平及訓練背景人士的參與門檻。無論是青年運動愛好者、中年健身參與者，抑或希望維持功能性體能的年長人士，均可因應自身能力循序漸進地參與訓練與比賽。此外，賽事中的推、拉、搬運、蹲舉及跑步等動作，與日常生活所需的基本活動能力密切相關，有助促進大眾建立更全面、實用及可持續的運動習慣。Hyrox的興起提醒我們，未來體適能推廣不應只聚焦單一運動表現，而應重視跨年齡、跨能力及跨社群的參與機會。透過循證訓練、安全指導與社群支持，混合式體能運動有潛力成為促進全民健康、提升運動參與及連結社區的重要平台。

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專題文章

Hyrox為何能成為適合不同年齡層參與的新興運動？

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要點：

- Hyrox 年紀最大的參賽者高達 77 歲，證明年齡從來不是參與這項運動的阻礙，2025 年全球已有超過 55 萬人參賽、35 萬人觀賽，Hyrox 早已從小眾賽事躍升為國際級的運動現象。
- 參賽者以 30 歲以上族群為主力，且女性參與比例持續攀升，打破這類賽事專屬年輕男性的刻板印象。
- 推雪橇、搬沙袋、農夫走路等比賽項目，本身就是日常生活中推、拉、搬、移的基礎活動能力
- 即使不擅長跑步或力量訓練也無需卻步，雙人組與接力賽讓參與者透過分工合作，有效降低個人負荷。

引言

近年來，Hyrox成為全球健身界備受關注的新興運動，其快速擴張不僅反映出市場對混合式體能賽事的需求，亦顯示其賽制設計具備跨年齡層參與的潛力（Fernández-Navarrete et al., 2025）。作為一項結合跑步與功能性訓練的運動，Hyrox以清晰賽制、固定項目結構及可調整參與模式，吸引不同運動背景的人士參與（Brandt et al., 2025）。從公共衛生與運動參與的角度而言，Hyrox的吸引力並不僅在於其競技性，更在於其兼具體能訓練、功能性價值及社群支持等多重特徵，這些因素共同構成其跨年齡層普及的基礎（Caumeran & Jesus, 2026）。

清晰賽制與低門檻

Hyrox之所以能夠吸引不同年齡層參與，首先在於其賽制具備相對清晰且易於理解的特點。比賽由八組一公里跑步與八個功能性動作交替組成，參與者可清楚預期比賽內容與完成要求（Hyrox, 2025）。與某些需要高度技術掌握或長時間專項訓練的運動相比，Hyrox的基本架構由跑步與常見功能性動作構成，包括滑雪機（Ski Ergometer）、推雪橇（Sled Push）、拉雪橇（Sled Pull）、波比蛙跳（Burpee Broad Jumps）、划船（Rowing）、農夫走路（Farmers Carry）、沙袋弓箭步（Sandbag Lunges） 與藥球（Wall Balls）。這些動作與一般生活中的基本身體活動具有高度連結，因此較容易被參與者理解及掌握。對初學者、平日運動經驗較少者，或希望重新建立運動習慣的人士而言，這種相對明確的結構有助降低認知門檻與心理壓力，從而提高其投入運動的可能性。

圖1：Hyrox功能性動作圖示（Hyrox, 2025）

分層參與與年齡包容

除了入門門檻較低之外，Hyrox亦透過分組制度回應不同年齡層及能力水平的差異。如圖2所示，比賽設有個人公開賽（Open）、個人菁英賽（Pro）、雙人組（Doubles）及接力賽（Relay）等形式，參與者可按自身能力、經驗及參與目的選擇適合的組別（Hyrox, 2025）。在個人組方面，年齡分組涵蓋由16至24歲的U24組，以至60歲以上的多個年齡級別；雙人組及接力賽亦設有不同平均年齡分組。更重要的是，官方明確指出年齡並非參與限制，並提到年紀最大的參賽者曾達77歲，顯示該賽事在制度上具備跨年齡包容性。從運動參與角度而言，這種以能力及年齡並行劃分的設計，有助擴大參與基礎，亦降低不同年齡層對「比賽只屬於年輕人」的排斥感。

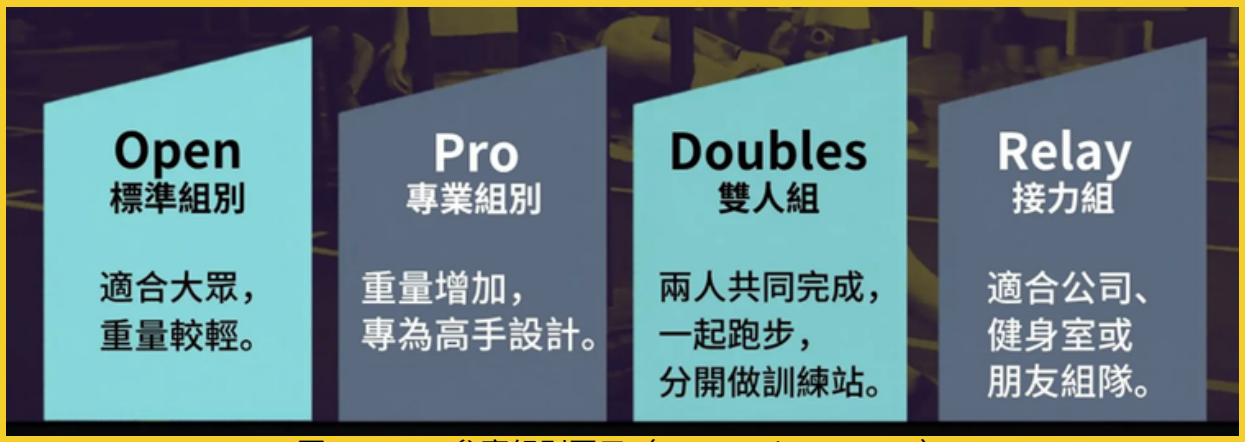

圖2：Hyrox參賽組別圖示（Hyrox Taiwan, 2025）

混合式訓練與健康效益

Hyrox屬於混合型運動，其訓練內容同時涉及心肺耐力、肌力、肌耐力與核心穩定性（圖3），因此可回應不同年齡層的體能需求（Brandt et al., 2025）。從健康促進的觀點來看，年輕參與者可藉此挑戰速度與表現；中年人士可透過持續訓練維持體能、肌肉功能及日常活動能力；年長參與者則可按自身條件循序漸進地投入，從而提升身體活動能力與運動信心。Hyrox標準賽的設計目標是提供一場「具有挑戰性但可以完成」的比賽，而較高級別則提供更高負荷的參與選項，反映其強調分層參與而非單一化標準。從運動科學角度而言，Hyrox的優勢在於其不單純強調單一體能指標，而是重視整體體能的平衡發展，因此不同參與者較有機會在不同項目中發揮自身優勢。

圖3：Hyrox覆蓋心肺耐力、肌力、肌耐力三種體適能指標（AASFA, 2020）

功能性動作與生活連結

另一方面，Hyrox的功能性訓練特徵亦是其受到廣泛關注的重要原因。比賽中的推、拉、搬運與移動等動作，與日常生活中所需的基本活動能力密切相關。對年輕人而言，這類訓練有助提升整體運動表現；對久坐工作者而言，可作為改善體能不足的一種方式；對中年及年長參與者而言，則有助維持基本活動能力與功能性體能（Hyrox, 2025）。換言之，Hyrox不僅是一項競技運動，亦可被視為一種與生活功能相連的訓練模式，這使其更容易獲得不同年齡層的認同。

社群支持與持續參與

Hyrox的參與規模亦支持其跨年齡層擴張的觀察。Hyrox在2025年已於超過80場賽事中吸引超過55萬名運動員及35萬名觀眾，顯示其已由小眾健身賽事發展為具國際規模的運動現象（Fernández-Navarrete et al., 2026）。另有資料指出，Hyrox目前已在全球超過30個國家舉辦賽事，並持續擴展至新的國家與城市。這種擴張不僅反映市場需求，也意味著其賽事形式已被不同文化與年齡群體接受。就人口特徵而言，相關報道指出Hyrox參與者以30歲以上族群為主，首次參賽者比例高，而女性參與亦持續上升，反映其吸引力並不限於年輕男性健身族群。

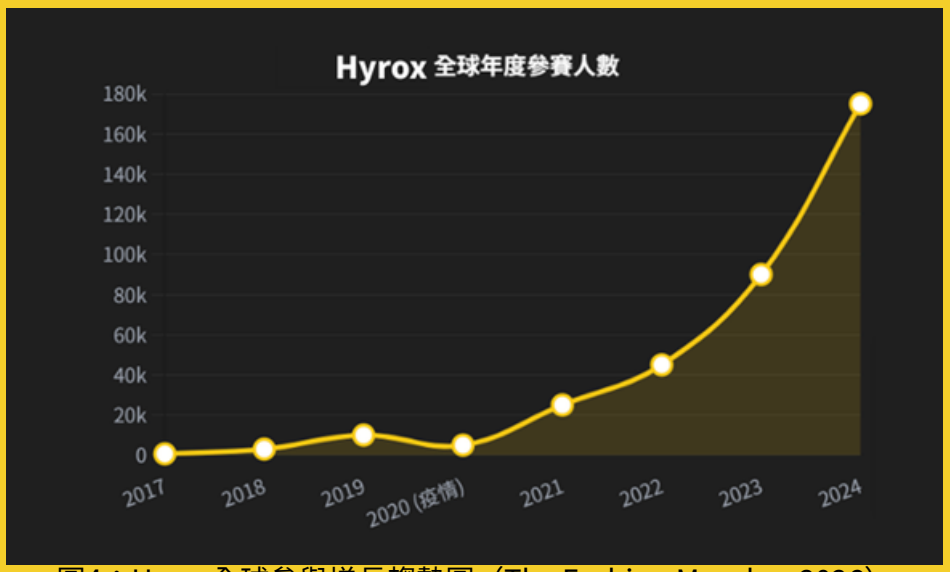

圖4：Hyrox全球參與增長趨勢圖（The Fashion Muscles, 2026）

研究亦顯示，影響Hyrox參與忠誠度的關鍵因素，主要包括社群歸屬感、訓練準備度、挑戰滿意度、營運安全質素及教練支援，而非單純依賴市場推廣（Caumeran & Jesus, 2026）。部分參與者報名Hyrox，並不僅僅是為了競賽成績，而是希望與朋友、家人或訓練夥伴共同完成挑戰。由於Hyrox的備賽過程通常涉及跑步、力量、耐力與功能性動作的整合，參與者往往需要與訓練夥伴持續投入相近節奏的訓練。這種長期、重複且具目標導向的互動，有助於建立穩定的社會連結，使運動經驗由個人挑戰延伸為具社交屬性的共同實踐。

彈性調整與安全參與

值得注意的是，Hyrox雖然具有跨年齡層的參與潛力，但並不意味著所有人都可以以相同強度投入。不同年齡及健康狀況的參與者，仍需根據自身能力調整訓練強度，例如由較低強度開始，逐步建立體能基礎。這亦反映出Hyrox的另一項特點，即其並不要求所有人以相同參與模式進入，而是容許參與者在不同階段持續進步（Hyrox Taiwan, 2025）。官方亦設有雙人組與接力賽等形式，讓參與者可透過分工與合作降低單次負荷，進一步提升其可及性。這種彈性有助提升其對一般大眾的可及性，並使其較其他高技術門檻的競技運動更具普及潛力。

結論

總括而言，Hyrox之所以能成為適合不同年齡層參與的新興運動，關鍵在於其兼具清晰賽制、分層參與、混合式訓練、功能性價值與社群支持等特徵。它既可回應年輕人對挑戰的需求，亦可滿足中年人對體能維持的關注，同時為年長者提供一種可調節、可持續的運動選擇。從更宏觀的角度來看，Hyrox的價值不僅在於比賽本身，更在於其為不同年齡參與者提供了按自身步伐投入運動的可能性，從而促進更健康、更持續的運動參與模式。

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Physiological demands of Hyrox

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Highlights：

- Eight kilometers of running. Eight brutal functional stations. One standardized race format that makes every finish time directly comparable — anywhere on the planet.
- In a single Hyrox race, your body fires all three energy systems at once: aerobic metabolism carries you through the kilometers, anaerobic glycolysis powers the high-intensity stations, and ATP-PC delivers instant explosive bursts when you need them most.
- The sled push torches your posterior chain and hip extensors. Wall balls punish your quads and shoulders. Rowing demands relentless full-body coordination. Each of the eight stations is a distinct physiological puzzle, corroborated by electromyography and biomechanical research.

Introduction

Hyrox is a standardised hybrid fitness race combining 8 kilometres of running with 8 functional exercise stations. The event requires integrated aerobic and anaerobic energy system contributions. It engages major muscle groups of the body and has rapidly expanded globally to over 30 countries and more than 85 cities. This article will look at a scientific overview of Hyrox’ s race format, global expansion, and the physiological demands imposed by its unique structure. We will also discuss the details of different energy system contributions (aerobic, anaerobic glycolysis, ATP-PC) and primary muscle groups targeted for each station. The discussion addresses the implications for concurrent strength and endurance training and the accessibility of Hyrox to a broad participant base.

Hybrid racing events, exemplified by Hyrox, have emerged as a prominent modality in the fitness landscape, combining endurance running with functional strength and conditioning exercises. Since its inception in 2017, Hyrox has experienced rapid global expansion and has been recognised for its standardised format, which enables direct comparison of performance across locations and population (Hyrox, 2026). The physiological demands of such events require the integration of multiple energy systems and the recruitment of diverse muscle groups, presenting unique challenges and adaptations for the participants (Duffield et al., 2005).

Race Format and Categories

Each Hyrox event consists of eight 1 km running intervals, each followed by a functional exercise station, for a total of 8 km running and eight stations, as shown in Figure 1. This format is consistent worldwide, facilitating a unified ranking system and standardised competition.

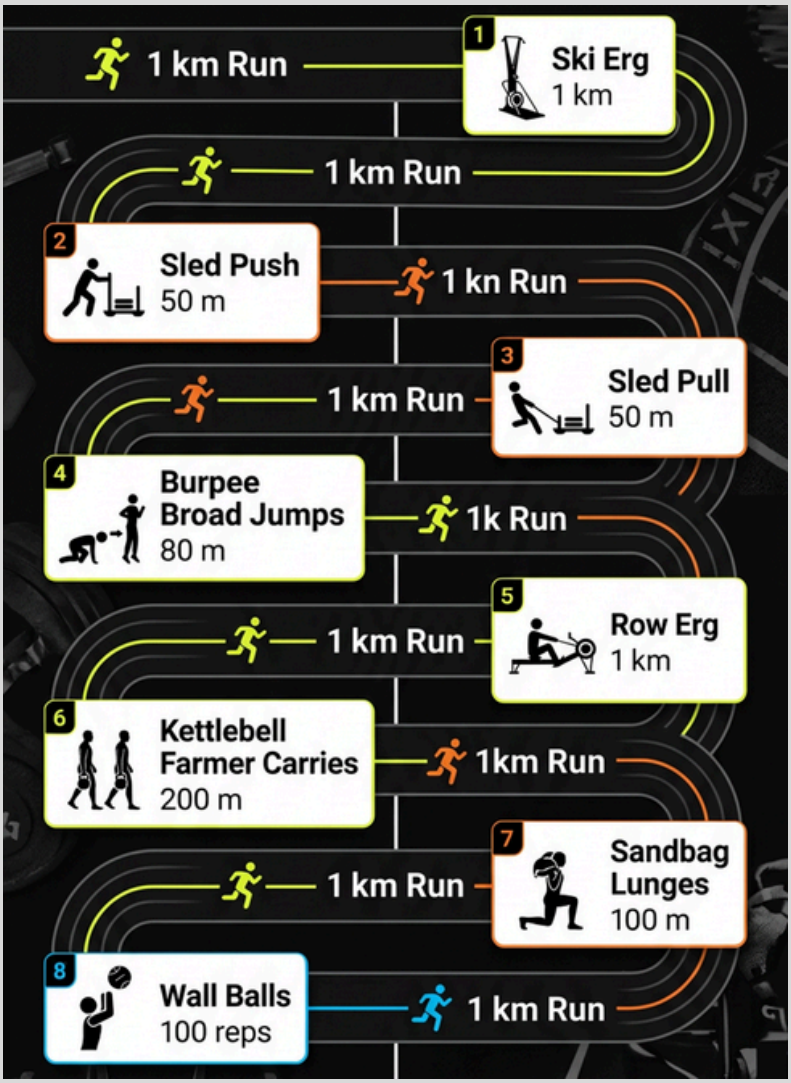

Figure 1. Hyrox Race format (created by Nano Banana 2)

Competition categories and weight distinctions

Hyrox offers multiple divisions to accommodate varying fitness levels and team preferences of open (men/women) - standard weights, solo; pro (men/women) - heavier weights, solo; doubles (men/women/mixed) - two athletes share the workload at each station; pro doubles - doubles format with pro weights; and relay (men/women/mixed) - four-person teams, each member completes two runs and two stations. Doubles and relay categories use open weights for each gender (Hyrox, 2025).

Table 1. Station-specific weights by competition category (created by Nano Banana 2).

Station	Open Men	Pro Men	Open Women	Pro Women
Sled Push	152 kg	202 kg	102 kg	152 kg
Sled Pull	103 kg	153 kg	78 kg	103 kg
Farmers Carry	2 × 24 kg	2 × 32 kg	2 × 16 kg	2 × 24 kg
Sandbag Lunges	20 kg	30 kg	10 kg	20 kg
Wall Balls	6 kg	9 kg	4 kg	6 kg

Physiological demands of hybrid racing

Hybrid racing requires the coordinated integration of all three major energy systems. The aerobic system predominates during running intervals and recovery phases and supports sustained energy production and facilitating repeated-effort capacity (Gastin, 2001). Anaerobic glycolysis becomes increasingly important during high-intensity functional stations, such as the sled push, sled pull, burpee broad jumps, and wall balls, where rapid ATP resynthesis is required for efforts lasting from approximately 10 seconds to several minutes (Bangsbo et al., 1997; Gastin, 2001). The ATP-PC system provides immediate energy during explosive, short-duration actions, particularly at the onset of maximal efforts and during faster-paced doubles or relay formats, where athletes may sustain higher intensities across shorter work bouts (Bangsbo et al., 1997; Gastin, 2001). The relative contribution of each system varies according to race category, exercise station, movement intensity, pacing strategy, and the athlete’ s conditioning status (Brooks et al., 2005; Hoffman, 2014).

Concurrent endurance and strength training, as required in Hyrox, can induce an interference effect, potentially attenuating maximal adaptations in either domain compared to single-mode training. However, structured hybrid programs can yield improvements in both aerobic capacity and muscular strength, which are essential for optimal performance in this format (Hoffman, 2014).

Station-by-station physiological analysis

Table 2 summarises the physiological and biomechanical demands of each Hyrox station by identifying the primary muscle groups, dominant energy systems, and relevant scientific findings. Running is characterised primarily by aerobic metabolism, whereas functional stations impose varying combinations of ATP-PC, anaerobic glycolytic, and aerobic demands depending on intensity, duration, and movement pattern. High-force stations such as sled push and sled pull emphasise posterior-chain and upper-body activation, while cyclical tasks such as rowing require substantial full-body aerobic capacity. Overall, Hyrox is hybrid in nature which requires integrated endurance, strength, power, muscular endurance, and movement-specific stabilisation.

"Physiological and Biomechanical Demands Across HYROX Stations"

Station	Primary Muscle Groups	Dominant Energy System(s)	Key Scientific Findings
Running (8 × 1 km)	Quadriceps, hamstrings, glutes, calves, core	Aerobic major; anaerobic minor	Running economy and endurance rely primarily on aerobic metabolism (Gastin, 2001)
Ski Erg (1 km)	Lats, triceps, abdominals, glutes, quadriceps, hamstrings	Aerobic; anaerobic glycolysis; ATP-PC	High trunk and arm activation; core contributes to stabilization
Sled Push (50 m)	Quadriceps, glutes, calves, core, pectorals, shoulders	ATP-PC; anaerobic glycolysis	Posterior-chain dominant with high force output
Sled Pull (50 m)	Hamstrings, glutes, lower back, biceps, forearms, lats	ATP-PC; anaerobic glycolysis	High posterior-chain and upper-body activation
Burpee Broad Jumps (80 m)	Quadriceps, glutes, calves, core, chest, triceps	ATP-PC during jumps; anaerobic glycolysis	Plyrometric stretch-shortening cycle with high lower-limb activation
Row Erg (1 km)	Quadriceps, gluteus maximus, hamstrings, lats, core, arms	Approximately 70% aerobic; 30% anaerobic	Full-body cyclical movement with high VO_{2max} demand (Bjerkefors et al., 2018; Paavolainen et al., 1999; Perrault & Turcotte, 1994; Spencer et al., 2005)
Kettlebell Farmer Carries (200 m)	Forearm flexors, upper trapezius, gluteus medius, core	Anaerobic for shorter efforts; aerobic contribution increases with duration	Requires substantial grip strength and core stability; high upper-body activation (Beardsley & Contreras, 2014)
Sandbag Lunges (100 m)	Quadriceps, gluteus maximus, gluteus medius, hamstrings	Anaerobic glycolysis; aerobic	Requires unilateral lower-body strength and core stabilization (Escamilla et al., 2012)
Wall Balls (100 reps)	Quadriceps, gluteus maximus, deltoids, triceps, core	Anaerobic glycolysis; aerobic	Squat-to-press movement with high lower- and upper-body demand (Schoenfeld, 2010)

The physiological demands of Hyrox reflect on the requirements of hybrid racing, mainly stressing on both aerobic and anaerobic energy production systems. The alternation between running and functional stations challenges the cardiovascular, metabolic, and neuromuscular systems. Literature supports that each station shows distinct patterns of muscle activation and energy system usage, with electromyography and biomechanical studies supporting the involvement of major muscle groups throughout the event (Beardsley & Contreras, 2014; Escamilla et al., 2012). The accessibility of Hyrox is enhanced by its scalable format, standardised rules, and broad appeal across all ages and fitness levels.

Conclusion

Hyrox represents a standardised, globally expanding hybrid fitness competition that integrates endurance and strength modalities. The event imposes significant physiological demands, requiring coordinated contributions from aerobic and anaerobic energy systems and engaging major muscle groups throughout the body. All in all, Hyrox is more than just a race. It’s a global phenomenon that inspires people of all backgrounds to push their limits, embrace fitness, and have fun while doing it.

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