



5-0-5 CHANGE OF DIRECTION (COD) TEST STEP-BY-STEP TESTING WALKTHROUGH

Using the 1080 Sprint | Based on 1080 Motion COD Methodology

1080MOTION

1 | WHY TEST THE 5-0-5 ON A 1080 SPRINT

The 5-0-5 is a change of direction test: the athlete sprints 5 meters, plants and turns 180 degrees at a line, and sprints 5 meters back. Traditionally it produces a single stopwatch or timing-gate result, which is skewed toward straight-line sprinting ability and misses the deceleration and turning qualities of COD performance.

Running the 5-0-5 on a 1080 Sprint changes that. The system captures continuous data through the entire movement and automatically splits the test into two phases:

- **Phase 1A** — entry into the cut: total time, max acceleration, deceleration distance, deceleration time, max deceleration and top speed.
- **Phase 1B** — re-acceleration out of the cut: total time and max acceleration, acceleration distance, top speed.

COACHING INSIGHT: Max deceleration has proven highly predictive of total COD time, making it one of the best indicators of real change of direction performance — not just raw sprint speed.

2 | WHAT YOU NEED

- 1080 Sprint, positioned on a stable, level surface (turf, track, court, or grass all work).
- *Tablet or PC running the 1080 Control App, connected to the machine via Wi-Fi, Bluetooth, or USB-C cable.
- 360-degree swivel COD belt so the line stays centered on the athlete's waist through the turn.
- Two cones (or tape) to mark the start line and turn line, plus a clear runway of at least 15 m in front of the machine.
- Client profile created in the software so results save to the correct client for reporting.

***SOFTWARE:** If using a 1080 Sprint 2, the exercise can be recorded using the Sessions program on the display screen or the 1080 Go App for iOS and Android.

EQUIPMENT NOTE: A standard belt attachment will pull off-center when the athlete rotates 180 degrees. Use the dedicated COD swivel belt so the tether tracks cleanly through the turn and the data reflects true center-of-mass movement.



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3 | COURSE SETUP

Recommended: Assisted 5-0-5. The athlete performs the test in the “Running Zone” and starts 5 m away from the turn (line or cone) and sprints toward it, so the unit's pulling force assists the acceleration and increases the braking demand at the turn. This is the point of the test — it stresses the athlete's ability to create braking force, rather than simply testing how well they run under load.

A	Position the machine Place the 1080 Sprint at the end of your runway with the line exiting straight toward the testing area. Power on and set the zero position per the on-screen prompts. Suggest 5 meter No Pull Zone. 
B	Mark the start line From zero position, place a cone 10 m from the machine. This is where the athlete begins, facing the machine, from a standstill.
C	Mark the turn line Place the turn line 5 m from the start line (5 m closer to the machine). The athlete sprints 5 m in, plants at this line, turns 180 degrees, and sprints 5 m back through the start line.

MEASUREMENT NOTE: You define segment endpoints in the software — the system identifies where the change of direction occurs with high accuracy and measures true center-of-mass displacement in each phase.



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4 | SOFTWARE SETUP (TABLET - CONTROL APP)

1. Connect	Connect and select the athlete Open the Control App, connect to your Sprint unit, and select (or create) the client profile. Start a new session.
2. Exercise	Choose the Change of Direction exercise type Select a CoD exercise (e.g., Assisted 5-0-5) rather than a linear sprint. The CoD exercise type is what enables phase-specific capture (1A / 1B) and per-turn analysis.
3. Settings	Set the load, mode, and speed limits: 3 kg assisted Set 3 kg of resistance and assistance. Loads are set independently per direction, so the entry (1A) and exit (1B) can each carry their own setting. Keep loads light for testing — around 3 kg is the standard. Also increase the resisted and assisted speed limits to 14 m/s. Finally, make sure to test in NFW mode for consistent results.

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5 | RUNNING THE TEST — STEP BY STEP

Watch a demonstration of running a 5-0-5 test [here](#).



1. Warm-up	Warm up the athlete Complete a standard dynamic warm-up including submaximal accelerations, decelerations, and a few practice turns at both directions so the athlete is familiar with the belt and the pull of the line.
2. Belt	Attach the COD belt Fit the swivel belt snugly at the waist with the line attachment centered. Clip in the 1080 line and confirm the line runs freely to the machine.
3. Position	Set the starting position Athlete stands at the start line (10 m from the machine), facing the machine, in a still, consistent stance. Keep the athlete motionless until the rep is armed — measurement triggers as they begin acceleration from the start line.
4. Rep	Run the rep Athlete sprints 5 m toward the machine (assisted), plants at the turn line, turns 180 degrees, and sprints 5 m back through the start line against the resistance. Require the same plant convention every rep — e.g., always touching the line with the outside foot.
5. Directions	Test both directions Perform reps turning off each leg: two reps turning left and two reps turning right is the standard protocol. Record which leg is the plant leg for each rep, and give full recovery (2–3 minutes) between efforts. If time allows, 2-3 reps each turning left and right will provide a consistent and robust testing set.
6. Review	Review and clean the data Check each rep immediately on the graph. Remove or flag bad reps (slips, early triggers, missed line touches) before the data is used in reports — meaningful comparisons require clean, maximal efforts.



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6 | READING THE DATA

Each rep displays graphically (speed over time, step by step) and numerically for each phase: distance, time, average speed, force, and power — alongside total time and total center-of-mass distance covered.

- **Output measures** (total time, top speed) tell you how fast the athlete completed the task.
- **Strategy metrics** (deceleration distance, deceleration time, max deceleration) tell you how they did it — and where to coach. For example, a shorter deceleration distance at the same total time indicates a more efficient braking strategy.
- **Left vs. right turn comparison** exposes asymmetry between plant legs — a key marker in return-to-play testing, where differences often grow larger as load increases.
- **Total distance covered** (center of mass) matters too: completing the task over less total distance can indicate better technical execution of the turn.

7 | VARIATIONS & PROGRESSIONS

Once you have a baseline from the standard assisted 5-0-5, adjust one variable at a time:

- **Approach distance:** extend the lead-in to 10 m or 15 m instead of 5 m to raise entry speed and deceleration demand. Adjust distance before load — it introduces higher braking demands while letting the athlete self-regulate.
- **Load:** progress from 3 kg to 6+ kg assisted to identify athletes who get “stuck in the turn.” Higher assisted loads increase the braking challenge without requiring maximal sprint speeds — ideal for early return-to-play reintegration.
- **Stance:** compare base stance, split stance, and rotated starts for different data points of comparison.
- **Locomotor pattern:** swap sprinting for lateral shuffles or crossover steps to match the sport — shuffles for basketball, sprint transitions for soccer.
- **Multiple turns:** chain consecutive 5-0-5s or 5-10-5s as a single test to measure COD endurance across repeated turns.

TEST FOR THE SPORT: COD testing should reflect how your athletes actually move in competition — not arbitrary lab standards. Choose patterns, entry speeds, and directions based on the demands of the game.



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8 | BEST PRACTICES CHECKLIST

- Use an assisted start to load the braking phase — a resisted start lightens deceleration and mostly tests running under load.
- Keep testing loads light (~3 kg) and identical across test dates.
- Standardize the plant: same foot convention (outside foot on the line) every rep.
- Keep stance, approach distance, surface, and footwear consistent between sessions.
- Test both turn directions and record plant leg for asymmetry analysis.
- Clean bad reps before reporting.
- Change one variable at a time when progressing: stance first, then distance, then load. It is a testing process, not a one-time event.

SOURCES & FURTHER LEARNING

- *How to Test Change of Direction (COD) with the 1080 Sprint 2* — 1080 Academy Live, Dr. Ola Eriksrud (1080motion.com/news, Nov 2025). [Full webinar](#)
- *Change of Direction Testing & Metrics for Speed Development* — Ola Eriksrud & Jesse Green (1080motion.com/news, Oct 2025). [Full webinar](#)
- [Change of Direction Testing and Training with 1080 Sprint](#) — 1080 Motion white paper ('20), including modified 5-0-5 case studies in performance and ACL return-to-play.
- *1080 Motion Help Center* — docs.1080motion.com (Control App, Web App reporting, and CoD exercise support articles).