Performance Diagnostics in Applied Settings: Moving Beyond the Laboratory

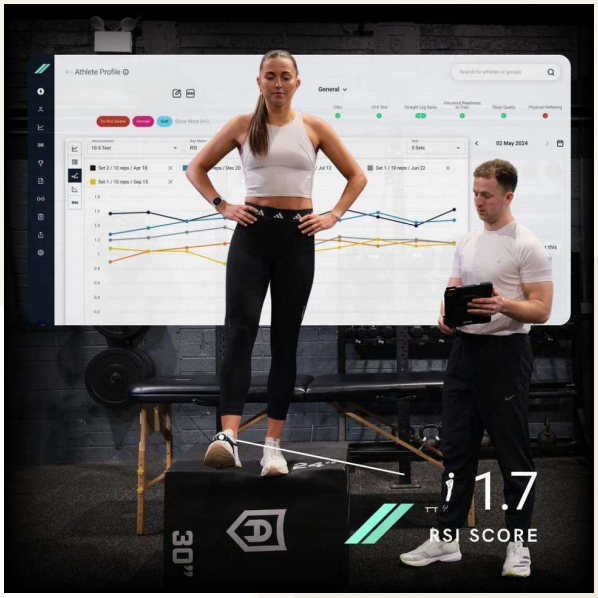
Ant Sharp

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Performance diagnostics: the problem

To gain meaningful insight into an athlete's physical capacities, assessment often relies on high-cost technologies that require specialist expertise to operate and interpret. These may include force platforms, linear position transducers (LPTs), and motion capture systems.

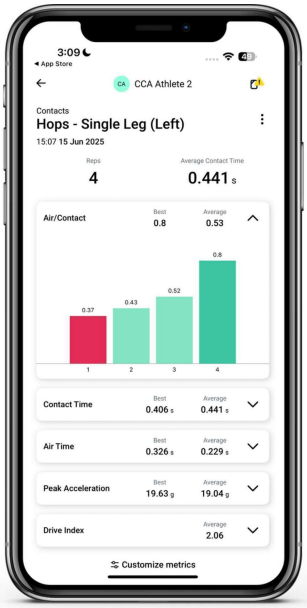


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The solution



Inertial measurement sensors (IMUs) offer an affordable and easily administered solution to a numbers of performance diagnostics;



1) Velocity based testing (VBT)
2) Range of movement testing
3) Jump and hop based testing: ground contacts, flight times, reactive strength indices, accelerations

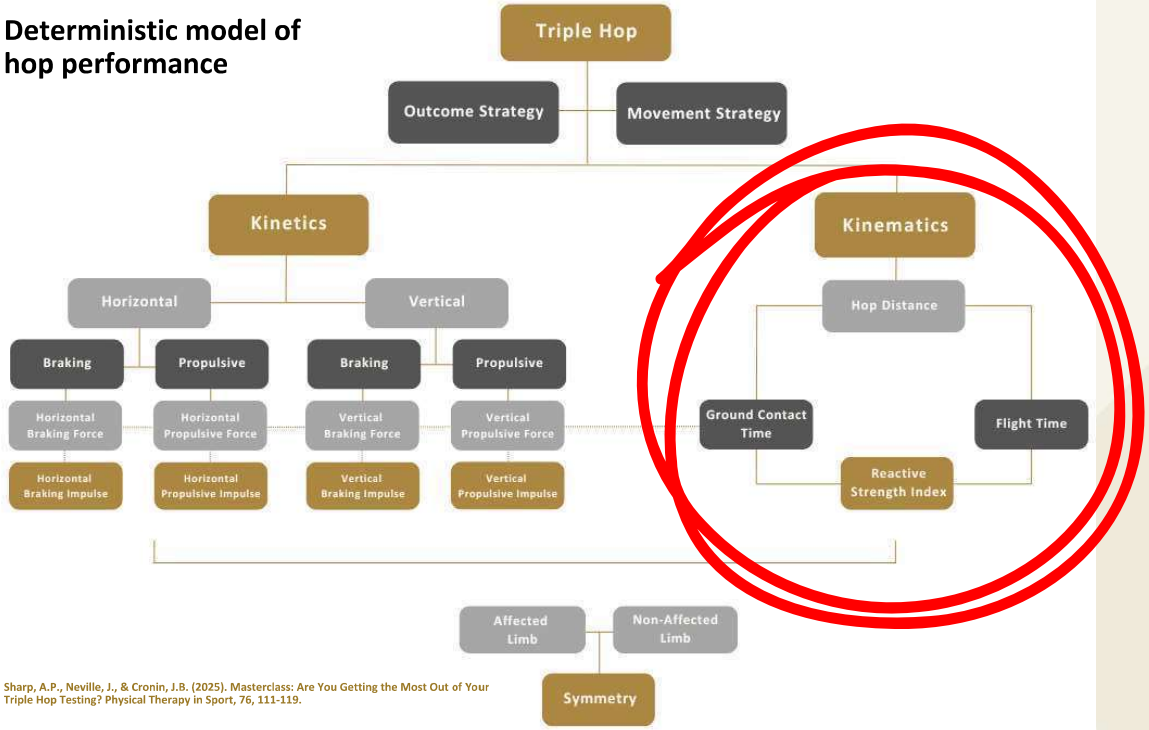
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Deterministic model of hop performance



Sharp, A.P., Neville, J., & Cronin, J.B. (2025). Masterclass: Are You Getting the Most Out of Your Triple Hop Testing? Physical Therapy in Sport, 76, 111-119.

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Practical demonstration

The aim of the practical session is to;

1) introduce the workshop to the utility of IMU technology in performance diagnostics; and

2) demonstrate its use in multiple hop profiling

Notes:

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