David Weck: Biography of an American Inventor

Introduction

This blog is about telling the story of rope flow so it’s only fitting to start with the story of its inventor, David Weck.

This article will provide biographical research on David Weck. The goal is a living archive of his contributions to athletics and biomechanics.

David Weck has had a huge impact on the fitness industry in his career as a coach, teacher, and inventor.

David Weck invented the BOSU Balance Trainer and founded WeckMethod. Though his inventiveness extends much further.

His output over the past 3 decades had made him one of the most prolific inventors that the USA has ever produced.

David’s work has helped millions of people across the globe. From world-class athletes breaking records to disabled individuals regaining the ability to walk.

Weck's equipment inventions and biomechanics concepts have stood the test of time.

And even though Weck has been making world-class inventions for the last 30 years...

Most people still haven’t heard his name.

Most people only make it to the cut-half ball in the corner of the gym.

BOSU Photo

Early Life and Education

Look at that mug!

David Weck was born to be a star.

Who would have guessed his aspirations to succeed as an actor would be dashed by even bigger success as an inventor?

Not much information is public about David Weck’s early life or childhood upbringing.

In one interview about the invention of the BOSU ball, he recalls being “28 years old in 1998.”

This implies that he was born in 1970 and is approximately 54 years old as of this writing.

Weck holds a B.A. in Political Economy from Williams College in Massachusetts. He played football under College Football Hall of Fame coach Dick Farley and competed as a sprinter on the track and field team.

He also holds a degree in Chinese medicine from the Pacific College of Oriental Medicine. The focus of this degree is Acupuncture and Oriental medicine.

While at Williams Weck described coach Farley as his key professor.

Weck described Farley’s work ethic as “very inspiring and motivating”. Noting also the mindset Weck carried toward his eventual success as an inventor came from Farley's coaching.

One coaching concept that Weck carried on from Farley was the “Eleven is One” concept. He breaks this down into a few main points.

In team sports and the military organization, everyone has an assignment

Synchronization of purpose, drive, and timing are the fundamentals of acting as a team

No Man or Woman is an Island

Integration and unified sequencing result in a come-together attitude that serves the whole

And knowing Weck its clear ideas are woven into everything he does.

Like his concept of Both Sides Utilized taught within the BOSU Ball programming.

And RMT rope flow training uses programmed patterns to enhance communication between the left and right sides of the body.

But Weck didn’t begin as a star athlete - and he knew his physical inadequacies were going to be a limiting factor.

So he had to use his inventive mind to find ways to improve his abilities beyond only training harder.

So he began to train his coordination using other athletes' movements as a framework.

So for 20 hours a week after football practice, Weck would watch game film and practice the movements he saw.

And at that time mind you At that time he was one of the first few people to reference slow-motion films like this.

His goal was to use film to identify and improve natural movement sequences.

The film was exactly what he needed to understand how to get an advantage on the field.

And form the foundations of the WeckMethod curriculum that’s now taught around the globe.

He has a skill for engineering complex ideas and creating new associations.

And his novelty and ingenuity have been all his own.

It's an inspiring success in innovative sports equipment and biomechanics concepts.

And as a result of his work, we have several of his inventions that can help the world make every movement better.

Or Weck puts it, make “Every Step Stronger.”.

Early Career Accomplishments

PHOTO TABLE OF WECK

In Weck’s early career, he lived and worked in New York City as a fitness instructor trying to make it as an actor.

He was smart and charismatic but above all, he had drive and determination toward his goals.

In the story below he talks about inventing and making the first BOSU ball and how it affected his life.

What’s so cool is that he had the sensitivity to see the potential in his invention and take action.

Even when it meant giving up another goal of acting success.

And when the BOSU proved it could be a success he had the courage to make it a reality for the world.

In this excerpt from The Todd Durkin Impact Show, Weck explains the origin of his first invention and shows his open-minded approach to full-hearted living.

Begin Interview Excerpt With Linked Source

David Weck (DW): I was living in NYC pursuing a career in acting. He laughs “pursuing a career was the, ya know, survival job - for rent and food.

And I rollerbladed everywhere - and I’m a very intense person so that means if I do something I do it 100%.

And that means that I went 6 years without walking or running because I wore rollerblades all the time.

So if I was outside I was rollerblading, and Manhattan is basically a skating rink, so I was holding onto cabs, jumping over stuff, and got really good at it.

But the consequence was that my feet trapped in these boots got super weak.

And one day I got an acting job that paid me a decent amount of money and I got a motorcycle.

But it was a cheap motorcycle and the starter didn’t work… so I had to jump-start it.

I lived on 56th street [one way] and downhill was the wrong way.

So I’m side saddle on this motorcycle trying to pop the clutch and this car sort of swerves and I drop the bike.

And I lift it up as fast as I can and my back got twinged… and I was in agony.

And 3 days later I was with a client chatting and I was rollerblading when I collapsed.

Todd Durkin (TD): How old were you then?

DW: Then I was 28 and it was 1998, and I didn’t know then what I know now about the body and biomechanics.

It was my weak feet that couldn’t resolve the forces, strength, and tension through my body. And that ultimately led to a back problem that I couldn’t fix.

And finally, on my last day of physical therapy - the money was run out, my insurance was done, and it wasn’t better.

The therapist says here let me introduce you to this swiss ball.

So I started training with the swiss ball, and I started getting some results with it.

I discovered there was a reflexive, [self] righting, and internal adjusting that helps reset the nervous system.

Then one day I saw a picture of Paul Chek standing on the ball squatting and I thought “Well, hey let me try that.”

And so I stood on the ball, very cautiously at first, and I got rather good at it. And my feet regained their strength because I would stand on the swiss ball barefoot.

But the problem was that the risk-to-reward ratio very quickly changes, so the risk outweighs the reward.

And so I was literally jumping onto the ball, jumping from one to another, and I would take these wipeouts.

TD: Wait, jumping from one ball to another?

DW: Yes

TD: Sounds like a recipe for disaster!

DW: Yes, with one thing being that when you’re [jumping] you’re prepared for the fall. But it turned out that the Feldenkreis-inspired minimalist stuff was where the real danger was.

The opposite end of the spectrum was more dangerous.

So, I would stand on it totally still, close my eyes, and tilt my head to cause vestibular perturbation.

Authors note: Vestibular perturbation refers to disrupting the normal functioning of the vestibular system. The vestibular system handles maintaining balance, orientation, and coordinating eye movements. When Weck tilts his head like this, he's creating great stimulus on the vestibular system due to the added instability of the swiss ball. To stay balanced in this way requires immense skill.

And one night, it was the New York Knicks losing in the finals and I was standing on a 75 mm swiss ball.

And I closed my eyes, tilt my head, and I fell off that thing and I got scared.

I landed on it, did a backflip, and bounced on the other side of the apartment, and I started Kicking my legs to see if I could still do it!

I was terrified because I literally almost broke my neck.

So that night laying in bed pondering what to do, I was like… what if I cut the ball in half?

And then BOOM - lightbulb, aha, eureka.

I’ve never seen that!

I immediately thought of all the things that I could do, and that it would be SAFE!

So I drew pictures of it on an envelope that night.

The next day I canceled all my plans and went to the hardware store.

I took my stability ball and cut it in half with scissors.

I bought a round tabletop that was the right diameter, a whole bunch of staples, glue, and tape.

And I built the first prototype that Saturday after falling on a Friday.

The glue dried and Sunday it worked.

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The BOSU ball would be the first of several more original inventions that Weck would go on to make.

The RMT Rope, which he produced following the discovery of rope flow training, is another.

And while rope flow training is our favorite Weck invention, it wouldn't be fair to stop the list there.

The tables below name, picture, and describe David Weck's notable products and concepts.

| Educational Philosophy | Performance |
| --- | --- |
| Weck Method | WeckMethod is David Weck’s innovation company.   Weck states on his website, that he created it with the goal to push the fitness industry forward and to develop proprietary products and athletic training.   David Weck’s training is approachable, but challenges norms solve problems and provide real-world value with a focus on human improvement, not just exercise.  Weck’s foundational principles are rooted in the pursuit of improving locomotion and human optimization.  The training is scalable for everyone and enhances all primal elements, translating both athletically and aesthetically. |

| Product | Performance |
| --- | --- |
| |BOSU Ball |BOSU Elite| | The BOSU Ball’s pressurized dome and reinforced platform are able to generate elastic resistance and governable instability - exciting muscle fibers that are less commonly engaged and bringing them to life with new stimuli.   With this technology the newly recruited fibers can be pushed to their maximum force limit in a safe way.  The newest version called the BOSU Elite version of the ball has become a training tool for top strength coaches, pro athletes, pro trainers, and fitness professionals worldwide. |
| |RMT Rope| | The RMT Rope is David Weck's proprietary rope design for use during rope flow training.  Weight: 1 lb  Diameter: .5 inches  Length: 8.5 Feet  The RMT Rope, or a rope with similar characteristics, can be used for rope flow training which integrates both sides of the body through patterns that enhance communication between large and small muscle groups.  Utilizing both sides of the body together results in improved mobility, coordination, core strength, and rotational power. |
| |SoleSteps| | SoleSteps are another staff favorite here at RFW.   Weck engineered these precisely cut wood blocks with a patented multi-pitch surface.  The SoleSteps employs four key points and a unique multi-pitch surface to create a unique tool that can relieve the daily stress your body encounters from walking, standing, and exercising by providing full foot support.  Available Sizes: One Size Fits All  Height Measurements of 4 Points:   * Point 1: ⅜” * Point 2: ½” * Point 3: 1” * Point 4: 1 ½”   Heel to Toe Pitch: 11.25 Degrees  Cross Foot Pitch: 22.5 Degrees  The combined attributes above result in a pitch that provides stability to the foot when you stand on it.  The SoleSteps surface acts as a supportive guide for healthy foot posture and allows you to build strength in your feet needed to counter foot collapse.  SoleSteps can also be used for weighted exercises, body weight exercises, unilateral exercises, conditioning, yoga, stretching, and for additional comfort at a standing desk.  SoleSteps have a unique strength-building process that teaches the body to bear its weight properly and to retain balance and security from the full foot. |
| |RMT Club| | The RMT Club is a made-in-USA training club. Its design is a cross between an Indian club and gada mace, with a few notable updates in form factor.  Height: 22 IN  Available Weights: 2, 4, 6, 8 LBS   The 4 LB club is recommended by the Weck Method site for beginners.  Unlike a kettlebell, dumbbell, or other traditional training equipment, the RMT Club incorporates the following:  Fixed Reinforced Handle   * Unifies multi-directional movement and increases range of motion   Internal Shifting Weight   * Creates dynamic resistance to act as an eccentric counter-weight * Provides audible feedback for proper positioning, timing, and, coordination   Durable Flexible Club Head   * Absorbs impact for striking motions   Because of this the RMT club offers versatility and unique training benefits.   Its patented design opens new avenues in functional training and improves functional strength, rotational power, mobility, coordination, core strength, conditioning, and balance. |
| |Propulse Speed Trainers| | The Propulse Speed Trainers are another unique David Weck invention.  Weck designed the Speed Trainers to generate faster reaction time, increase speed, and amplify conditioning.   Dimensions: 4 IN x 2 IN Weight: 12 OZ Each  They offer more than just weight in your hands with a few unique features.  Shifting Weight   * Creates dynamic feedback & sensory feeling   Fluted Design   * Creates a delay component & comfortable grip   Audible Feedback   * Created by the shifting weight and fluted design to set rhythm and timing   Like many other weck products there is specific training for their use that is detailed on the Weck Method website.  The shifting weight inside and audible feedback help increase rhythmic timing, speed, pace, and output to unify and engage your entire body so you get more from your working out, running, and fight training. |
| |WM Punch Pads| | WeckMethod Punch Pads provide hand protection without the bulk of a full fist glove.   They’re useful for training your punches with a few benefits:   * Practice at bare-knuckle range * Increase your striking accuracy * Improve the penetrating power of your punches.   They’re super convenient and easy to wear, and the convenient design gives you access to gripping and holding objects during use, so you can perform circuit training with many exercises, along with your striking sets.  It’s nice because you don’t need to take them off and put them back on again for different exercises. |

| Prototypes | Performance |
| --- | --- |
| |The Deck| | The Deck by WeckMethod is a lifting and training platform that incorporates the same unique pitches, angles, and configurations used in the SoleSteps, packaged in a larger platform.  The larger surface area allows the user to optimize output efficiency while reducing stress on joints.  As a result, you can improve posture and promote even distribution of weight into the feet.   Like the SoleSteps, it’s simple to use. All you do is step on for an effective and versatile training augmentation.  The Deck is used for weighted exercises, body weight exercises, unilateral exercises, conditioning, and everything in between. |
| |Hybrid Rope| | The Hybrid rope is a second interaction RMT Rope that experiments with the use of spinning bearings in the handles and a dual material rope arc.  The “hybrid” descriptor is a reference to the addition of Jump Rope-style training features to the RMT Rope lineup. The bearings in the handles pay homage to speed ropes used for performance jump rope training.   While the apex of the rope is made of a more traditional RMT Rope, or flow rope, material. |
| |Two Sticks| |  |
| |Lifesaver Rope| |  |

| Biomechanics Concepts | Performance |
| --- | --- |
| |Head Over Foot Technique| |  |
| |Weck Fists| |  |
| |45 Stance| |  |
| |Coiling Core Training| |  |
| |Rotational Movement Training| |  |

This list of David Weck’s inventions is an impressive view into Weck’s creativity and productivity. And my guess is this list is small relative to the number of prototypes Weck has not produced commercially.

*Authors note: RFW will be continuing to research and update this article to include products and ideas as David Weck produces them.*

Contributions to biomechanics research and fitness training

Innovations in equipment and technology for fitness and health

Notable achievements in the field

Role in the sports and fitness industry

Advocacy for healthy lifestyles and social change through fitness

## Philosophy on Health and Fitness

Weck Method philosophy on functional training and movement

Approach to injury prevention and rehabilitation

Emphasis on the mind-body connection and holistic health

## Teaching and Training

Weck Method teaching philosophy and method

Fitness and training expertise

Approach to strength and conditioning

Contributions to exercise science and kinesiology

## Innovations and Contributions

Unique or innovative approaches to fitness and health

Use of technology in research and training

Use of data and analytics in research and training

Use of biomechanics in rehabilitation and injury prevention

## Impact on the Fitness Industry

Contributions to the field of sports medicine

Role in or impact on the field of physical therapy

Contributions to or impact on the field of rehabilitation sciences

Innovations in or contributions to the field of biomechanical engineering

## Conclusion

Summary of David Weck's impact on the fitness industry and beyond

Future implications of his contributions and innovations