

**WARRIOR PERFORMANCE LAB**

PRO PERFORMANCE RESOURCE

**ADVANCED**

# HYROX SUBSTITUTES GUIDE

Race-transfer systems for limited-equipment training

Transfer scoring | station calibration | advanced programming | six sessions

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**SEASON 26/27**

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HOW TO USE THIS GUIDE

# Build transfer - not random fatigue

A substitute earns its place by preserving the demand that matters. It does not need to look identical, but it should reproduce enough of the station's force direction, posture, duration, muscular load, and breathing cost to improve race performance.

1 - CHOOSE

## The substitution hierarchy

1. Actual movement or official equipment.
Use it whenever access and training phase allow.

2. Same force direction and joint sequence.
Examples: manual treadmill drive for sled push; straight-arm cable pull for SkiErg.

3. Same local muscular limit plus similar duration.
Use this when the exact pattern is unavailable.

4. Metabolic match only.
Bike, elliptical, or circuit work can preserve engine demand, but it does not replace technical exposure.

2 - SCORE

## WPL Transfer Score - 10 points

Score each area from 0 to 2:

Movement and force vector
Prime muscles and tissue demand
Duration and density
Posture and technical constraint
Effect on the next run

8-10: primary race-prep option
6-7: useful secondary option
0-5: general conditioning only

3 - APPLY

## The advanced rule: change one variable at a time

Start by matching the target station time. Then progress only one lever: load, speed, uninterrupted work, rest, technical precision, or the run that follows. If you make every variable harder at once, you can no longer tell whether the substitute is improving transfer or only increasing fatigue.

Race-equipment anchor: In the final 4-8 weeks, keep regular exposure to the actual stations whenever possible. Substitute training supports race skill; it does not replace learning the real equipment, movement standards, or pacing decisions.

IMPORTANT

## Training substitute does not mean race modification

These are training options for equipment constraints. On race day, athletes must perform the prescribed movements, distances, loads, and standards for their division. Use the current official HYROX rulebook as the final authority.

WPL SUBSTITUTION LAB

# Calibrate before you intensify

There is no universal rep conversion between a row, bike, cable pull, treadmill drive, or strength movement. Use the athlete's time, output, posture, and recovery response to build an individual match.

| Step | What to measure | How to use it |
|---|---|---|
| 1. Anchor | Actual station time or realistic target window | Record time plus RPE, breathing recovery, and technical breakdown point. |
| 2. Match | Substitute duration and primary limiter | Begin near the same work duration. Adjust until the same system is limiting without changing the movement into a different exercise. |
| 3. Verify | Posture, rep quality, and recovery at 60 sec | A valid match should produce repeatable mechanics and a similar recovery pattern - not only a high heart rate. |
| 4. Repeat | Second and third rounds | Look for controlled fade. Large quality loss means the first bout was too aggressive or the substitute is poorly chosen. |
| 5. Progress | One lever per session | Increase load, density, output, or run demand - never all four together. |

CALIBRATION TARGETS

## Use these as starting heuristics

Continuous engine substitute: begin at roughly the target station duration.

Heavy force substitute: accumulate the target work time in 20-60 sec bouts with short resets that preserve posture.

Paired substitute: combine one movement-pattern drill with one engine drill when no single option reproduces both demands.

Compromised run: add 200-800 m only after the substitute itself is technically stable.

QUALITY CONTROLS

## Stop calling it specific when...

- Force direction is completely different.
- Load is so high that movement stops repeatedly.
- Speed is so high that posture or range collapses.
- The substitute only reproduces heart rate.
- Extra impact compromises key running sessions.
- The athlete has no later exposure to the actual station.

Best marker: the option improves repeatability across rounds and helps the next run settle sooner.

TREADMILL SAFETY

## Do not force a powered treadmill belt unless the manufacturer explicitly permits manual pushing

Use a purpose-built manual treadmill, sled, prowler, or another approved resisted-drive option. Equipment safety and manufacturer guidance come before exercise selection.

RUN + STATION 01

# Run + SkiErg

Preserve race rhythm after stations and sustained lat-driven power without turning either option into generic conditioning.

RUN

## Compromised running

Race demand: A controlled 1 km run repeated eight times. The limiter is pace discipline and mechanics while systemic and local fatigue accumulate.

**TRANSFER MENU**

| | |
|---|---|
| CLOSEST | Outdoor, track, or treadmill running at target race effort after station work. |
| SPACE | 10-20 m shuttles with controlled turns. Limit total volume because acceleration and deceleration add a different tissue cost. |
| LOW IMPACT | Elliptical, bike, or incline walk matched to target run time and breathing demand. Treat this as engine support, not a biomechanical replacement. |
| PAIRING | Low-impact engine interval followed by 10-20 sec fast relaxed cadence if short run exposure is tolerated. |

Calibrate: Use the athlete's target 1 km time as the duration anchor. Track first-200 m restraint, cadence, and the time required to settle after a station.

AVOID THE LEAK: Do not make every substitute harder than the run. Protect total running quality and keep a separate progression for actual run durability.

SKI

## SkiErg power endurance

Race demand: Long-arm pulling, lat drive, trunk stiffness, hip contribution, grip, and continuous breathing pressure over 1,000 m.

**TRANSFER MENU**

| | |
|---|---|
| CLOSEST | Heavy straight-arm cable or band ski pulls with a controlled hinge and hands finishing toward the pockets. |
| POWER | Two-arm med-ball slams for 10-20 sec bursts, then cable pulls to preserve the longer force path. |
| ENGINE | 30-45 sec ski-pattern pulls plus 45-75 sec air-bike or bike work when no single drill can match both pattern and oxygen demand. |
| TRAVEL | High-tension band ski pulls in repeatable timed sets; increase density before adding complex variations. |

Calibrate: Match the athlete's 1,000 m SkiErg work time, then compare power fade and posture across 2-4 bouts. Use shorter sets when bands or cables overheat the triceps first.

AVOID THE LEAK: Avoid a triceps-only pressdown, excessive lumbar flexion, or random slam volume that loses the long lat-driven pull.

STATIONS 02-03

# Sled Push + Sled Pull

Horizontal force, uninterrupted tension, foot pressure, bracing, and the ability to resume running are the priorities.

PUSH

## Sled push force system

Race demand: High horizontal-force leg drive with forward body angle, short steps, trunk stiffness, and repeated exposure to near-stall tension.

**TRANSFER MENU**

| | |
|---|---|
| CLOSEST | Loaded sled or prowler push on a consistent surface. Track lane time, stoppages, and step rhythm rather than plate load alone. |
| PRIMARY | Purpose-built manual treadmill drive. Use repeatable 20-45 sec bouts and compare posture and belt speed across rounds. |
| FORCE | Waist-resisted forward march, heavy incline drive, or plate push on an approved surface to preserve low-angle pressure. |
| PAIRING | Heavy leg-strength set followed immediately by 20-30 sec resisted march when no safe horizontal push is available. |

Calibrate: Aim for the same total high-tension time as the athlete's expected sled lanes. Progress continuous movement and lane repeatability before adding load.

AVOID THE LEAK: A heavy squat can build force, but it does not reproduce horizontal grinding. Do not label it a full sled substitute by itself.

PULL

## Sled pull tension system

Race demand: Hand-over-hand pulling under load with a braced trunk, upper-back and grip endurance, heel drive, rope management, and backward movement.

**TRANSFER MENU**

| | |
|---|---|
| CLOSEST | Heavy rope hand-over-hand pull attached to a sled or cable, paired with controlled backward steps. |
| PRIMARY | Low cable hand-over-hand pulls from a braced squat or staggered stance. Keep tension continuous through the full set. |
| SPACE | Heavy cable row clusters plus backward resisted march. Use the pairing because either drill alone misses part of the race demand. |
| GRIP | Rope rows, towel-grip rows, or short heavy isometric holds as an accessory - not the entire substitute. |

Calibrate: Accumulate the athlete's expected pull time while tracking grip, trunk position, and step quality. A good match taxes the back and legs without becoming a biceps curl.

AVOID THE LEAK: Do not pull from an unstable anchor, wrap rope around the body, or let a heavier load erase the heel-driven backward movement.

STATIONS 04-05

# Burpee Broad Jumps + Row

One station is dominated by floor-to-feet turnover and forward travel; the other by sustainable full-body power. Their substitutes should not blur into the same generic circuit.

BBJ

## Burpee broad jump system

Race demand: Repeated ground contact, trunk control, forward projection, elastic landing, and fast recovery with heart rate already elevated.

**TRANSFER MENU**

| | |
|---|---|
| CLOSEST | Official-pattern burpee broad jumps in a measured lane. Short lanes with controlled turns are preferable to removing forward travel. |
| SPACE | Burpee plus one or two forward bounds, then walk back. Count total cycles and preserve consistent takeoff and landing. |
| LOW IMPACT | Step-back burpee to powerful forward step or low bound. Use for temporary impact management while maintaining floor transition skill. |
| POWER | Short quality clusters such as 4-6 reps with 10-15 sec resets, followed by a density block once landing control is stable. |

Calibrate: Record meters per rep, cycle time, and form fade. Progress repeatability before adding volume or external load.

AVOID THE LEAK: Vertical-only burpees, random box work, or loaded broad jumps can increase fatigue without preserving the station's forward rhythm.

ROW

## Row power-endurance system

Race demand: Leg-driven full-body power, trunk connection, upper-back finish, and repeatable breathing rhythm across 1,000 m.

**TRANSFER MENU**

| | |
|---|---|
| CLOSEST | Any reliable row ergometer with drag and foot setup adjusted consistently. Track split plus stroke rate. |
| PRIMARY | Bike or air-bike interval paired with heavy horizontal rows. The machine supplies engine demand; the row supplies pulling fatigue. |
| HIP + PULL | Kettlebell swings followed by chest-supported or cable rows to connect hip power and upper-back output. |
| TRAVEL | Dumbbell Romanian deadlift plus bent row in timed clusters, followed by a short high-cadence cardio bout. |

Calibrate: Match the athlete's row duration, then verify that the pairing does not create more local back fatigue than the actual station. Hold consistent output across rounds.

AVOID THE LEAK: A bike alone can match breathing but misses pulling and trunk connection. A row exercise alone misses the sustained engine cost.

STATIONS 06-07

# Farmer's Carry + Sandbag Lunges

These late-race stations reward posture, grip, unilateral control, and the ability to keep moving under load rather than chase isolated strength numbers.

CARRY

## Farmer's carry system

Race demand: Heavy bilateral grip and trunk stiffness over 200 m while walking efficiently, managing turns, and preserving breathing rhythm.

**TRANSFER MENU**

| | |
|---|---|
| CLOSEST | Heavy kettlebell, dumbbell, or farmer-handle carry with repeatable turns and purposeful walk speed. |
| LOAD | Trap-bar carry when grip and bilateral loading are the main objective. Keep steps quiet and posture tall. |
| SPACE | Heavy standing march with minimal sway, short shuttle carries, or accumulated 30-60 sec holds plus marching. |
| ASYMMETRY | Suitcase carry as an accessory for anti-lateral-flexion control, then return to bilateral loading for race specificity. |

Calibrate: Use total time under load and posture loss as the anchors. If the athlete's grip fails immediately, reduce load enough to train movement continuity.

AVOID THE LEAK: Do not let implements swing, shorten every step, or make grip failure the only outcome. The next run still matters.

LUNGE

## Sandbag lunge system

Race demand: Front-loaded unilateral leg endurance over 100 m with stable knee tracking, trunk organization, and sustained steps late in the race.

**TRANSFER MENU**

| | |
|---|---|
| CLOSEST | Sandbag walking lunges with the race-style carry position and measured distance. |
| PRIMARY | Front-rack walking lunges using a barbell, dumbbells, kettlebells, or a heavy medicine ball. |
| SPACE | Alternating reverse lunges from a front load, or short forward-lunge shuttles with controlled turns. |
| STRENGTH | Split squats or deficit reverse lunges to build local capacity, followed by a continuous lunge set to restore station rhythm. |

Calibrate: Match expected station time or total steps. Use short planned breaks only when they protect range and posture, then progress toward longer unbroken blocks.

AVOID THE LEAK: Do not replace all lunge exposure with bilateral squats. The unilateral balance and repeated forward stepping are central demands.

STATION 08

# Wall Balls + Target Precision

Wall balls are not merely high-rep thrusters. Target height, catch timing, breathing, squat depth, and planned set architecture determine late-race execution.

WALL BALL

## Wall-ball repeatability system

Race demand: High-rep squat-to-throw work that combines leg endurance, shoulder stamina, target accuracy, breathing control, and composure under judging.

**TRANSFER MENU**

| | |
|---|---|
| CLOSEST | Correct-load wall ball to a clearly measured target. Train the actual standard whenever possible. |
| PRIMARY | Medicine-ball squat to target or controlled rebound toss. Preserve visual focus and catch timing. |
| STRENGTH | Double-dumbbell or barbell thruster clusters to build squat-to-press strength without pretending the implement behaves like a ball. |
| SPACE | Single dumbbell goblet thruster or landmine squat-to-press, then add separate target toss practice when access returns. |

Calibrate: Build an honest set plan: opening set, repeatable middle sets, and final close. Track no-rep causes, breathing pattern, and the time lost on every break.

AVOID THE LEAK: Overloading thrusters can make the shoulders fail earlier than race-weight wall balls. Heavy work is an accessory; rhythm and target precision remain essential.

SET ARCHITECTURE

### Advanced wall-ball progression

Level 1 - quality: small sets with identical depth, flight path, and catch.

Level 2 - repeatability: fixed clusters with short controlled rests.

Level 3 - decision: preselect an opening set and a repeatable follow-up set.

Level 4 - compromised: execute after carry, lunge, or run work without losing standards.

Level 5 - close: practice the final 15-25 reps with no unnecessary pauses.

RULE ANCHOR

### Specificity returns before race day

Use substitutes to build capacity, but return to the correct ball, target, depth, and movement standard before competing.

The official 26/27 Singles and Doubles rulebooks remain the final source for current loads, target heights, distances, repetition standards, and penalties.

WPL principle: a station substitute can prepare the system; only the station itself confirms technical readiness.

FAST SELECTION MAP

# Choose by environment

Start with the athlete's constraint, then choose the highest-transfer option that can be performed safely and repeatedly in that setting.

| Station | Commercial gym | Home / garage | Hotel / travel | Low-impact support |
|---|---|---|---|---|
| Run | Treadmill or track | Outdoor run / shuttle | Treadmill / bike | Elliptical / bike |
| Ski | Cable ski pull + cardio | Heavy band ski pull | Band pull + bike | Cable pull seated or supported |
| Sled push | Manual treadmill / approved plate push | Sled / waist-resisted march | Incline drive march | Bike force interval |
| Sled pull | Cable hand-over-hand + backward step | Rope or band pull + backward march | Low cable row + march | Supported cable row |
| BBJ | Measured short lane | Short lane + walk-back | Burpee + bound | Step-back + forward step |
| Row | Bike + heavy row pairing | Swing + row pairing | Bike + DB row | Bike + supported row |
| Carry | DB / KB / trap-bar carry | KB / DB carry | DB march or hold | Light carry + posture sets |
| Lunge | Front-rack walking lunge | Sandbag / DB lunge | Goblet reverse lunge | Supported split-stance work |
| Wall ball | Med-ball target / thrusters | Target toss / thrusters | DB goblet thruster | Light target squat-toss |

DECISION RULE

## When the best option is a pairing

Some stations combine two demands that one substitute cannot reproduce. Pair a pattern drill with an engine or force drill: cable ski pull + bike; heavy row + bike; leg-strength set + resisted march; target toss + thruster. Keep the transition short enough that the pair behaves like one station, but simple enough to track.

Do not combine exercises just to make the workout look advanced. Every piece should solve a missing demand.

EQUIPMENT CONSTRAINT

## A safe, repeatable option beats a clever option

Stable anchors, clear travel lanes, manufacturer-approved equipment use, and predictable loading are prerequisites. If the setup is questionable, select the next-best option and preserve the training intent.

BUILD THE MISSING QUALITY

# Three advanced programming models

Select the model based on the limiter. The same substitute can be useful for force, power endurance, or race density - but the work-rest structure must change.

MODEL A

## Force-transfer blocks

Use when: the athlete loses posture, stalls, or cannot maintain pressure on sled, carry, or lunge work.

Structure: 4-6 sets of 20-45 sec high-tension work; 45-90 sec recovery; technical standard stays strict.

Progress: more continuous force, slightly more load, or less recovery - one change at a time.

Finish: optional short easy-to-steady run only after force quality is secured.

MODEL B

## Power-endurance repeats

Use when: the athlete starts strongly but output, cadence, or movement length fades quickly on SkiErg, Row, BBJ, or wall balls.

Structure: 3-5 repeats near target station duration; 45-75 sec recovery; track output or round time.

Progress: reduce fade between first and last repeat before raising the target.

Finish: 200-400 m settle run to practice recovery while moving.

MODEL C

## Compromised-running density

Use when: station work is acceptable, but the athlete overpaces the next run or takes too long to restore mechanics.

Structure: substitute station -> 400-800 m run -> short reset; 3-5 rounds.

Progress: keep station work stable and improve the first 200 m of the run, not just average pace.

Guardrail: stop the session before the run becomes survival mileage with poor mechanics.

WEEKLY USE

## Most athletes need one or two substitute-focused sessions - not a whole week of simulations

A practical starting point is one force or technical session plus one mixed-density session. Keep high-quality running, strength, recovery, and actual-equipment exposure visible in the overall plan.

FORCE + POWER ENDURANCE

# Sessions 1-3

Choose one session that matches the athlete's limiter. Loads and distances are starting frameworks, not universal prescriptions.

SESSION 1

## Horizontal Force Lab

4 rounds
30-45 sec manual treadmill drive, sled, or resisted forward march
30-45 sec rope/cable hand-over-hand pull with backward steps
400 m controlled run
Rest 75 sec

Intent: preserve low-angle force, bracing, and movement continuity.
Score: compare push/pull quality and first-200 m run control across rounds.
Progress: extend continuous work before adding load.

SESSION 2

## Ski-Row System Pairing

4 rounds
40 sec heavy straight-arm cable or band ski pull
50 sec bike or air bike at strong sustainable output
12-15 heavy horizontal rows
300 m run
Rest 60 sec

Intent: combine pull pattern, upper-back demand, and machine-like breathing pressure.
Score: power fade, trunk position, and breathing recovery at 60 sec.
Progress: reduce inter-exercise transition time.

SESSION 3

## Late-Race Posture Builder

4 rounds
60-90 sec heavy bilateral carry or march
20-30 front-loaded lunge steps
15-25 wall-ball substitute reps
500 m run
Rest 60 sec

Intent: preserve posture, unilateral control, and breathing through the late-race sequence.
Score: carry sway, lunge range, planned wall-ball breaks, and run cadence.
Progress: increase unbroken quality rather than total fatigue.

DENSITY + TRAVEL

# Sessions 4-6

These sessions use limited equipment without pretending every exercise is an exact station equivalent.

SESSION 4

## BBJ Repeatability + Settle Run

5 rounds
6-10 burpee broad jumps or space-limited cycles
200 m fast but relaxed run
200 m settle run at intended race rhythm
Rest 45 sec

Intent: restore cadence and posture after repeated floor contacts.
Score: meters per BBJ, cycle time, and the pace difference between fast and settle segments.
Progress: reduce form fade - do not add external load.

SESSION 5

## Commercial Gym Threshold Grid

3 rounds
2 min bike at near-threshold
45 sec heavy cable ski pull
45 sec manual treadmill drive or approved resisted march
12-15 thrusters
600 m run
Rest 90 sec

Intent: combine sustained engine demand with station-specific force and a controlled run.
Score: run opening restraint and quality of the final 20 sec on each station.
Progress: hold output before reducing rest.

SESSION 6

## Advanced Travel Density

5 rounds
60 sec incline treadmill run or strong bike
12-16 dumbbell Romanian deadlift + row reps
16-24 front-rack reverse lunges
12-20 dumbbell thrusters
30-45 sec heavy hold or march
Rest 45 sec

Intent: preserve full-body density when equipment is minimal.
Score: unchanged movement range and round-time fade under 8 percent.
Truth: this is hybrid conditioning support, not a complete station simulation.

PLACE SPECIFICITY WITHOUT BURYING QUALITY

# A 14-day integration example

This is a planning example for a trained athlete in a race-specific block. Adjust frequency, volume, and intensity to the athlete's history, race date, and total training load.

| Day | Week 1 - build | Week 2 - verify |
|---|---|---|
| Mon | Easy aerobic + mobility | Easy aerobic + mobility |
| Tue | Force-transfer session: push/pull | Actual-equipment exposure or closest verified options |
| Wed | Easy run + upper strength | Easy run + upper strength |
| Thu | Threshold / quality run | Threshold / quality run - slightly reduced volume |
| Fri | Recovery or off | Recovery or off |
| Sat | Mixed substitute density session | Short race-flow verification; stop before major fade |
| Sun | Long easy run or aerobic base | Long easy run or aerobic base |

PLACEMENT RULES

## Protect what matters most

- Keep the hardest substitute session away from the highest-priority run when possible.
- Use actual equipment to verify transfer; do not wait until race week.
- Reduce substitute volume when soreness changes run mechanics.
- Avoid stacking multiple high-impact BBJ sessions around speed work.
- Keep one easy day truly easy after the most race-specific session.
- Progress weekly density only when technical quality remains repeatable.

READINESS SIGNALS

## The substitute is working when...

- Target posture lasts longer.
- First-to-last-round fade narrows.
- The next run settles sooner.
- Grip and breathing recover while moving.
- Actual station performance improves.
- The athlete needs fewer unplanned breaks.

Reassess when the substitute improves gym output but actual station skill, run mechanics, or recovery worsens.

DELOAD DECISION

## Reduce complexity before reducing quality

During a lighter week, keep the same movement patterns but reduce rounds, work duration, or compromised running. Familiar movement with lower fatigue preserves skill better than introducing new drills.

SAVE THIS SEQUENCE

# Your substitute decision card

Before every equipment swap, answer these questions. If the logic is unclear, the workout probably needs simplification.

| Question | Your answer |
|---|---|
| Which exact race demand am I replacing? | Pattern / force / local muscular load / duration / breathing / transition |
| What is the highest-transfer option available safely? | |
| What is my time, output, or quality anchor? | |
| Which one variable will progress today? | Load / speed / density / duration / run demand / precision |
| What technical leak ends the set? | |
| When will I verify this on the actual equipment? | |

GREEN

## Keep it as a primary option

Transfer Score 8-10. Mechanics remain stable, the intended local limiter appears, and the next run settles without a new compensation.

AMBER

## Use it as a secondary option

Transfer Score 6-7. The drill preserves part of the demand, but it still needs pairing with another option or earlier actual-equipment verification.

RED

## Rebuild the substitution

Transfer Score 0-5, unsafe setup, technical breakdown, or gym output improves while actual station performance or run mechanics decline.

FINAL COACHING RULE

## A substitute must earn its place

Keep the option only when it improves a defined race demand and survives verification. If you cannot explain what it replaces, how it is scored, and when it will be checked on the real station, simplify the workout.

**SOURCE + SCOPE**

Race order, station distances, division loads, movement standards, and penalties: official HYROX Season 26/27 Singles and Doubles rulebooks. Substitute rankings and calibration methods are WPL coaching frameworks; no substitute is presented as an official one-to-one equivalent.

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