

Who is behind the new FLX Health App?

Martin Haines DipRGRT MCSP SRP IBAM

Martin is an internationally-renowned biomechanics coach and chartered physiotherapist with expertise in sports medicine, biomechanics and rehabilitation.

After working in the NHS, he was headhunted to work for Arsenal FC and Crystal Palace FC before setting up his own clinic in London. Here he came to treat many of the world's leading sports stars, from the England Rugby Union Team to Olympic athletes, including many top-level amateur sportspeople. He also consulted for McLaren F1 Racing Team to help design their monocoque and work with their drivers to improve their performance. Away from sport, he has worked with fire and rescue services and police forces to help mitigate their risk of injury and improve their performance.

Martin has been an honorary lecturer at Salford University and a consultant to Depuy Synthesis International and Boots Pharmaceuticals. He is currently consulting to Start-rite shoes and is a Key Opinion Leader to Reckitt Benckiser and Scholl. He is also a member of the Medical Advisory Board to the PGA European Tour. A former chairman of the UK Biomechanics Coaching Association, Martin is also a published author and lectures internationally.

Journey

Martin and his team started to test people's function nearly 30 years ago, mainly because he wasn't satisfied with the clinical outcomes at his elite sports medicine clinic in London.

They started by testing the way people moved. They looked at their movement patterns by using video and digitising the images to measure accurately their movement profiles, more common now in many health facilities. They then provided exercises to modify the patterns to what was considered, at the time, a more efficient method of moving. While this worked for some, others needed a deeper understanding, as they learned that measuring how people moved was only a part of the picture. It didn't

tell them why they were moving in that way. In fact, they now know that if the movement pattern they were using was a protective pattern to reduce the load on a vulnerable area, changing the pattern could be harmful. So, they started to investigate 'why' people were moving the way they were.

Martin invested heavily in sophisticated robots, called isokinetic machines, and lumbar motion monitors, not used in Europe at the time, to measure the capacity of the joints, muscles and nerves to perform. Over a 15-year period, they tested over 4,000 people - ranging from elite athletes and sports players all the way down the activity level scale to his own mother!

When they retrospectively evaluated the results, they found some interesting patterns that hadn't previously been identified, such as pelvic dysfunction leading to shoulder pain and spinal dysfunction leading to foot



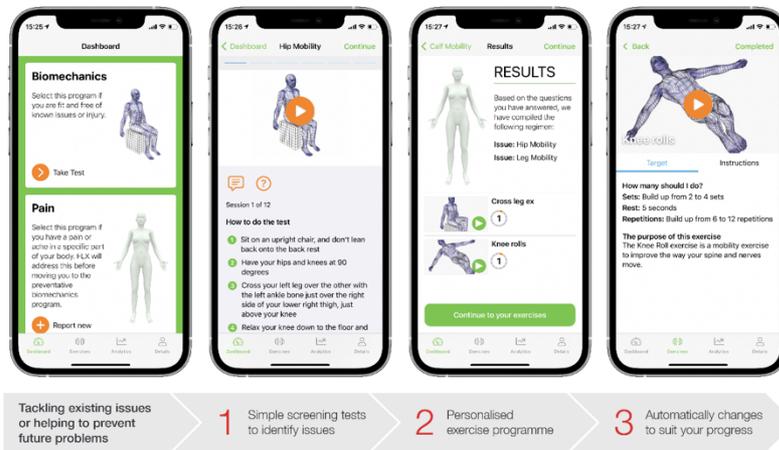
pain. These were, and remain, cutting edge concepts. In fact, they have not found another retrospective study of this size, so the outcomes are unique and proprietary.

They then looked at manual tests that correlated highest with the gold standard lab tests and from this they created a series of tests (or screens)

to highlight key biomechanical dysfunctions in the body. Then they looked at the most effective exercise interventions to manage those dysfunctions.

This work enabled them to create a series of algorithms that linked these findings together to identify a person's unique biomechanical profile. The algorithms then identify key exercise interventions that help manage these dysfunctions. Regular re-screening allows the system to learn from the outcomes and constantly refine the programme to personalise it and to ensure the most suitable programme is being provided.

All of this functionality is embedded in the FLX APP.



They created FLX to look at the intrinsic biomechanical profile of a worker and then identify which areas need addressing, and which are the best self-help exercises to help mitigate the risk.

The app has two sections: injury risk management and self-help pain management. It is a very person-centred approach, promoting self-awareness and empowering users to take control of their bodies.

Martin Haines
Chief Medical Officer | FLX Health
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