

# CORE MOMENTUM TRAINER.™

BRIEFING  
PAPER.



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# PART ONE: THE WAY PEOPLE TRAIN IS CHANGING.

## THE IMPORTANCE OF CORE TRAINING AND MOVEMENT DEVELOPMENT.

**Coaches and their clients are increasingly moving away from pure strength or power workouts. Instead, more than ever they understand the importance of performance and skills development training.**

Whether trainers are working with clients on functional training programmes or performance development for a specific sport, two things really matter:

- **A capable, functioning core.** The core is the body's hub and it handles all of the forces going through it, associated with simple tasks like walking uphill or more complex actions such as striking a tennis ball. It is vital that the core can handle these forces if the body is to move well and enable an individual to achieve their performance goals.
- **Excellent movement and mobility.** Being able to coordinate and sequence muscles to manage external forces and move freely is a key component of daily tasks and specific sports techniques.

This blend of core training and movement development is required in multiple situations. It's relevant for everything from rehab where a trainer is helping a client to get up from a chair better, right up to improving elite sports performance.

In order to achieve this blend, trainers will use a range of fitness tools. However, so far there hasn't been a light, compact, highly effective piece of kit that anyone can use AND that delivers great results.

What trainers really need is a tool that makes it possible to replicate movements from sport or everyday life, and to add a load to that movement at the right place and time.



## THE EXPERTS WHO DEDICATED A DECADE TO A NEW SOLUTION.

**Before we look at the new core and movement tool from Escape Fitness, let's go back a few years to see how it all started.**

The need for a new way to challenge and enhance the core muscles, and improve muscle movement, was recognised ten years ago by Dr. Derek Steveson.

### **Dr. Derek Steveson**

Derek is a PhD physiotherapist based in Arizona, where he runs the Functional Performance Center. He has extensive experience in patient care, including six years as the official rehabilitation consultant for the Arizona Diamondbacks baseball team.

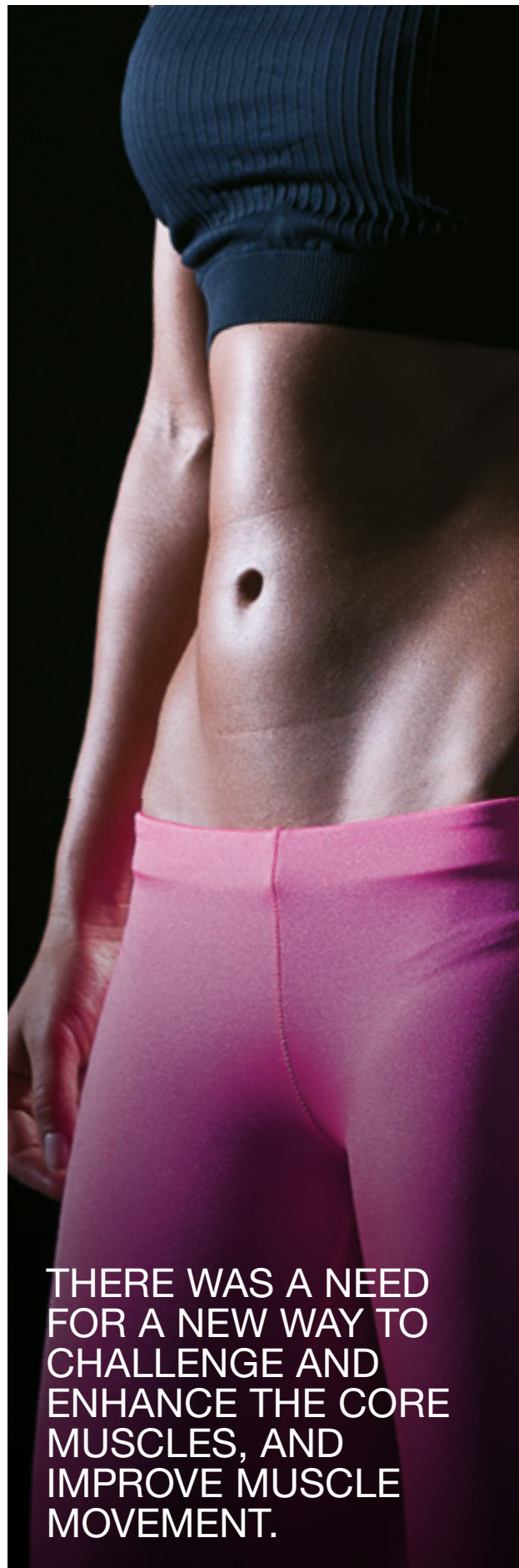
He has lectured physicians, physiotherapists, personal trainers, coaches, athletes and the general public on human movement and movement dysfunction. His speciality is in functional biomechanics – the relationships and interactions that body parts, segments and systems have with each other, and how these relationships contribute to an ability or inability to function.

Derek's keen appreciation of natural body movement, combined with his knowledge of typical limitations and imbalances that people acquire when pain or dysfunction invades their lives, inspired him to develop a new tool for exercise and rehabilitation.

### **Mark Lashinski**

Someone else was also very interested in the problem and soon started working with Derek on a solution: Mark Lashinski, a respected engineer and manufacturing expert who had already enjoyed success with gaining US patents. Mark had solved engineering problems in aircraft design, so this was a task he took in his stride

Together they started a journey to create a device that would allow spinal motions to be challenged and loaded in an effective and safe way. This was the essential factor in the creation of something for superb core and movement development.



**THERE WAS A NEED FOR A NEW WAY TO CHALLENGE AND ENHANCE THE CORE MUSCLES, AND IMPROVE MUSCLE MOVEMENT.**

# PART TWO: THE PROBLEMS WITH CORE TRAINING AND MOVEMENT DEVELOPMENT.

## **CORE TRAINING IS OFTEN FLAWED.**

**Core training can be difficult for trainers to perform with their clients for a few reasons:**

### **Clients struggle to engage the core AND other muscles at the same time.**

To engage the core requires hitting it with a significant amount of shock. That can be achieved, for example with a heavy medicine ball, but it's hard to do it and simultaneously work out on a whole body movement.

For example, it is easy to exercise in a way that makes a shoulder feel fatigued, but it's harder to make the core work hard at the same time. Traditional core training often isolates the core, but fails to work both the core AND other muscles involved in real-life movements.

### **It's slow and difficult.**

Core training exercises often need to be very demanding in order to make the core feel like it's the most used part of the body when performing a whole-body movement. This is partly because there are no products available that people of all abilities can use to perform complex movements and challenge their core at the same time.

### **Several exercise types are required in each session.**

To hit the core and have it support the muscles that sit in the extremes of the body you often have to combine three or four exercises. Even when you do that, it is difficult to work out in a way that feels natural and that mirrors 'real life' movements such as sport techniques.

### **Trainers can find it difficult to monitor performance.**

The trainer has to observe a lot of tiny movements to make sure that the client is engaged and performing well. This can make core training hit-and-miss.

### **It's often done on the floor.**

Many core training exercises take place on the floor, whereas most movements in sport and everyday life are performed upright.



## **THERE ARE MISCONCEPTIONS ABOUT HOW TO TRAIN EFFECTIVELY FOR IMPROVED MOBILITY.**

**There is a fundamental problem with the way that some people view training to develop mobility.**

Too often, people believe that simply improving general strength is the best way to improve specific movements. However, that is not the case: working out with the vague goal of increasing strength as a route to better mobility can only get you so far.

Another argument is that lengthening muscles should be the aim of an exercise session as this will achieve improved mobility and range of motion. But lengthening a muscle takes a long time and can only be achieved through a long-term resistance training programme.

The best way to improve movement in a session is to develop a client's confidence in their capability. This can be achieved by working with the client on coordinating movement of the joints in the right sequence – and by introducing loading at the right time in the movement.

## **NO SINGLE PRODUCT EFFECTIVELY TARGETS THE CORE AND SPECIFIC MUSCLES.**

**It is very difficult to find an exercise tool that can create the forces required to enhance the sequencing of the core (the hub of the body) with the extremities.**

For example, medicine balls are versatile but to get significant forces to apply they need to be thrown and caught, which carries more risk than is suitable for some exercisers. Also a very large and heavy ball is needed in order to generate large forces on the limbs and core.

Slosh bags, sandbags and other similar products use moving material but they have not been built specifically for core training and are really just a weight to lift with some added functionality.

There is no type of exercise equipment on the market that allows users of all sizes and abilities to go through natural motions that create loading of core muscles in multiple planes.



# PART THREE: CREATING A NEW TOOL FOR CORE AND MOVEMENT DEVELOPMENT.

## **SOLVING THE PROBLEMS BY DEVELOPING A SINGLE SOLUTION.**

**Derek Steveson and Mark Lashinski set out on a journey to solve all of the problems. They moved through a number of vital decisions and developments to design the ultimate training tool.**

Through exhaustive building and testing of several prototypes, they discovered what worked best:

### **Getting the most from a lightweight piece of equipment.**

The new tool was most effective when it was relatively lightweight, but still delivered a load to the user's core in excess of what the weight would normally achieve.

### **Using a loose mass that stops abruptly.**

The best way to deliver the load was to get a small weight in the form of loose material to become a larger weight by having it move - and stop abruptly - within a hollow central unit shaped similar to a rugby ball or American football.

### **Choosing the right material for the moving mass was vital.**

Prototypes were tested and worked well, but it was clear that the material used to create the moveable weight was crucial and had to be perfect.

The search was on for the right material to use within the cavity. Water, sand and gravel were used in various combinations in prototypes, but the best material was a precise blend of steel pellets and oil for lubrication.

### **The internal design of the central unit was vital.**

It became clear that the central hollow unit couldn't just have a smooth internal surface if the material was to stop in exactly the right way. Mark Lashinski developed a design with compartments within the unit to guarantee the right effect.

### **Removable handles added versatility.**

Another feature of the prototypes that worked very well was to add removable handles to the central unit. This created extra versatility for users and built on the success of using broomstick-style tools in workouts.

## ESCAPE FITNESS JOINS THE TEAM.

**A beta testing product – the CoreStick – was developed and used extensively with athletes and sportspeople, at PT sessions and by physiotherapists to assist in rehabilitation.**

A new member of the team came on board during this period: John Hardy of Faster Health and Fitness. He educates fitness industry professionals on the best way to deliver training and has a special interest in the way the body moves. He saw the potential of the CoreStick and integrated it into his training programmes.

Escape Fitness heard about the product from John Hardy. We loved it from the start, but recognised that more development was needed to make it commercially viable.

Our expertise in materials, engineering and design was put to use in the creation of what is now known as the Core Momentum Trainer (CMT).

As we have seen, this is a 'new' product but has an extensive history of research, development and testing. This is why we are certain that it's poised to take the fitness industry by storm.



THE CMT IS A 'NEW' PRODUCT BUT HAS AN EXTENSIVE HISTORY OF RESEARCH, DEVELOPMENT AND TESTING.



# PART FOUR: A NEW WAY OF TRAINING WITH THE CORE MOMENTUM TRAINER.

## HOW THE CMT WORKS.

**With the history and background to the Core Momentum Trainer explained, let's now start a detailed look at the CMT with some of the fundamental principles.**

**At the end of each movement, users feel a sudden force.**

The CMT is based around the central unit - the Power Core - that contains lubricated steel pellets. At the end of each movement, this material collides with force against the Power Core walls. The force is transferred to the user's core via their arms. Working hard to precisely control the force is what guarantees an effective workout.

**Work effectively and you hear a sharp, sudden sound.**

The sound of the collision in the Power Core provides an accurate indication of how well

the exercise is being performed. When you are working effectively with the CMT the material hits the Power Core sweet spot and you hear a sharp, sudden sound. A longer, less sharp sound indicates that you are losing focus or are becoming fatigued, so it's time to up the effort or move on to another exercise.

**The removable handles allow for more specificity.**

With the handles attached, the energy escapes mainly through the limbs and there is a catch-like force on the body. Removing the handles and pulling the weight in close means the energy escapes through the spine and so is closer to the core.

**Exercises can be performed sitting, kneeling, standing or travelling.**

Exercises can be performed in all three positions. This means that trainers and therapists can build the best and most specific exercises for their clients, whatever their level of fitness or their desired outcome.



## HITTING THE CORE AND EXTENDING END RANGE.

**Think about what happens when you strike an object moving towards you, or when you strike an object in the middle of acceleration. Your body experiences both the motion and the loading forces at impact.**

This is the principle behind the CMT: when the loose material inside the Power Core comes to a stop it creates a loading force that transfers to the limbs, core and other muscles.

When users start to control this force they are on their way to achieving their physical goals faster than with many other forms of exercise.

### **Going further than the client thought possible.**

End range is the end of someone's range of motion; the point in a movement where their body protects itself by telling their brain 'I'm in a safe position so don't push me harder'.

You may experience a shake or judder in the muscle at this point. It feels like you are entering the unknown and it can be a little scary.

But often you haven't reached end range at all. To extend range, the impact in the Power Core delivers a kick to 'wake up' the muscle, which reports back 'It's OK, I can do further movement in the range'.

Extending end range can be of significant benefit when the aim is to improve mobility. You come out of a turn, squat or lunge and find that you can go back further into it than you did previously. It is also ideal for sports such as tennis where the act of striking a ball usually happens near end range.

### **Train deeper for a healthier spine.**

The CMT challenges deep core muscles like the quadratus lumborum and the iliopsoas, which are considered postural or tonic spine stabilisers, in a way that is unprecedented. These deep muscles need full range spinal motions with end range loads in order to be significantly influenced. By challenging these muscles with safe and strategic movements,

the CMT helps users build a healthier spine that serves as the foundation for optimal health and fitness from a biomechanical perspective.

## WHY THE SOUND THE CMT MAKES IS SO IMPORTANT.

**So the CMT has been developed to make it easier than ever to target the core and other muscles, but don't forget that it's the sound that maximises effectiveness.**

Trainers want to get their clients to reach their goals as fast as possible, but in a safe way. This is why trainers need to pick movements and intensity levels that will be effective and safe for the client.

In order to do this the trainer has to be in-tune with how the client is performing at a session. Trainers notice when clients start to lose form and that's an indicator of fatigue starting to set in. But in fact, the body is pretty smart and will often be keeping some energy in reserve.

People experienced in tough training, such as accomplished weightlifters, are used to going further at the end of a session. But many other clients - especially those performing quite technical routines - will underperform sooner than necessary because they feel there is nothing left in the tank.

The trainer will hear this happening, with the sound of the CMT changing from a sharp, sudden noise to a less focused one. The trainer can ask the client to refocus and perform the movement again.

Two things can then happen:

- **They get back to producing a sharp, sudden sound.** This is a sign that the body was slowing down to defend itself, but there is more energy in the tank. The trainer can then motivate the client through initial form failure to extend the session - while ensuring this is done safely.
- **They continue to produce a less defined sound.** This is a good indication that the session should finish. The client is unlikely to get more from the session and in fact could take on an injury by continuing.

## **Push for better performance, but within safe limits.**

So the audible aspect of the CMT helps trainers to be in tune with how the client is performing at a session. Trainers can get their clients to challenge their fatigue systems enough to achieve great results, but still keep them within the range of movements that they need to be performing.

It's all about getting results without pushing clients way beyond their limits. Coaches and gym operators are rightly worried about the risk of injury to their clients. With the audible indication of performance levels and fatigue, the CMT offers a great way to deliver excellent results to clients while minimising the risk of injury.

## **DON'T BE FOOLED BY THE CMT.**

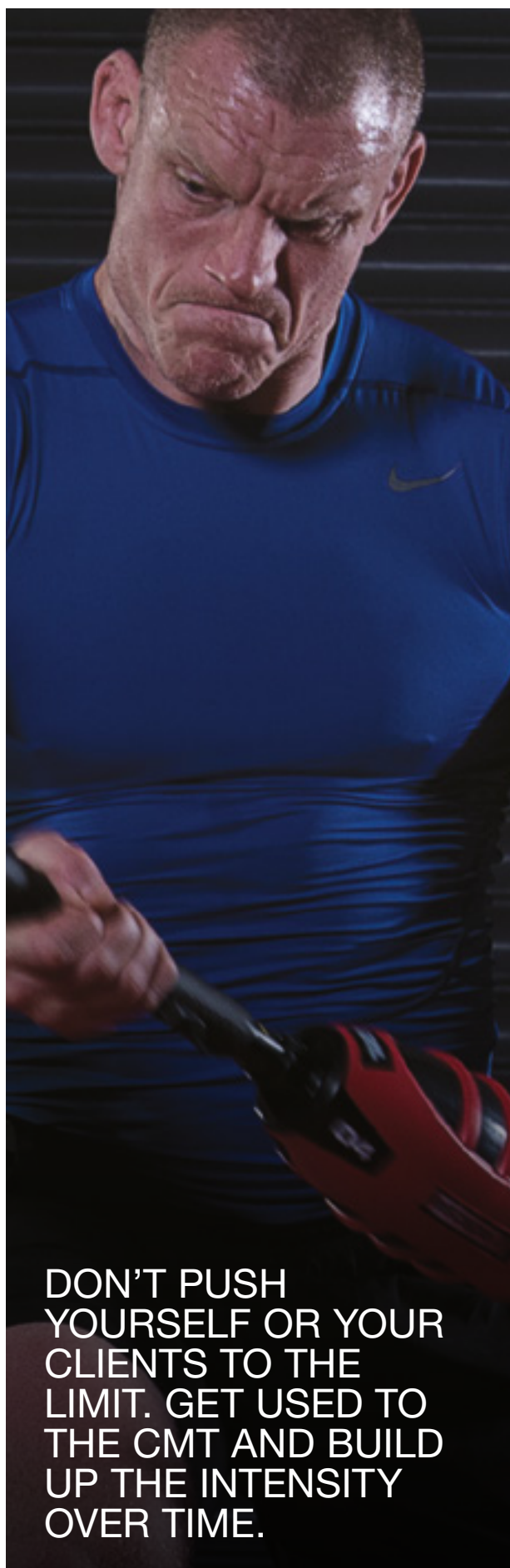
**When people see and pick up the CMT for the first time, they often discount it as something that can't deliver a challenging workout. But use it for any length of time and you'll start to feel what it's doing.**

The chances are that when you wake up the next day you will have the aches and pains that are a symptom of effective training.

In fact, the day after USA swimmer Nick Brunelli used it for the first time, his coach had to cut short a practice session as Nick's intercostal muscles and deep core were too fatigued.

The lesson is clear: don't push yourself or your clients to the limit. Get used to the CMT, understand what effect it has and build up the intensity over time.

You can also use the three different models in the range to match the right CMT to the client and their situation. The 2kg (blue) model is the place to start for most people. Move on to 1kg (green) for speed exercises or 4kg (red) for strength and power workouts.



**DON'T PUSH YOURSELF OR YOUR CLIENTS TO THE LIMIT. GET USED TO THE CMT AND BUILD UP THE INTENSITY OVER TIME.**

# PART FIVE: WHO CAN BENEFIT FROM USING THE CORE MOMENTUM TRAINER?

## THE CMT IN ACTION.

**As a trainer, once you have familiarised yourself with the CMT you can deliver one-to-one and group sessions by working through the exercises explained in the user guide accompanying every CMT.**

**You can stick to these exercises but we recommend that you go on to deliver a greater range of routines, opening up opportunities to work with varied client groups.**

Here are some examples of scenarios where the CMT has a lot to offer:

### **THE tool for specialist core workouts.**

Whether as the main route to core and abdominals development or as part of a varied programme, the CMT works brilliantly as a specialist core tool. Because core and abs development is such a highly-valued proposition, dedicated training for individuals or groups is bound to be a big seller.

### **THE tool for mobility.**

The CMT's strength in movement development makes it the ideal tool for mobility drills that prepare the body for all kinds of activity, both in the gym and in daily life.

### **An all-round aide for functional training.**

You can use the exercises we have developed to deliver great all-round core and movement routines as part of functional training

programmes. Your clients will really feel the CMT working, and therefore quickly value the session that you are delivering.

### **A guarantee of excitement, synchronicity and noise in group training.**

We have seen how exciting it looks - and sounds - when a group of people are using the CMT together. More importantly, the CMT enables people to work hard in a short amount of time, with exercises that are easy to learn and that the whole class can stick with to their peak.

### **For PTs on the move.**

The CMT packs into a small bag, so it's perfect if you need an incredibly versatile training tool in a portable package. Despite its small size, it lets your clients work out with as much intensity as punchbags, medicine balls or other pieces of bulky equipment. Already, PTs are buying 20 or more to use with their groups, often in public spaces such as parks where workouts are grabbing people's attention.



### **A tool for cross training.**

The CMT is proving its value in cross training (including CrossFit gyms), where mobility and improving end range is important. Because the CMT is light, when you get to end range you are not placing too much pressure on joints. You also excite the central nervous system in new ranges for more strength and power. This carries over into activities such as the catch in a lift, a handstand or a push-up.

### **For clients with movement limitations.**

The CMT is ideal for opening up movement ability with people who are restricted due to injury or general lack of fitness. In fact, its roots are in rehabilitation and it has helped hundreds of people to recover from injury.

## **ACCURATE TARGETING OF PRECISE MOVEMENTS AND MUSCLES FOR SPORTSPEOPLE.**

**Because of the high accuracy with which the CMT can target the right muscles used in specific movements, you can create bespoke exercises for clients that want to improve performance in specific sports.**

The CMT has already achieved great results when used with sportspeople in running, throwing, swinging and team sports, as well as for people involved in combat sports.

One of the reasons it is so effective in speed and agility training is that the movement in the Power Core sends the body off balance while travelling through the exercise. This is a great way of replicating movement across the ground, or the force of a nudge from another player in a contact sport.

So far we have seen coaches using the CMT with clients in all of these sports:

- American Football.
- Baseball.
- Cricket.
- Football (soccer).
- Golf.
- Rugby.
- Skiing.
- Snowboarding.
- Squash.
- Tennis.

There is a great business opportunity here: once you have successfully worked with one client on movements for their golf game, for

example, you can now promote a specialist programme for golfers.

To illustrate the value of the CMT in sports development, let's look at just two examples:

- **Tennis.** The CMT is light enough so you can use it while moving across the ground, which is an essential component of striking a tennis ball. You can also get the CMT to hit with resistance in a way that is very similar to tennis. It's much more accurate and specific than simply performing movements with a dumbbell or medicine ball, because they would need to be prohibitively heavy in order to match the shock created by the CMT's Power Core.
- **Golf.** The golf swing is all about a biomechanical sequence of movements (simplified as backswing, transition and downswing). Several segments of the body move through this sequence including the hips, chest and arms. The CMT is ideally suited to helping golfers develop strength in all of these areas.

The same approach can be taken by coaches in just about any sport. A coach that understands the movement involved in a sport can create CMT routines that target the right muscles to develop movement ability where it is most needed.

## **THINGS GET EVEN BETTER AFTER ATTENDING ESCAPE'S CMT EDUCATION PROGRAMME.**

**If you really want to explore all of the opportunities created by the CMT, you can become an expert by taking part in the trainers' education opportunities from Escape Training and Faster Health and Fitness.**

The hybrid live and online sessions will mean you are better able to assess how well clients are performing with the CMT. They also take you through lots of examples of movement patterns to use with your clients.

We will also show you how to create and deliver new muscle and movement exercises for your clients, tailored to their desired outcomes.

# PART SIX: WHAT PEOPLE ARE SAYING ABOUT THE CORE MOMENTUM TRAINER.

## THE CMT HAS PROVED ITSELF AT AN ELITE LEVEL.

Dr Derek Steveson and other movement specialists and personal trainers have extensively tested the CMT (known as the CoreStick during its development phase) with professional footballers, baseball players, golfers and other athletes.



**Todd Stottlemyre, baseball:** “I used the CoreStick for the final three years of my 15-year Major League Baseball career as a pitcher. It was the major tool in both my rehab from injuries and for getting my core as strong as ever with my ongoing strength and conditioning. I really think that it helped me to extend my career and I endorse it for anyone who is looking to improve their core strength and athletic performance.”

**Matt Joyce, American football:** Matt had an 11-year career as an offensive lineman and used the CoreStick to prolong his career, especially by using it to stabilise his lumbar spine following multiple injuries.

**Nick Brunelli, swimmer:** “As a USA National Swim Team member, I have used the CMT for about a year. I not only feel like my core is stronger, but any full body motions like swimming seem much easier and more controlled. The small muscles that help stabilise my body have become very important to my success in the pool because of the CMT. I will never again train without the CMT for however long I swim. Thank you CMT!”

**John Ship, cricket and golf:** “As a personal trainer I have used the CMT while working with a number of my clients, including professional cricketers and golfers. I have found that the CMT is the ideal tool for developing the movement of these sportspeople. It is incredibly flexible and lets us mirror the movements they go through in their sport to promote development of the muscles they need to target, as well as the core itself.”

## PERSONAL TRAINERS WORKING WITH VARIED CLIENTS LOVE THE CMT TOO!

**The response to the CMT from personal trainers has been fantastic. Whatever the type of user, PTs are finding that the CMT is something that quickly becomes a favourite piece of equipment.**

**Aimie Dodson:** “Glutes and core galore! Feeling very, very, very sore all over after learning more about how cool this piece of kit is.”

**James Gair:** “I used the Core Momentum Trainer for a day and was shocked by just how much you can do with it! I love how you can use the CMT to hit any body part hard and create entire body workouts which push you to your limits. I will be using this equipment with clients to help increase range of motion, increase core development and to aid with all fitness goals.”

**Laura Carroll:** “I’m excited to finally use a functional tool where you can actually feel the core working straight away and for days after. My clients love it. It’s the best investment I’ve made in years: challenging yet effective for all age ranges and both men and women.”

**David Mackman:** “I’ve got one of the original CoreSticks and have been a big fan of the idea but Escape’s new CMT is far superior in looks and ease of use. The central Power Core for example now has grips, which is very useful when you use it without the handles. The CMT allows you to work the client’s heart (and burn fat) while working all their core muscles. It’ll improve your mobility at the same time and make you feel awesome the next day... and very sore, but who doesn’t love that?!”

**David Jones:** “I am very impressed with the Core Momentum Trainer, which is very portable and can be used for all abilities. I will be purchasing one for myself to let loose on clients - and I will be using it in my own training also. I think it’s a revolutionary way of hitting the core in a functional way. I’m all for that and promote that style of training to clients. Hitting three planes of motion is also very easy to do and explain to clients.”



**“IF YOU WANT BODY TRANSFORMATION FAST THE CMT IS THE FERRARI OF EXERCISE EQUIPMENT THAT I USE WITH MY CLIENTS DAILY! STRONG CORE, AN INCREASE IN RANGE OF MOTION, MOBILITY AND THE RELIEF OF PAIN DUE TO POOR POSTURE... THE LIST GOES ON, NOT TO FORGET A STRAIGHT UP KILLER WAY TO GET IN SHAPE! I LOVE IT.”**

**Paul Lubicz, trainer and wellbeing coach for Grammy, Oscar and Golden Globe winners, international royalty and CEOs.**



## JOIN THE CMT REVOLUTION!

**Find out more about the  
Core Momentum Trainer.**

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...or for great updates, discussion and lots of exercise videos featuring the CMT, search for '**WE LOVE OUR CORE MOMENTUM TRAINER**' on **Facebook** and hit the '**Like**' button. There are already 50-plus exercises to see, with more being added all the time.