

# KAATSU®



**JAMAL HILL**  
*Team USA*  
#1 Paralympic Swimmer

**KAATSU FOR EVERY BODY**



# KAATSU FOR EVERY BODY

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*If you have any questions, call :*

**+1-866-217-3460**

*or*

Email :

**info@kaatsu-global.com**

Learn more about KAATSU:

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# KAATSU FOR EVERY BODY

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By Steven Munatones for KAATSU Global, Inc.  
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# KAATSU FOR EVERY BODY

## THE LETTER FROM THE EDITOR



The first time that I met Jamal Hill was at a Biohacking Conference in Pasadena, California in 2015. We quickly became friends and he has continued to inspire and teach me the tremendously positive impact one person can have. Jamal has vision, passion and commitment to not only perform at his best in competition, but also to help others and teach others how to stay safe in and near the water.

Other Paralympic athletes like Robert Griswold and Olympic marathon swimming gold medalist Ana Marcela Cunha of Brazil are similarly inspirational individuals with back stories that are worthy of telling through books and movies. The Tokyo Olympic and Paralympic Games showcases many of these athletes who competed in swimming, running, water polo, and other sports.

But we see incredible men and women among KAATSU users every day. They shape people's lives while fulfilling their potential and facing the challenges of life. People like Purple Heart recipient and Green Beret Joe Lowrey and many others who are humble but do remarkable things every day.

We are very happy that the Olympics and Paralympics are able to be held, enabling us to learn more about these modern-day heroes and heroines. This digital KAATSU Magazine is one means of share their stories and experiences.

*Steven Munatones*  
Steven Munatones,  
CEO & Co-founder  
KAATSU.com  
Huntington Beach, California  
U.S.A.

# KAATSU Equipment



## DO

- » Correctly place the KAATSU Air Bands on your upper arms and upper legs every time.
- ⊕ Note : On your arms, the Bands should be placed above your biceps and triceps near your armpit, but below your deltoids.
- » Check Base SKU (pressure) and find Optimal SKU (pressure) during every KAATSU session. Optimal Pressure is one that is not so high as to occlude, but high enough to get that “KAATSU Fatigue/Failure Feeling” during exercise.
- ⊕ Note: Your Optimal SKU can change on a daily basis.
- » Release the KAATSU Air Bands if you feel something is not right. If you feel lightheaded or if you have any pain on one side or the other, stop and continue on another day.
- » You can do different exercises or movements during KAATSU. You can type emails or play the piano or play computer games. Be creative and enjoy the experience.
- » Rest 30-60 seconds between different sets of exercises.

## DON'T

- » Do not ever fully occlude blood flow. Signs of this are collapsed veins, no pulse at the wrist, pale palms and skin, severely delayed (>6 seconds) capillary refill.
- » In the untethered mode, do not have the air bands inflated for more than 20 minutes on your limbs
- » Do not lift heavy weights when doing KAATSU

# ONWARDS TO TOKYO WITH JAMAL HILL



Fly into LAX and head out of the international airport to all points in Southern California, and you may see a large multi-story likeness of Paralympic swimmer [Jamal Hill](#) who grew up underneath the LAX flight paths of inbound and outbound airlines.

**H**ill, a native of Southern California who grew up in Inglewood, was only 10 years old when his body started to fail him. He experienced total paralysis and doctors considered amputating his right arm. The decision was made to keep his arm, but he was

diagnosed with Charcot-Marie-Tooth (CMT), a hereditary neurological condition that can result in progressive loss of muscle tissue and touch sensation in the body.

CMT threatened to alter his life, including his passion for swimming

where he started near the LAX Airport. But through sheer will, deep faith, and relentless determination, Hill has not only regained his mobility and strength, but he also competed in college and most recently qualified for the Tokyo Paralympic Games (S10 category).



## HE DID KAATSU CYCLES BEFORE AND DURING THE FLIGHT, AND THEN ONCE AGAIN BEHIND HIS SCHEDULED BEDTIME THROUGHOUT HIS INTERNATIONAL TRAVELS

The 26-year-old developed a love for swimming at the Westchester YMCA Mommy & Me swim class - and has never stopped. Two decades later, an 8-story likeness of him hangs from a building not far from LAX and the YMCA where his career started.

Hill is ranked #1 as the top U.S. Paralympic 50m freestyle sprinter and #3 in the world - with eyes on a gold medal. He talks about his journey in an interview with KAATSU Global CEO Steven Munatones and KAATSU Aqua Master Specialist and Olympic swim coach Chris Morgan: Hill pushed through the pain and fear of being seen and treated differently and swam competitively in high school, receiving a swimming scholarship to Hiram College in Ohio. After college, the post-graduate swimmer trains 14 hours per week and now works with mental performance coach and swim coach Wilma Wong. He says, "*Her innovative training style and techniques have resulted*

*in improving from an unranked amateur to number one in the nation within one year."*

### Global Ranking Progression

There are 13 classes of athletes in para swimming. The lower the number the more severe impact of activity limitation an athlete experiences according to designated classifiers. The nature of Hill's disability has caused him to fluctuate between World Para Swimming classifications as an S9 and S10. Despite the constant uncertainty of classification, Hill continued to excel in whatever class he is ultimately categorized.

Hill won his first national title at age 23 in 2018, a veteran swimmer but a neophyte national champion. It was his first time traveling outside California for a national competition and he finished strongly as a member of Team USA. The experience motivated him to accelerate his physical and mental training to higher levels.

At the 2019 Glasgow International World Series, Hill won silver and bronze medals while setting three new personal best times and an invitation to train at the Olympic Training Center in Colorado Springs, Colorado.

His success in Glasgow was followed by a spectacular performance in Peru at the 2019 ParaPan American Games where he won a silver medal and 2 relay bronze medals. He also received the honor to anchor the first Team USA men's relay to medal at an international paraswimming event.

Throughout 2020, Hill's goals became clear as he continued to experiment KAATSU with Coach Wong. The investment in KAATSU the Original BFR, both in the water and on dryland, as a modality to improve athletic performance, and to warm-up for races, and to recover from workouts is paying off well. Under Wong's tutelage, Hill has ventured into the Top 10 rankings of the world, an achievement that has

not been reached by an American S10 athlete in nearly a decade.

Finally, within sight of the Tokyo Paralympic Games, Hill's dreams came crashing down. Down hard.

Due to a unique set of circumstances caused in part by the pandemic, Hill learned that his route to Tokyo was hampered by bureaucracy. But he was not about to lie low and accept fate. He and Wong uncovered and considered every possibility - and they found a route to Paralympic selection by going on an unplanned trip to Rio de Janeiro so Hill could be properly and officially categorized. His travel plans set, Hill went off on a 10-day journal from LAX to Houston to Rio de Janeiro to Houston to LAX to Indianapolis and back, using his

new KAATSU C3 and the KAATSU jet lag and travel fatigue protocols throughout the long journey.

*"He did KAATSU Cycles before and during the flight, and then once again behind his scheduled bedtime throughout his international travels,"* explains KAATSU Global CEO Steven Munatones. *"We have been developing and testing these protocols ever since KAATSU inventor Dr. Sato and cardiologist Dr. Nakajima first tested their oxygen saturation rates (SpO2) before and after doing KAATSU on airplanes back in the 1990's. When the doctors first saw their oxygen saturation rates increase in flight, they knew they had something special."*

Hill was selected for the Team USA Paralympic

50m freestyle sprinter and a relay member.

But his passion for swimming extends beyond his personal and professional goals for the Tokyo Paralympics. The World Health Organization show that 360,000 people lost their lives to drowning in 2016. In the United States, drowning ranks fifth among the causes of unintentional injury death according to the Centers for Disease Control and Prevention. In an attempt to lower the global drowning rate, Hill began [Swim Uphill](#), an initiative to teach one million people to swim through a wholly innovative program supported by a digital swim school platform.

Swim Uphill is exploding with success and growth, just as its founder is doing in the swimming world.







## ROCKING AND RECOVERY WITH ROBERT, HEADING TO THE TOKYO PARALYMPICS

**Robert Griswold** is an American Paralympic swimmer and gold medal favorite for the upcoming Tokyo Paralympics. He has cerebral palsy and does KAATSU Cycles before and after his 8-times-per-week workouts and races as part of his pre-swim warm-ups and post-swim cool-downs.

.....

**D**uring the complete lockdown at the U.S. Olympic Training Center due to the COVID-19 pandemic, Griswold spent nearly a year of trying his best to being creative in order to maintain his speed, strength, stamina and flexibility. He also graduated from Indiana State University, began clerking at a law firm in St. Louis, Missouri, and continues to train 8 times per week in anticipation of the Paralympic Trials

in Lewisville, Texas in April with the anticipation of winning medals at the Tokyo Paralympics.

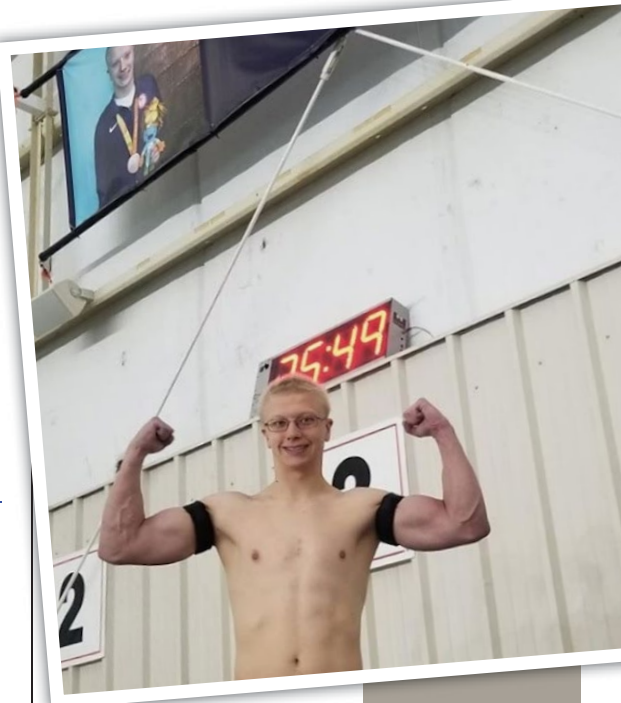
When the COVID-19 pandemic hit, the administration at the U.S. Olympic Training Center shut down its facilities, but also would not let the athletes off the Training Center campus. The athletes had no way to leave the Center, but swimmers also had no way to train properly in

a pool. So what did Griswold do? He looked for an AirBnB with a backyard pool and found one and negotiated an early morning training schedule with the owner.

He and his roommate would sneak out of the Training Center campus through a side door before the sun came up. They would get to the AirBnB house with a 13-meter pool. They jury-rigged a tether unit and did creative pool workouts. He also finagled his way to get a [Yasa Trainer unit](#) and figured out a way to stay in shape with his ingenuity and KAATSU Air Bands that he used on dry land and in the pool.

Eventually, he ended up moving to St Louis where he currently trains in a 50m pool 8 times per week while working as a law clerk 25 hours per week. The United States Paralympic Trials are on April 10-12.

He explains his recovery protocol, *“When I came back and competed in my first swim meet at the U.S. Open, I swam the 400m individual medley. I was about 95% of my peak physical abilities and just barely missed the world record. When I got out of the pool, I used my lactate meter and showed the [USA Swimming National Team High Performance Director](#) that his post-race lactate levels were 19.9 mmol/L. The director saw my lactate reading and said that 19.9 must be a mistake.*



*So I retested a few minutes later and I tested at 20.2 mmol/L. The director was surprised it was that high.”*

But Griswold uses his KAATSU equipment to help him recover from these high lactate levels. He swims easily (loosens down) for 600 meters until his lactate reading is between 7-8 mmol/L. Then he gets out of the water and does KAATSU Cycles until his lactate is reduced to 2.1 or lower mmol/L.

“

When I came back and competed in my first swim meet at the U.S. Open, I swam the 400m individual medley. I was about 95% of my peak physical abilities and just barely missed the world record.

Note: Griswold, Matt Torres and Jamal Hill are among the American Paralympic athletes who will use KAATSU at the Tokyo Paralympic Games.

# JAMAL HILL

## HEADING TO NEWPORT BEACH

[Jamal Hill](#) of Inglewood, California struggles with the degenerative disorder Charcot-Marie-Tooth - but not much else.

**T**he personable [aquapreneur](#) is a member of the USA Paralympic Swim Team and is looking forward to competing in the 2020 Tokyo and 2024 Paris Paralympic Games despite living with Charcot-Marie-Tooth disease which is an inherited disorder that causes nerve damage in his arms and legs.

The disease results in smaller, weaker muscles, a loss of sensation and muscle contractions, and difficulty walking.

In Hill's case, it significantly reduces the mobility in his legs where his motor function stops at his knee caps and his motor function in his arms is impacted.



*"[The disease] runs in my family," Hill explained. "It affects my mom a little bit. It affects my uncles pretty heavily.*

*Essentially my motor neurons in my outer extremities, from my elbow to my fingertips and from my kneecaps all the way to my toes gives me a lot of problems."*

But his overwhelming positive nature has enabled him to succeed in a sport he could have easily quit many times - and filmmaker [John Duarte](#) made an inspirational short documentary film about him called [Swim Up Hill](#).

Swim Up Hill was recently accepted to the 2020 Newport Beach Film Festival.

Duarte talked about Hill, *"Jamal has blazed through boundaries.*

*Once fully paralyzed from the neck down, and now a top ranked swimmer, he teaches us that nothing - and no one - can put a limit on his ambition if he doesn't impose one on himself. As soon as I met Jamal, I knew I had to document his journey."*

Hill won a silver medal at the 2019 Para Pan American Games in Lima, Peru with a lifetime best. *"He just keeps getting better and better under the tutelage of coach [Wilma Wong](#). "Jamal has a passion - for swimming, for sharing his passion, for mentoring others - has is so uncommon. It is great to see him succeed both in his commercial ventures and in the water," said [Steven Munatones](#) who taught Hill how to use [KAATSU](#) in his training.*

Hill is happy with his progress using [KAATSU](#), *"The [KAATSU] technology has been so integral in my growth since we first met almost two years ago."*

Coach Wong describes how he warms up with [KAATSU](#) on the pool deck for his races - since he becomes paralyzed once his core body temperature increases too much. *"Sometimes, he cannot even climb out of the pool,"* said Wong with respect and compassion.

*"In Tokyo, I think there will be gold at the end of his Olympic rainbow,"* predicted Munatones.



# ROBERT GRISWOLD, JAMAL HILL HEAD INTO THE OLYMPIC YEAR

53 athletes were named to the 2020 U.S. Paralympics Swimming National Team, as announced today by the United States Olympic & Paralympic Committee. The team features 33 women and 20 men, including 19 Paralympians and 9 reigning world champions.



- relatively close to Griswold's training base at Indiana State University - will be a stop on the World Para Swimming World Series on April 16th-18th.

The U.S. Paralympic Team Trials will be held June 25th-28th in Minneapolis, where the athletes who will represent Team USA in Tokyo will be selected. The Paralympic Games Tokyo 2020 will be held August 25th - September 6th.

Every morning before his first workout of the day, Griswold understands the value of doing repeated KAATSU Cycles to warm-up his limbs - and repeating the KAATSU Cycles after the workouts as a recovery modality. Hill similarly frequently uses his KAATSU Cycle 2.0 to help him with warm-ups and recovery.

*"With this being a Paralympic Games year, this is an incredibly important time for our team," said Queenie Nichols, director of U.S. Paralympics Swimming. "The team just concluded a national team camp which only heightened their excitement for Tokyo 2020. This will be an exciting year, and we can't wait to get the season started."*

The national team includes two KAATSU users, [Robert Griswold](#) (S8/SB7/SM8) from Freehold, New Jersey and [Jamal Hill](#) (S9/SB8/SM9) of Inglewood, California.

Griswold performed very well at the 2019 world championships, helping the American team that heads to Melbourne, Australia in February for the World Para Swimming World Series. Indianapolis

***"I will forever and always rave about Operation Healing Forces, because this is an organization that shows the heart of God. When people are in need, you help them, and that's what they do."***

Brooke Adams, OHF 2020 Immediate Needs Recipient

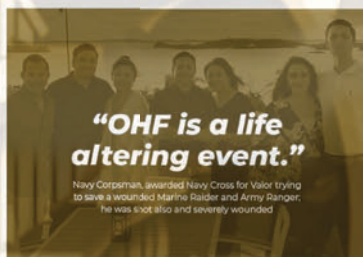
## THE MISSION

The mission of Operation Healing Forces (OHF) is to help active-duty and recent-veteran wounded, ill and injured Special Operations Forces (SOF) and their families with mental, physical and emotional healing. Its goal is to help them return to the fight or transition successfully into civilian life.



## THE PARTNERSHIP

KAATSU Global has partnered with OHF to aid SOF and their families by donating 3% of its online sales and supplying KAATSU equipment to foster rehabilitation, reintegration and resiliency in the Special Operations community.



[operationhealingforces.org](http://operationhealingforces.org)

## KAATSU IS ALSO USED BY ...



# G.I. JOE TAKES FLIGHT AND CONTINUES IMPROVEMENT



**N**ot only has retired U.S. Army Green Beret Sergeant 1st Class [Joseph Lowrey](#) made significant improvements in his muscle tone and mobility after improbably surviving a horrific gunshot wound to his head during a combat tour in Afghanistan, but also his vision scores have returned to his pre-seizure levels.

*"Not only has Joe improved his cognitive functions, but his vision improvements will enable him to obtain a California State driver's license,"* said Steven Munatones. *"Getting his license and being able to drive is another major step in his long rehabilitation from a month-long coma after getting shot in the head. When I first met Joe, he*



*had to record everything that I said because his short-term memory was so impacted. Now, Joe can talk profoundly about his ketogenic diet or his increased muscle tone and elasticity or a new author he is reading or his deep faith in God."*

The Long Beach, California native is an avid KAATSU Cycle 2.0 user - doing twice-daily sessions on both his arms and legs - while launching his G.I. Joe YouTube channel and working with his colleagues at [United Wings of Liberty](#).

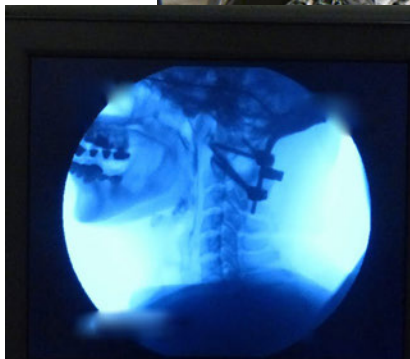


United Wings of Liberty is a military veteran nonprofit organization that acts a hub for all Veteran nonprofit organizations, patriotic business owners and citizens [see [here](#)].





# TRAUMATIC BRAIN INJURY SURVIVOR 12 YEARS POST-CAR ACCIDENT



**P**hotos above show car wreckage and Tina's x-ray of during swallow test.

Tina is a 47-year-old car accident survivor with traumatic brain injury (3 on the Glasgow Coma Scale) who has been quadriplegic for over 12 years.

After several weeks of KAATSU Cycles performed daily on her arms and legs, Tina, her family and her caregivers say the following:

1. Tina has eliminated her hyperbaric chamber dives.
2. Tina has eliminated her home visit physical therapy sessions.
3. Tina has rapidly improved her wound healing so the home health care nurse visits every other day, not every day like before.
4. She sleeps 8 hours through the night instead of waking up hourly as she always had to benefit her and her 24/7 care givers.
5. She feels warm now throughout the day. Previously she always felt cold.
6. Her spasmodic episodes are significantly reduced and her pain and discomfort levels are reduced.
7. She can do KAATSU full body pandiculations (stretches). This has enabled her body to begin less stiff and

more flexible and easier to carry and move. This greatly benefits her 24/7 care givers and helps reduce the pain they feel in their own backs and shoulders.

8. She can move her feet and stretch her legs.
9. She can move her arms and is working towards feeding herself and using an icing bag to decorate cakes (her previous profession).
10. She looks forward to sharing her story with others in similar situations.

## 0 on May 21st in Long Beach, California

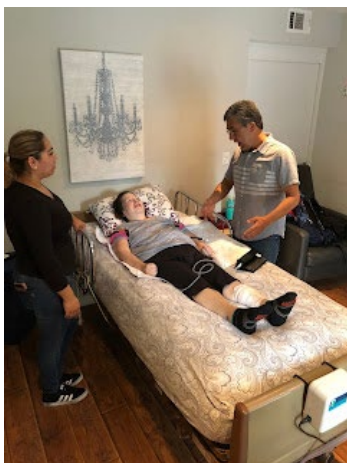
Linda learned about KAATSU after watching [Tap Nixon](#), a 74-year-old man, improve with KAATSU Cycle. For the past 12 years Delmar has been on the side of her younger sister, Tina, in the hospital, care facilities and finally home. A hit-and-run accident left Tina a quadriplegic when she was 35 years old [see wreck above].

Tina, a 47-year-old cake designer and decorator, survived a car accident in 2006 [3 on the Glasgow Coma Scale]. Linda explained that Tina experienced “internal decapitation” (medically known as an atlanto-occipital dislocation; atlas is the name of the topmost vertebral bone of the spine; the occipital bone forms the lower part of the back of the skull).

During the first six years after the accident, Tina lived in care facilities and breathed through a ventilator and tracheostomy tube. For the past six years, she has lived at home with Linda with 24/7 caregivers and therapists at her side 365 days a year.

Tina is mentally alert, very attentive, laughs, smiles, acknowledges conversations around her with expressive eyes. She speaks very softly.

After a KAATSU demonstration by the KAATSU Specialist, Linda became excited to try KAATSU Cycle on her own arms to see how it would feel on her sister. The KAATSU Specialist applied one KAATSU Air Band on her arms that quickly became pink with the resultant blood engorgement.





Linda started to move in an easy, rhythmic manner as she is a hula dancer. After a few minutes, Linda stated that she was feeling the burn and started sweating as if she was working out harder than she was. Tina listened intently to the explanation and carefully observed the demonstration.

The KAATSU Specialist asked Tina if she wanted to try. She said yes with a sparkle in her eye. Linda was asked if she could put the bands on Tina, but Tina said, “No... you” with her eyes focused on the KAATSU Specialist. The KAATSU Specialist placed a pink band on her right arm, her good arm that was less spastic than her left arm. Both hands remained in the clenched position and angled towards her torso.

The pink band was placed with a very, very light Base SKU (under 10 SKU). Tina confirmed that she felt comfortable with the band on her upper arm. Tina had previously mentioned that she wanted improved muscle tone.

The KAATSU Cycle mode was selected and an Optimal SKU pressure of 100 was selected (on the scale of 0-400 SKU on the KAATSU Nano device). Within seconds of the air being compressed into the pink band, Tina’s skin tone almost immediately

became a light pink color, obviously a shade darker than her normal skin tone. Her eyes glistened as she concurrently focused on the additional pressure she felt on her arms.

She proceeded to 3 KAATSU Cycles (3 minutes 20 seconds per Cycle): the first at 100 SKU, the second at 120 SKU, the third at 140 SKU as she verbally confirmed her consent.

The band was then removed after the 10 minutes of KAATSU.

The KAATSU Specialist asked her to try and move her hand. She was able to ever so slightly move her right hand. Linda and Yuri, her caregiver, appeared to be pleasantly surprised.

She was asked to attempt moving her right hand again. She moved her hand again with a slightly greater range of motion on the second attempt, but these movements clearly required significant effort and concentration on her part.

Linda took videos of the session as Tina and the KAATSU Specialist were focused and constantly sharing feedback about the sensations she felt, the resultant movements and skin color. It would have

“

In 12 years I have never seen her move her left arm straight up and as far as that. If she tries to move her left arm it takes tremendous effort and I can see her “thinking” about trying to move it.

---

a great opportunity to place a Masimo MightySat Finger Pulse Oximeter on her finger to check her physiological data on the next-generation KAATSU Master 2.0, but her hands were constantly clenched in a spastic paralysis.

Then Tina said, “I feel warm” as her arm remained a slightly pink color.

The session ended as Tina agreed to meet the following day.

The KAATSU Specialist Steven Munatones remarked on what he just observed, “I felt all the years of listening and learning from [KAATSU inventor] Dr. Sato were all worth the effort - even for this one spectacular moment in a bedroom in Long Beach, California with a car accident and Traumatic Brain Injury survivor, her sister and her caregiver.”

## Day 2 on May 23rd in Long Beach, California

Yuri, the caregiver, said Tina slept very well - and snored loudly - after the KAATSU session on the previous day. This morning, she did not feel sore and felt good. Tina was excited and at considerable ease on the second day.

Caregiver Yuri placed two pink KAATSU Air Bands on her left and right arms. Tina agreed as the goal is to get the entire network of family members, therapists and caregivers certified as KAATSU

Specialists so they are very confident and competent in applying and doing KAATSU by themselves.

Tina did 4 KAATSU Cycles at increasing Optimal SKU levels on both arms, starting at 100 SKU (i.e., 100 SKU on the first Cycle, 110 SKU on the second Cycle, 120 on the third Cycle, 140 SKU on the fourth Cycle). Her Base SKU was still low (i.e., under 10 SKU).

By the second KAATSU Cycle, both her arms had achieved a pink color, including around the scar tissue that is around a very long scar on her upper arm. Linda said, “I have never seen her scar get pink.”

On the third KAATSU Cycle, Tina independently tried to move her hands. She concentrated deeply, squinted her eyes, and moved both hands at approximately 45°. Everyone smiled. Then, without prompting, Tina started to move her left arm. She closed her eyes and with a furrowed brow, she held her breath. Unbelievably, she did a complete bicep curl.

Linda was shocked and said, “In 12 years I have never seen her move her left arm straight up and as far as that. If she tries to move her left arm it takes tremendous effort and I can see her “thinking” about trying to move it. Before this moment, she has had to essentially move her whole right side to get a little movement from the left. Her brain stem injury precludes her from moving without ‘thinking about it’ as we do.

Tina, do that again!"

Again, Tina closed her eyes and her entire body shook as she attempted to move her left arm again. She was literally willing her arm up again as she held her breath. When she completed her second arm curl, it was clear that she was physically spent. She gave it everything she could as her body seemed to sink into her bed. She finished her upper body workout with one more KAATSU Cycle. Then the arm bands were removed.

Yuri took Tina's right hand and easily opened her fingers. Yuri had tried to open her clenched hand on Day One, but Tina did not want to do it because it hurt. With the success of opening her right hand, Yuri took Tina's left hand and did the same. Linda said, "In the past five years, Tina has had almost 200 hyperbaric oxygen sessions which opened her left hand so it didn't dig into her palm. Today her hand opened even further with less effort."

Tina was beaming with pride - and exhaustion - as she smiled in a supine position on her bed.

The KAATSU Specialist was getting ready to go, but then Tina whispered softly, "Legs?"

Yuri put the KAATSU Air Bands on her right leg with a very low Base SKU. Her left leg has a bacteria infection and bandage so it was decided to only focus on her right leg. The KAATSU Cycle mode was changed to LEG with an Optimal SKU of 100. Tina proceeded to 3 KAATSU Cycles at that pressure.

After the third KAATSU Cycle on her right leg, the band was removed. This time, Linda asked Tina if she could move her legs. She turned her feet very slightly inward, perhaps 5-10°. "Wow!" was the collective expression as everyone smiled.

Linda joked that Tina was really going to snore loudly on her post-KAATSU nap.

## Day 3 on May 24th in Long Beach, California

KAATSU Master Specialist David Tawil of New York visited Tina for her third consecutive KAATSU session.

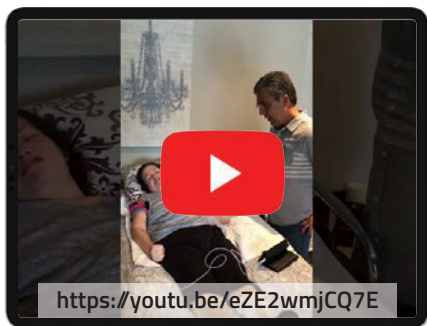
But Tina just had experienced a total body spastic episode and was very uncomfortable. She also felt cold. Her caregiver had just finished giving her a massage, but it was clear that Tina was still in distress.

David asked her if she wanted to do KAATSU. "I would not have been surprised if she declined," Tawil said later. But Tina wanted to do KAATSU and proceeded to do 4 KAATSU Cycles at 100 SKU + 110 SKU + 120 SKU + 120 SKU pressure on both her arms. Without prompting, Tina suddenly did 10 consecutive biceps curls on her right arm as she moved her hands from near her waist upwards to her shoulders. She then focused on her weaker left arm and proceeded to do 6 consecutive biceps curls with her left arm in the supine position. Her improvement was remarkable the way she moved her arms and hands on her third KAATSU session of less than 15 minutes.

Tina clearly put in a tremendous effort into each of these movements of her left and right arms.

Tina then expressed an interest to eat for herself and then attempted to open her left hand by herself. She was not able to do anything but move very slightly one finger, but her attempt was admirable.

A pink KAATSU Air Band was then placed on her right leg and 2 KAATSU Cycles were performed (20 seconds of applied pressure followed by 5 seconds of release repeated 16 times). She then proceeded to move her toes inward.



## Day 4 on May 25th in Long Beach, California

Tina repeated her KAATSU session on both arms and her right leg...ready for the following week.

*"Our goal is to teach the standard KAATSU protocols to Tina's sister Linda, her caregivers, and therapists over the next week so they all can work with Tina according to their own time schedules and availability - and comfort of their own home," said Munatones. "The convenience of KAATSU - to be able to do anywhere anytime - is compelling."*

## Day 5 on May 26th in Long Beach, California

Tina repeated her KAATSU session on both arms and her right leg.

## Day 6 on May 28th in Long Beach, California

Tina repeated her KAATSU session on both arms and her right leg. She used the new KAATSU Aqua Bands on her arms with a Base pressure of 10 SKU. She did four KAATSU Cycles at 100 SKU, 110 SKU, 140 SKU and 150 SKU. She did some arm contractions and biceps curls on her right arm while she was propped up in her bed.

After her upper body workout was completed, Yuri placed a plastic fork in her right hand and she attempted to bring the

utensil to her mouth. She got her hand holding the fork to approximately a 90° angle with considerable effort. She was also able to move her right shoulder for the first time.

Yuri then placed the plastic fork in her left hand and she attempted to bring the utensil to her mouth. She got her hand holding the fork to approximately 45° with considerable effort while her body shook with effort. She also felt warm and started to perspire due to her effort.

Tina finished her workout with a standard KAATSU Air Band on her right leg with a Base pressure of 10 SKU. She did 4 KAATSU Cycles at 150 SKU, 160 SKU, 190 SKU, and 200 SKU. After the second and third Cycles, she asked for the pressure to be increased.

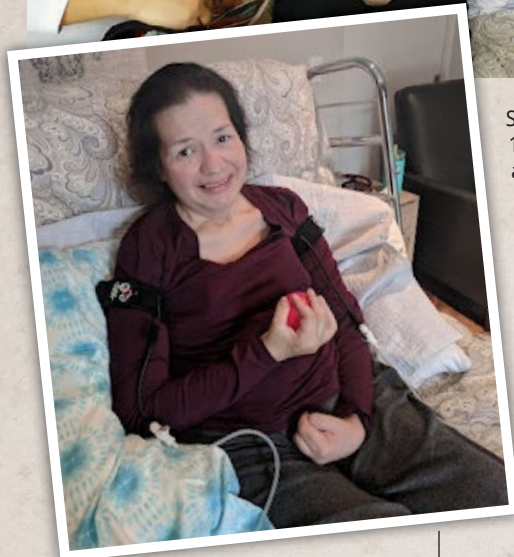
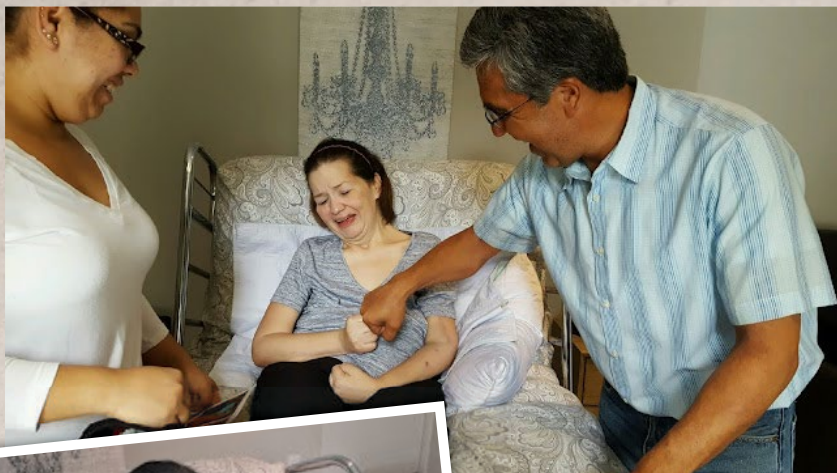
## Day 7 on May 29th in Long Beach, California

Tina did 4 KAATSU Cycles on both her arms followed by 4 KAATSU Cycles on her right leg.

She used a Base SKU level of 10 on both her arms and leg with Optimal SKU levels of 100 + 120 + 140 + 150 respectively on her arms and Optimal SKU levels of 150 + 160 + 180 + 200 respectively on her legs.

After these Cycles, the bands were removed and a spoon was placed in both her right hand and then her left hand by Yuri. This is the exercise that she followed up with:





SKU levels of 100 + 120 +140 + 150 respectively on her arms and Optimal SKU levels of 150 + 160 +180 + 200 respectively on her legs.

During these arm Cycles, a spoon was placed in her right hand and she attempted to raise the spoon to her mouth.

Then she followed up her upper body workout with elevated leg extensions with both legs in the supine position with the band on her right leg [see video below from Day 9]:

She ended the session by giving a fist pump to the KAATSU Specialist [see above].

## Day 8 on May 30th in Long Beach, California

Tina did 4 KAATSU Cycles on both her arms followed by 4 KAATSU Cycles on her right leg.

She used a Base SKU level of 10 on both her arms and leg with Optimal

## Day 9 on June 1st in Long Beach, California

Tina did 5 KAATSU Cycles on both her arms followed by 5 KAATSU Cycles on her right leg.

She used a Base SKU level of 10 on both her arms and leg with Optimal SKU levels of 100 + 120 +140 + 150 + 150 respectively on her arms and Optimal SKU levels of 150 + 160 +180 + 200 + 200 respectively on her legs.



During the last two arm Cycles, a spoon was placed in the professional cake decorator's right hand and she attempted to raise the spoon to her mouth.



Then she followed up her upper body workout with elevated leg extensions in the supine position with both legs



She had a lower back pain before the KAATSU session started in which she felt relief after her KAATSU session was over.

Her sister and caregivers have been taught the standard KAATSU protocols and will conduct the KAATSU sessions by themselves over the weekend. They will be given the opportunity to become certified KAATSU Specialists by taking the 100-question online certification examination.

## Day 12 on June 1st in Long Beach, California

After doing 5 KAATSU Cycles between 100 - 170 SKU on her arms, Tina did calf and leg exercises and whole body pandiculation during KAATSU Cycles at a Base pressure of 10 SKU and Optimal pressure between 150-220 SKU on her legs. Her body continues to feel warm upon doing KAATSU Cycles.





## Day 15 on June 4th in Long Beach, California

After doing 5 KAATSU Cycles between 100 - 170 SKU on her arms including biceps curls with a plastic spoon, Tina did calf and leg exercises and whole body pandiculation during KAATSU Cycles at a Base pressure of 10 SKU and Optimal pressure between 150-220 SKU. Her body continues to feel warm upon doing KAATSU Cycles.

## Day 16 on June 4th in Long Beach, California

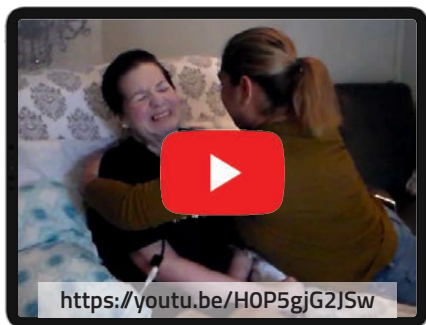
Tina felt sore after her vigorous workout yesterday so we decided to go easy. Today was simply a recovery day using KAATSU Cycles without movement or exercises.

She simply did 5 KAATSU Cycles between 100 - 170 SKU on her arms without hand clenches or biceps curls with a plastic spoon and 5 KAATSU Cycles between 150-200 SKU on her legs without calf and leg exercises and whole body pandiculations. While Tina was doing the KAATSU Cycles, her caregiver Yuri explains the differences she has seen in her hands since starting KAATSU:



## Day 17 on June 4th in Long Beach, California





After a recovery day on Day 16, Tina did 5 KAATSU Cycles on her arms (with an Optimal SKU of 100 + 120 + 140 + 160 + 180).

Then she did 5 KAATSU Cycles on her legs (with an Optimal SKU of 150 + 170 + 190 + 200 + 201) while her caregiver Yuri Ramirez helped her do a variety of exercises:

1. Yuri lifts her knee while Tina pushes forward against resistance to work on her quadriceps and hamstring.
2. Yuri grabs against Tina's back while Tina pushes back to work on her back and neck muscles. It is important to help Tina gain more muscle and control her neck when she is moved.
3. Yuri rotates her ankles that helps her feet and calves feel better.



After a steady recovery over a 3-week period where she is enjoying improved sleep patterns, improved muscle tone, more relaxation, significantly greater movement and mobility, and improved wound recovery, Tina did 5 KAATSU Cycles on her arms (with an Optimal SKU of 100 + 120 + 140 + 160 + 180) on Day 17.

After her upper body workout, Tina did 5 KAATSU Cycles on her legs (with an

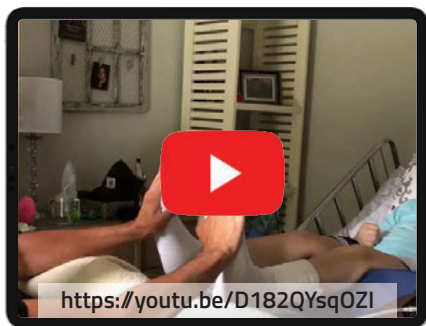
Optimal SKU of 150 + 170 + 190 + 200 + 201) while her caregiver Yuri helped her do a variety of exercises:

1. Yuri lifts her knee while Tina pushes forward against resistance to work on her quadricep and hamstring.

2. Yuri grabs against Tina's back while Tina pushes back to work on her back and neck muscles. It is important to help Tina gain more muscle and control her neck when she is moved.

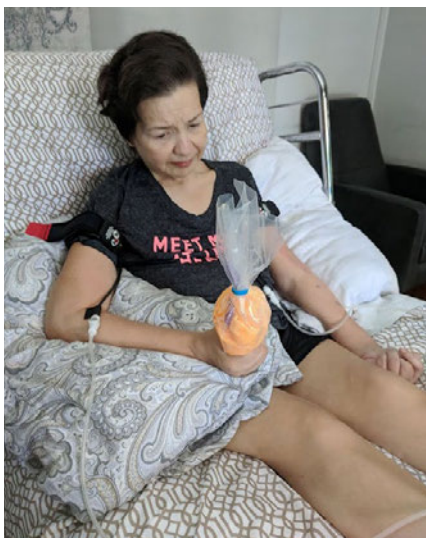
3. Yuri rotates her ankles that helps her feet and calves feel better.

By Day 26, she was doing the following exercises:



### July 1st in Long Beach, California

Tina was able to put an icing bag in her right hand, squeeze it, and plans to soon start decorating a cake for the first time in 12 years.



Dr. Yoshiaki Sato participated in a question-and-answer session on KAATSU usage with, by and for people with paralysis:

#### Q1. Why does a patient with paralysis become more relaxed and sleep better after doing KAATSU?

A1. The sympathetic nervous system has been activated for a long time. When KAATSU is performed, the sympathetic nervous system relaxes as the parasympathetic nervous system is stimulated and patients with paralysis are able to sleep well [after KAATSU]. Also, mechanical stress - which is a good stress - occurs and they can sleep comfortably.

#### Q2. What is the mechanism that enables an increased passive range of motion in her elbows, hands, and ankles?

A2. After the accident, joints became harden and spastic [for a long time, decades]. The tendons and ligaments become harden. Relaxed by KAATSU, because the sympathetic and parasympathetic nervous system are well activated, the joints and muscles become loosened. This increases its

range of motion. There are tendons within the muscles, but they will not become soft soon. Over time, however, the tendons gradually softens over the course of many months.

**Q3. The muscle and ligament contractures in their elbows, wrists, fingers and ankle plantar flexors are rigid. Can you predict how much a patient with paralysis can improve her range of motion?**

A3. Patients with paralysis have been tense for a long time and their bodies became stiff as a result. It is very important to make concentrated efforts just like climbing stairs, step by step. They should not be impatient. Movement towards their goals might go in a good direction if they keep making steady effort.

**Q4. Why do quadriplegic patients feel less pain?**

A4. The pain is relieved because of the secretion of beta-endorphins, which is called intra-cerebral anesthesia in the brain. Also, the nerves of the muscle fibers that were in a sleeping state around the damaged muscle fibers are awakened by the application of KAATSU. Thus, the pain is relieved.

**Q5. There are some red spots that showed up on a quadriplegic's right thigh after the initial session. Was the Base SKU too high initially?**

A5. You can judge that the patient's blood vessels are weak due to the appearance of red spots on the skin. Perhaps next time, when KAATSU is applied with the same SKU, these tiny red specks might disappear. Some people might say that KAATSU is dangerous because the red spots appeared or KAATSU might cause blood clots. The red spots indicates that stimulation was sufficiently given to blood vessels. It is important to start with KAATSU Cycle 1 (i.e., 100 SKU) for people who are trying KAATSU for the first time and gradually move on to KAATSU Cycle 2 (e.g., 120 SKU), Cycle 3 and on.

**Q6. Should we worry about blood clots in immobile patients? Does the potential for existing clots change KAATSU protocols?**

A6. The potential for kicking off blood clots will not change as long as you do the KAATSU Cycle. Start with pressurization for 30 seconds and depressurization for 5 seconds (i.e., KAATSU Cycle on and then off). Since the blood vessels gradually increase resistance against pressure and patient's blood vessels get used to SKU and can tolerate it. Do not worry about thrombosis.

**Q7. If patients eat poorly, what should we worry about with KAATSU?**

A7. Improving one's diet in parallel with doing KAATSU is one kind of treatment. The three goals - exercise, good diet and sufficient sleep are important to become healthier. It is necessary to balance these three factors.

**Q8. Do you recommend 2 full cycles, 2 times a day? What do you recommend for daily KAATSU usage?**

A8. The daily usage of KAATSU varies according to patient's abilities and their level of physical fitness. In the case of patients where spasticity tends to easily occur, even if their body loosens after one KAATSU session, it is possible that they will return to their original state after a few minutes. Rather than deciding whether to do one or two KAATSU Cycles, the amount of KAATSU should be decided by the patient. Generally, the more serious the patient, the more times they should do the KAATSU Cycle. Conversely, for less serious patients, the less time should be spent doing KAATSU. That is, the number of times doing KAATSU Cycles should be decided on a case-by-case basis.

**Q9. Why do patients with spinal cord injuries feel warm during KAATSU - especially when they have no sensation in the same limb?**

A9. The fact that their body feels warm after KAATSU is evidence that new blood vessels were created. Normally, there is no medical treatment to create new blood vessels instantly, but KAATSU instantly creates new capillaries. Blood flows to those points in the body and their body warms up. Conversely, when the body is exposed to below the freezing temperatures, capillaries are pulled away and the body becomes cold.

**Q10. Why does KAATSU appear to help with neuropathic pain in spinal cord injury patients?**

A10. For not only the patients with spinal injuries, but also the patients with various diseases, when they do KAATSU, cells and muscle fibers that have not been used until now start to work. Consider the case if there are 100 soldiers, but only 10 of them have been working. When those 10 soldiers are injured, the 90 other soldiers will start working on behalf of those 10 people.

**Q11. The Masimo device measures Perfusion Index (an indication of the pulse strength at the sensor site). The Perfusion Index values range from 0.02% for very weak pulse to 20% for extremely strong pulse. Normally, the Perfusion Index decreases during KAATSU, but why does the Perfusion Index often increase during KAATSU for a client with a spinal cord injury?**

A11. KAATSU immediately creates new blood vessels and the blood fills the place where no blood was flowing until then. Naturally, the perfusion index will increase in this case.

**Q12. For spinal cord injury patients, Capillary Refill Time is often very slow with no KAATSU pressure, and speeds up during KAATSU. Why?**

A12. Since the blood flow reaches every corner [in the limb], Capillary Refill Time is accelerated. New blood vessels are increased. When you do KAATSU, VEGF (Vascular endothelial growth

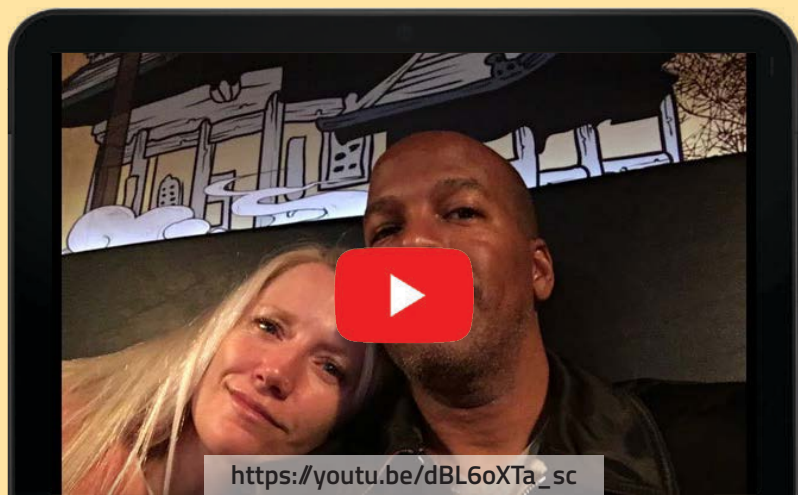
factor) new blood vessel growth factor hormone increases. KAATSU effects have continued to surprise me.

**Q13. If neural pathways are NOT intact (for example, with a completely severed spinal cord) for an individual with a spinal cord injury, why does the client still feel pain? Why does KAATSU appear to decrease that pain?**

A13. Blood vessels are not connected, but new blood vessels are born. It is the same as bypassing a road. Rather than repairing broken roads, roads are made new. When new blood vessels are formed, nerve cells come after, and nerves are completed. As new blood vessels are formed, neural cells are formed. In a previous KAATSU trial, we put a patient's head in a Functional MRI machine as we applied KAATSU to both arms while doing Hand Clenches with a grip band. New blood vessels increased in the portion of the brain that was black. Naturally, neurons are formed after. Since KAATSU works, I would like doctors and researchers at the VA to conduct further clinical trials.

**Q14. Many military therapists use electrical muscle stimulation on spinal cord injury patients. Can this Electrical Muscle Stimulation device be combined with KAATSU to achieve better results during the isometric contractions?**

A14. There are various devices such as electric stimulation units and EMS available now. When electric stimulation is given, the muscles shake. There are several research results that cause muscle hypertrophy to some extent. We get requests from researchers who specialize in electrical stimulation to simultaneously use KAATSU and electrical stimulation. We performed clinical trials on patients with spinal injury who could not move their legs. It showed positive results with KAATSU.



## GAMAL AWAD AND HAWLEY BENNETT ON KAATSU, THE ORIGINAL BFR

The husband-and-wife duo of U.S. Marines Major [Gamal Awad](#) and two-time Olympian [Hawley Bennett](#) talked about their use of KAATSU the original BFR with retired Navy SEAL captain and KAATSU Master Specialist John Doolittle on a recent discussion.

The pair regularly use the original KAATSU Nano unit with their KAATSU Air Bands. Awad is a tactical athlete who has pushed himself for years to maintain sufficient strength, speed and stamina for his military responsibilities. Hawley competes in equestrian events representing her native Canada.



Awad and Hawley have used KAATSU to help with their rehabilitation from numerous injuries - all quite serious from broken pelvis bones to broken backs. They also use KAATSU in the course of their daily exercise routines. Awad talks of his daily need for KAATSU while Olympian Hawley talked about her own KAATSU journey in the podcast above.



Awad is shown below on the day of his most recent injury - and soon thereafter during his recovery with his pink KAATSU Air Bands on his arms.

To learn more about equestrian athlete Hawley who is looking to participate in her third Olympic Games next summer in Tokyo in 3-day eventing, visit [hawleybennett.com](http://hawleybennett.com).





# TWICE DAILY KAATSU USAGE BY BULLETPROOF

Purple Heart recipient [Joe Lowrey](#) of Long Beach Wilson High School in Long Beach, California has been using KAATSU daily for nearly two years.

While serving with the 7th Special Forces Group on July 7th 2014, the U.S. Army Green Beret took a bullet to the head in 2014 (read his story [here](#)). The injury occurred during Lowrey's third deployment as he was manning the gun turret on top of a truck during an intense firefight against Taliban insurgents.

After surprising his colleagues and the medical staff in hospitals in Afghanistan and Germany, then later the Walter Reed Army Medical Center in Washington D.C. by surviving the traumatic brain injury, his ability to do simple movements - standing up, walking, using his left arm - was significantly hampered or impossible.

But after two years of twice daily KAATSU Cycles and KAATSU Constant (morning and night on both arms and legs), the

retired Sergeant 1st Class has improved dramatically, both physically and cognitively.

*"I started eating right, going keto, and getting good sleep," says Lowrey. "I use all kinds of biohacks, but I always try to do KAATSU in the morning with my caregiver and before I go to bed at night. I jokingly tell my buddies that [Dave Asbrey of Bulletproof](#) took my name. I am the one who is bulletproof."*





# 74-YEAR-OLD TAP NIXON ON KAATSU, DAYS 1-17

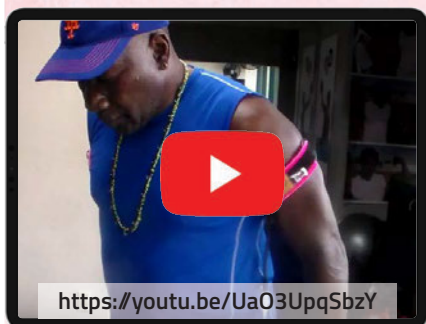


**7**4-year-old Tap Nixon, a former Long Beach State basketball player who played guard on its #2 ranked team in the early 1970s, hurt his shoulder that restricted his range of motion and eliminated his ability to shoot basketballs. He also uses a cane to help him limp along

since he had two hip replacements and one revision on his left leg and torn his Achilles heel.

He did his first session of KAATSU on April 9th 2018.

He explains his injury and restricted range of motion on his left shoulder before trying KAATSU.



Tap Nixon started by doing two KAATSU Cycles while sitting down to warm-up with a Base SKU pressure of 30 SKU and an Optimal Pressure of 250 SKU. Then he did slow and steady standard KAATSU 3-Point Exercises (i.e., Hand Clenches + Biceps Curls + Triceps Extensions) while doing 5 KAATSU Cycles (taking 15 minutes) on the KAATSU Master device using KAATSU Air Bands while doing two more KAATSU Cycles.

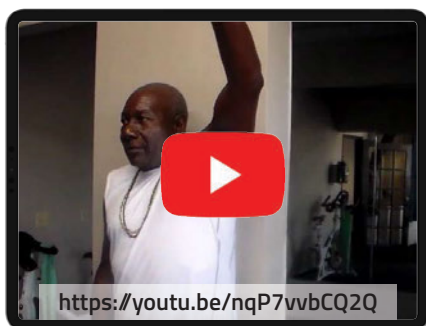


Tap stretches his injured left shoulder on his fifth and last KAATSU Cycles, finishing up his 15-minute session on the KAATSU Master using pink KAATSU Air Bands. He kept a Base SKU pressure of 30 SKU and his Optimal Pressure at 250 SKU.



Tap demonstrates his improved range of motion on his left shoulder after doing 15 minutes of KAATSU Cycles.

Day 1 is completed, he felt much better and will continue doing KAATSU every other day. We will continue to follow his progress.



Nixon wants to re-gain his ability to shoot and rebound basketballs. He did his second session of KAATSU on April 11th 2018.

He explains his injury to his left shoulder before doing 5 KAATSU Cycles (15 minutes) on the KAATSU Master device using KAATSU Air Bands at a Base SKU pressure of 30 SKU and an Optimal Pressure of 250 SKU. During the KAATSU Cycles, did the standard KAATSU 3-Point Exercises (Hand Clenches + Biceps Curls + Triceps Extensions) while the pressure was on and he rested while the pressure was off.

His improved range of motion is significant from Day One [see above].



Tap followed up with a third KAATSU session on April 12th 2018.

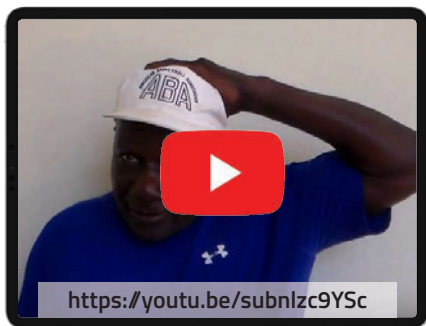
He did 5 KAATSU Cycles (totaling 15 minutes) on the KAATSU Master device using KAATSU Air Bands at a Base SKU pressure of 30 SKU and an Optimal Pressure of 250 SKU on his arms. He added two KAATSU Cycles on his legs of 35 Base SKU and 300 Optimal SKU on his legs.

During the KAATSU Cycles on his arms, he did the standard KAATSU 3-Point Exercises (Hand Clenches + Biceps Curls + Triceps Extensions) while the pressure was on and he rested while the pressure was off.

When the KAATSU Air Bands were on his legs doing the KAATSU Cycle, he did leg extensions while sitting and contracting

his quadriceps. KAATSU Specialist Steven Munatones explained to Tap, *"We began conservatively and are only doing the KAATSU Cycle during the first two weeks. We will do only simple exercises and stretching with the KAATSU Cycle. After two weeks, we will untether the bands and your Base SKU and Optimal SKU levels will increase. Then we will begin doing KAATSU Performance Training where the bands are untethered - disconnected - but they still remain inflated at your Optimal SKU pressure. Then we will begin to do chest passes, take free throws and do agility drills on the basketball court with the inflated bands on."*

His improved range of motion of his left shoulder is significant from Day One.



Tap did his fourth 20-minute session on April 17th 2018.

He did 5 KAATSU Cycles (totaling 15 minutes) on the KAATSU Master device using KAATSU Air Bands at a Base SKU pressure of 30 SKU and an Optimal Pressure of 260 SKU on his arms. He added two KAATSU Cycles on his legs of 35 Base SKU and 320 Optimal SKU on his legs.

During the KAATSU Cycles on his arms, he did the standard KAATSU 3-Point Exercises (Hand Clenches + Biceps Curls + Triceps Extensions) while the pressure was on and he rested while the pressure

was off. He used 2 lb dumbbells to do Biceps Curls during one of the KAATSU Cycles.

When the KAATSU Air Bands were on his legs during the first KAATSU Cycle, he just sat. During the second KAATSU Cycle, he did leg extensions on his left leg while sitting and contracting his quadriceps.

The overall plan for Tap is to do 6 sessions within the first two weeks, focusing on his left arm and starting to work on his legs. The subsequent 2-week period will focus on his legs where he had 3 hip surgeries. The final 2-week period will focus on his mobile agility and shooting ability on a basketball court where he will actually use a basketball. This is his ultimate goal: move fluidly without a limp and shoot basketballs with his young athletes who he coaches.





Tap talks about the effects of KAATSU on his lower and upper body after his sixth KAATSU session over a 2-week period (15-20 minute sessions on April 9th, 11th, 12th, 17th, 18th, and 19th).

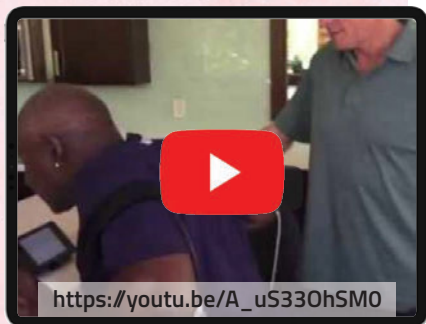
After 7 short KAATSU sessions, Tap can now pass and shoot a basketball - and open a Gatorade bottle - which he could not do before:



Tap also could not previously pick up his keys from the floor, but things changed after 7 KAATSU sessions of 20 minutes each. His Base SKU pressure is 35 SKU on both his arms and legs. His Optimal SKU pressure is now 290 SKU on his arms and 320 SKU on his legs.



During his 8th KAATSU session, Tap warmed up for his basketball moves with some KAATSU Cycles on his upper body (30 SKU Base Pressure + 290 SKU Optimal Pressure) and some KAATSU Walking with 35 SKU Base Pressure + 320 SKU Optimal Pressure on his legs.



He finished up his KAATSU session with some basketball moves he has not done for decades.

On Day 14 on June 6th, Tap did a series of KAATSU 3-Point Exercises (triceps extensions shown below) followed by a series of wall push-ups in the KAATSU Cycle mode:



On Day 17 on June 20th, Tap went out to a local basketball court to demonstrate his newly found strength and mobility:



For an explanation on what is happening physiologically, click [here](#).



# SUPPORT WATER WARRIOR JAMAL HILL HEADING TO TOKYO



Of all the aquatic athletes competing in the Summer Olympics and Paralympic Games, Los Angeles-born swimmer and long-time KAATSU user Jamal Hill may be the most creative, innovative, and the most influential agent of change.

Of all the aquatic athletes competing in the Summer Olympics and Paralympic Games, Los Angeles-born swimmer and long-time KAATSU user [Jamal Hill](#) may be the most creative, innovative, and the most influential agent of change.

The postponement of the Tokyo Paralympic Games to 2021 was a blessing in disguise for Hill and his [Swim Up Hill Foundation \(@swimuphill\)](#). After qualifying for the 50m freestyle and relays, Hill continues to use his voice as a platform for social change. His Foundation is on its way to teach [1 million people](#) in underserved communities how to swim and stay safe in and near the water.

In addition to his likeness on an 8-story building near LAX International Airport, Hill sells some Water Warrior, Swimming Ninja t-shirts to support his cause. To order Swim Up Hill shirts, visit [here](#).



For more information on The Swim Up Hill Foundation, visit [#swimuphill](#) and [@swimuphill](#).

Hill's shirt design is partly based off of the [Great Wave Off Kanagawa](#) ukiyo-e print by Japanese artist [Katsushika Hokusai](#).

# UNBOXING THE KAATSU C3



KAATSU C3 is the third generation KAATSU Cycle device.

**K**AATSU can improve blood circulation and improve muscle tone. KAATSU is the Original BFR (Blood Flow Restriction). Invented in Japan, with products engineered and designed in Southern California, KAATSU Global is the pioneer in the emerging BFR market. The carefully controlled, easy-to-use pneumatic KAATSU bands automatically and safely optimizes blood circulation for muscle tone, strength, mobility, rehabilitation, and recovery.

KAATSU devices (KAATSU Master 2.0, KAATSU Cycle 2.0, KAATSU C3, KAATSU B1, KAATSU AI) included a handheld

automated compressor and universal pneumatic, stretchable bands which are placed around the arms or legs. Arm bands and leg bands are used separately during each session.

The KAATSU Air Bands inflate and deflate in a patented sequence based on algorithms that are optimal for each user, no matter their age or physical abilities. KAATSU protocols are convenient, easy-to-do, and time-effective. KAATSU equipment offer unparalleled performance, precision, and safety for users of all ages, fitness levels, and walks of life - and can be used anywhere anytime to help you

Recover Faster, Rehab Stronger and Perform Better.

For more information, visit the [www.kaatsu.com](http://www.kaatsu.com) website to learn more about BFR, Blood Flow Restriction, BFR exercise, BFR science, and KAATSU protocols and how KAATSU differs from B Strong, Delfi Portable Tourniquet System for Blood Flow Restriction, Smart Cuffs, and other BFR brands and occlusion bands.

You can also learn more about KAATSU the Original BFR here:

<https://kaatsu.com/>  
<https://www.facebook.com/kaatsu/>  
<https://twitter.com/KAATSUGlobal>  
<https://twitter.com/originalbfr>  
<https://www.kaatsublog.com/>  
<https://www.instagram.com/kaatsuglobal/>

The primary differences between KAATSU and the other BFR bands is:

1. KAATSU utilizes the patented Cycle function
2. different pressures can be simultaneously used on different limbs
3. KAATSU equipment and protocols were proven safe and effective after a decade of clinical use and research on over 7,000 cardiac rehab patients at the University of Tokyo Hospital (between 2004 and 2014)
4. KAATSU is used by cardiologists, orthopedic surgeons, podiatrists, and physicians in various specialties
5. KAATSU Air Bands do not occlude arterial flow
6. KAATSU is meant to be gentle and convenient in order to do anywhere anytime
7. KAATSU is sold worldwide to people up to the age of 104
8. more research has been conducted in more countries on KAATSU than any other BFR device
9. the seminal, groundbreaking research on BFR was conducted and published by KAATSU inventor Dr. Yoshiaki Sato in the 1990s
10. KAATSU Air Bands are waterproof and the KAATSU C3 is ruggedized for military applications





# KAATSU THE ORIGINAL BFR SOCCER APPLICATIONS

*"My knee popped,"* recalled Josh Saunders, then a goalkeeper with the U.S. Major League Soccer team Real Salt Lake.

*"When I came down, I knew the injury was bad, but I had no idea what was to come."*

Saunders' fears were confirmed - a torn left ACL, a bad common soccer injury. However, Saunders' injury became more than the typical case - it became life-threatening.

Two weeks after his surgery, Saunders not only contracted a serious bone infection caused by the bacterium

streptococcus, but also a candida fungus. *"It was no longer about my return to football,"* Saunders said. *"It was about surviving."*

Now the New York City Football Club goalkeeper says he is lucky to be alive and to still have his leg. Saunders credits his complete victory to U.S. Olympic ski team doctor and sport scientist Dr. James Stray-Gundersen and his cutting-edge recovery, fitness, and strength protocols - the AlterG treadmill and the KAATSU.

Saunders was looking for anything to get him back in the goal. He had lost significant weight, and more



importantly, muscle mass. Saunders met Dr. Stray-Gundersen who elevated his fitness and built his strength with KAATSU protocols, very quickly.

*"I had never heard of KAATSU or Blood Flow Moderation Training before.*

*But Dr. Stray-Gundersen showed me results from his top skier, and I was all for it. He applied 30 minute KAATSU sessions, 5 days per week and in a matter of a few sessions, I had significant increases in strength, and my quad size increased,"* said Saunders. *"I got that same fatigue feeling in my muscles, with no heavy weights. It was amazing."*

*"I heard about KAATSU from Harvard researchers who had visited Japan,"* recalls Dr. Stray-Gundersen. *"But we never looked into KAATSU until one of our medalists went down with a severe injury a month before the 2014 Winter Olympics. We rehabilitated [Todd Lodwick] him using KAATSU exclusively, and he raced in 28 days, and we became believers."*



Major League Soccer defender Kuami Watson-Siriboe, another ACL tear victim, started the same KAATSU program. The effects were shockingly immediate. *"I quickly recovered doing KAATSU 3-Point Exercises and the KAATSU Cycle,"* says Watson-Siriboe.

*"In all applications, we always assess capillary refill and responses throughout recovery - same as Dr. Sato has done since the 1970's,"* said Dr. Stray-Gundersen. *"The KAATSU equipment allows me to identify the optimal pressure each time which is critical for safety and effectiveness as we will fill normally unused capillaries and engage more muscle fibers - we want to achieve the 'fatigue' in the muscle so that the physiologic cascade to produce Growth Hormone, occur."*

*Simply put, you cannot get beneficial results, if you do not use proper protocols, equipment, and safety checks required with blood flow moderation training used with KAATSU. As always, the athlete safety and recovery is our first concern and KAATSU researched system sets the standard."*

Saunders concluded after winning the NYFC Player of the Month in May 2015, *"I couldn't believe the results at first, but I had faith in Dr. Stray-Gundersen and KAATSU, and I just wanted to get back on track as fast as the skier did. I am now stronger, faster and quicker than I was before my injury."*

#### **Details:**

January 6th 2014: Left ACL reconstruction with Right hamstring graft  
January 14th 2014: Alter-G and KAATSU protocols re-started within first post-op week [above photo shows left 8 weeks post op  
April 2014: 12 weeks post-op: gait, girth and strength of quadriceps normal and symmetric to contra-lateral side. Instituted drills on the pitch  
May-June 2014: Return to normal training/practice.  
July 2014: First game, 23 weeks post op  
March 2015: MLS Player of the Month

# ANTONIO ARGÜELLES ON AVOIDING JET LAG WITH THE KAATSU C3



**Antonio Argüelles**, a 2-time Guinness World Record holder who have completed the **Oceans Seven** (solo crossings of the English Channel, North Channel, Strait of Gibraltar, Catalina Channel, Tsugaru Channel, Cook Strait, and Molokai Channel), will attempt to set his third world record this month.

**H**e aims to become the oldest swimmer in history - at the age of 62 - to complete a two-way non-stop English Channel crossing, 67 km (42 miles) from England to France and back to England this month.

The English Channel crossing is expected to take him over 24 hours to complete.

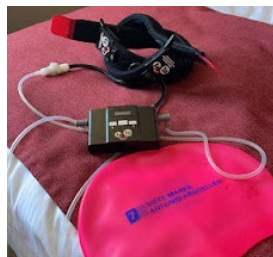
Argüelles used KAATSU Cycle 2.0 equipment and followed the standard

KAATSU Jet Lag Protocols on his 10.5-hour flight from Mexico City to Heathrow International Airport. He explains the effects of the original BFR protocols and equipment in his brief interview posted above.

The 62-year-old channel swimmer says, "I keep my KAATSU close to me at all times.

*I did three full KAATSU Cycles today after swimming*

*and will do one more KAATSU Cycle tonight before going to sleep. I swam 90 minutes this morning [three days after arriving in Dover, a week before attempting the world record English Channel crossing]."*



# SWIMMING WITHOUT A SPLEEN, ANA MARCELA CUNHA WINS OLYMPIC GOLD



Things were not looking good for Brazilian marathon swimmer Ana Marcela Cunha in 2019.

**A**fter facing the bitter disappointment of finishing 10th in the marathon swim at the 2016 Rio Olympic Games in front of her family and fans in Brazil where her high hopes for a gold medal was dashed, she also faced surgery where her spleen needed to be removed.

A year before the 2020 Tokyo Olympics her spleen had to be removed. Realizing her Olympic dream was put on the back burner and other health priorities took precedence.

Fortunately, her surgery was successful and Cunha got right back to work, training as intensely as ever. She



mustered enough speed and stamina to qualify for the [Olympic 10K Marathon Swim](#) and knew that she had another year to prepare for her Olympic redemption.

But then the COVID-19 pandemic hit - and it hit Brazil particularly hard.

In response, Cunha moved to Portugal to seek her Olympic dream. With all the pandemic uncertainty in Brazil, Portugal was her best bet.

She remained dedicated to her craft, spending several hours a day swimming up and back in a 50m pool, and doing all kinds of intense dryland and supplemental workouts.

When the 2020 Tokyo Olympics were postponed a year, Cunha had even more time to prepare. The delay worked out just right for her.

By the time, she lined up on the starting pontoon at the [marathon swim](#) in Tokyo Bay, she was as ready as ever. One of the shortest athletes in any Olympic swimming final, Cunha was arguably the one athlete with the biggest heart.

She swam a nearly perfect race at the Olympics, never out of the top three in a

tightly pack of 25 competitors throughout the 10 kilometer course. She took over the lead from American [Ashley Twichell](#) on the third of seven loops and kept on pushing the pace after taking the lead.

She only temporarily relinquished the lead when German [Leonie Beck](#) burst into first, but Cunha hung closely and regained the lead for good on the last lap with long, powerful arm strokes and a powerful kick. She talked about her gold medal performance, *"This means a lot. [The victory] was due to many years working hard. I want it so much, so badly."*

The 29-year-old from São Paulo stood tall on the Olympic podium, saluting the Brazilian flag. Cunha explained her mindset during the race, *"We had to be cool or 'cold' as Europeans [are]."*

*We are Latin people; we are hot, we are emotional people, so I had to be very cold mentally in the race to be focused and I had to win it myself. I knew I was prepared for that.*

*My family always believed in me and supported me in this journey. We are dreaming the same dream (with her coach). This medal means a lot to me.*



*I will keep this medal in a special place and I have a plan to develop a foundation that will support the future dreams of swimmers. I think this medal will show new generations that swimming, and especially marathons, will allow many others to dream. I could speak for hours about this medal, but our time is short. I am thankful for the support of the Brazilian government and for many other sponsors, supporting me for so many years. Of course I must thank my club and my family.*

*I was able to give 100% of my skills and talent. In other competitions, I often said I could have done better, but I won't say this [for this race]. I am exhausted. I am proud that it has been 13 years since my first Olympics [in 2008 when she finished 5th as a 16-year-old]."*

Unlike several others in the race who plan on retiring, Cunha will continue racing. "I am very happy in training for open water swimming. I am active and training with passion. That love will allow me to continue. Paris is just three years away. My mental preparation is as important as my physical training. My body and my mind are always connected and the most important is that I have always believed in myself."



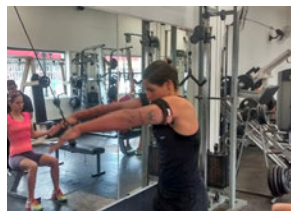
## OLYMPIC 10K MARATHON SWIM RESULTS:

Gold: Ana Marcela Cunha (Brazil, 29) 1:59:30.90

Silver: Sharon van Rouwendaal (Netherlands, 27) 1:59:31.70

Bronze: Kareena Lee (Australia, 27) 1:59:32.50

4. Anna Olasz (Hungary, 27) 1:59:34.80
5. Leonie Beck (Germany, 24) 1:59:35.10
6. Haley Anderson (USA, 29) 1:59:36.90
7. Ashley Twichell (USA, 32) 1:59:37.90
8. Xin Xin (China, 24) 2:00:10.10
9. Lara Grangeon de Villele (France, 29) 2:00:57.0
10. Finnia Wunram (Germany, 25) 2:01:01.90
11. Samantha Arévalo (Ecuador, 26) 2:01:30.60
12. Cecilia Biagioli (Argentina, 36) 2:01:31.70
13. Yumi Kida (Japan, 36) 2:01:40.90
14. Rachele Bruni (Italy, 30) 2:02:10.20
15. Anastasiia Kirpichnikova (Russian Olympic Committee, 21) 2:03:17.50
16. Paula Ruiz Bravo (Spain, 22) 2:03:17.60
17. Angelica Andre (Portugal, 26) 2:04:40.70
18. Kate Farley Sanderson (Canada, 21) 2:04:59.10
19. Alice Dearing (Great Britain, 24) 2:05:03.20
20. Paola Perez (Venezuela, 30) 2:05:45.00
21. Michelle Weber (South Africa, 24) 2:06:56.50
22. Krystyna Panchishko (Ukraine, 23) 2:07:35.10
23. Li-Shan Chantal Liew (Singapore, 22) 2:08:17.90
24. Spela Perse (Slovenia, 25) 2:08:33.00
25. Souad Nefissa Cherouati (Algeria, 32) 2:17:21.60



# WHAT IS MMHG VS. SKU? BLOOD PRESSURE CUFFS VS. KAATSU AIR BANDS?



**A**ll KAATSU equipment uses the measurement of SKU (Standard KAATSU Unit). For the KAATSU Nano, KAATSU 2.0, KAATSU C3 models, the KAATSU scale ranges from 0 SKU to 400 SKU. On the KAATSU Master 2.0, the KAATSU scale ranges from 0 SKU to 500 SKU.

Many physicians, physical therapists, chiropractors, coaches, physios, athletes and users ask what is the equivalent unit in millimeters of mercury (mmHg) pressure of 1 SKU? It is among the most common questions asked about KAATSU the Original BFR.

The easy answer is 1 SKU = 1 mmHg.

But the correct answer is SKU and mmHg are completely different scales and measure completely different things in the body.

In medicine, pressure is measured in millimetres of mercury. Blood pressure is measured with a sphygmomanometer. Blood pressure is the pressure of circulating blood against the walls of blood vessels. Most of this pressure results from the heart pumping blood through the circulatory system. When used without qualification, blood pressure refers to the pressure in the large arteries.

Blood pressure is usually expressed in terms of the systolic pressure (maximum pressure during one heartbeat) over diastolic pressure (minimum pressure between two heartbeats) in the cardiac cycle. It is measured in millimeters of mercury (mmHg) above the surrounding atmospheric pressure. Blood pressure, respiratory rate, heart rate, oxygen saturation, and body temperature are used in evaluate a patient's health. Normal resting blood pressure in an adult

is denoted as 120/80 mmHg with 127/79 mmHg as the average for men and 122/77 mmHg as the average for women.

Traditionally, blood pressure was measured non-invasively using a mercury-tube sphygmomanometer [see above].

The photo below shows a standard blood pressure cuff on the right arm and a KAATSU Air Band on the left arm.

SKU as measured by KAATSU equipment is much different.

SKU measures the compression against the air bladder that is located inside the pneumatic KAATSU Air Bands. So, simply compared, blood pressure in mmHg is the pressure of blood against the walls of the blood vessels, but SKU with KAATSU equipment is a measure within an external non-body part (i.e., the air bladder).

mmHg is an internal measure taken at full occlusion of arterial flow. In contrast, SKU is an measure of pressure taken at homeostasis of an external non-body part (i.e., the air bladder).

Those are two completely different measurements. Therefore, in reality,  $1 \text{ SKU} \neq 1 \text{ mmHg}$  and  $120 \text{ SKU} \neq 120 \text{ mmHg}$  when compared side-by-side.

The effects of SKU in a KAATSU Air Band and mmHg in a blood pressure cuff (or tourniquet) on the human body are also vastly different.



Orthopedic surgeons generally practice fixed inflation pressures (typically 250 mmHg for the upper arm and 300 mmHg for thigh) or fixed amount of pressure above systolic arterial pressure (typically +100 mmHg for upper arm and 100–150 mmHg for thigh). At these pressures (e.g., 250 mmHg for the arm), there is full occlusion. That is, arterial blood flow is stopped from the torso to the arm so the surgeon can properly and safely perform surgery. The reason why 250 mmHg creates full occlusion is due to the structure of the blood pressure cuff or tourniquet.

The surgical tourniquets used are stiff, wide, inflexible and purposefully engineered to occlude - or stop - arterial blood flow from the torso to the arm or leg. So a 250 mmHg pressure on such a tourniquet is what surgeons generally use.



Decades of testing with different materials, elasticities, and widths enabled the KAATSU inventor, Dr. Sato, to develop this innovative design. KAATSU protocols were researched at the University of Tokyo Hospital under the supervision of experienced cardiologists including Doctors Nakajima and Morita.

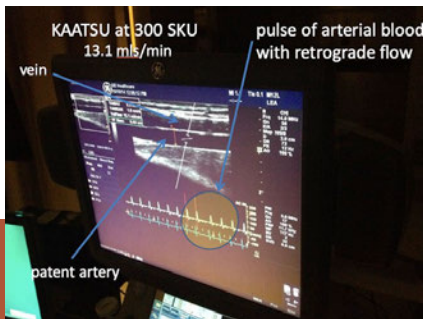


In contrast, a pressure of 250 SKU with KAATSU equipment is the pressure WITHIN the KAATSU air bladder. 250 SKU completely enables arterial blood flow to continue unimpeded into the air or leg. This is easily demonstrated by a pulse oximeter.

So 250 mmHg with a blood pressure cuff  $\neq$  250 SKU with KAATSU Air Bands. In the former case, blood flow stops temporarily; in the latter case, blood flow continues unimpeded.

Furthermore, the width of standard blood pressure cuffs and the narrow KAATSU Air Bands apply completely different pressures on the veins and arteries of the arms and legs. In the case of a standard blood pressure cuff, the stiff, wide, inflexible material and structure of the cuff effectively cuts off blood flow when inflated. In contrast with the KAATSU Air Bands, the flexible, stretchable and narrow bands enables venous flow and arterial flow to continue gently and repeatably in order to achieve the optimal KAATSU effects.

Many scientific researchers, physicians, coaches, and users interchangeably refer to KAATSU as BFR and BFR as KAATSU.



In fact, KAATSU is the original BFR. KAATSU was the original BFR because the editors of the first peer-review published studies in the 1990's did not recognize or accept the Japanese word 'KAATSU'. The scientific and medical community in the 1990's did not know what 'KAATSU' meant or what the protocols were. So the editors required that the word 'KAATSU' was substituted by 'blood flow restriction' or BFR.

The key definitions used in the BFR and KAATSU community include the following:

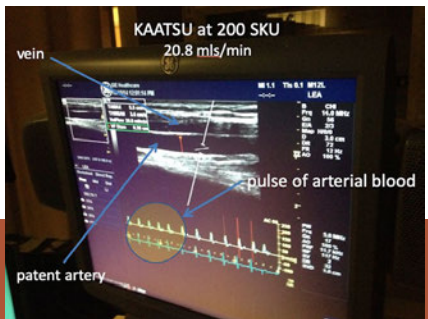
**Restriction (noun):** *something that restricts, an act of restricting, the condition of being restricted* from the Merriam-Webster online dictionary

**Occlusion (noun):** *the act of occluding (or close up or block off or obstruct) from* the Merriam-Webster online dictionary

**Patent:** *open, unobstructed, affording free passage* from MedicineNet

**KAATSU (or 加圧 in Japanese):** *translated as additional pressure in English.*

**Blood Flow Restriction (or BFR):** *a training strategy that involves the use*



“

We were unable to achieve complete arterial occlusion in any participant with the KAATSU cuff.

“

**BFR starts at the point of occlusion where there is no arterial blood flow to the limbs - but KAATSU starts at the point of homeostasis where there is complete and open arterial blood flow to the limbs.**



*of blood pressure cuffs, tourniquets or occlusion wraps placed proximally around a limb that maintains some arterial inflow while occluding venous return during exercise or rehabilitation. KAATSU was original defined as such.*

The Doppler ultrasound images above [300 SKU in the upper photo and 200 SKU in the lower photo] show the arm's artery and vein of a male using KAATSU Air Bands at different pressures. The ultrasound shows that the blood flow from the torso to the arm (arterial flow in the artery) and the blood flow back from the arm to the torso (venous flow in the vein) remain open and not occluded or restricted.

How is the pressure in BFR and KAATSU determined by BFR users and KAATSU Specialists?

BFR is commonly started by occluding the brachial systolic blood pressure in the arms or the femoral systolic blood pressure in the legs [known as 'Limb Occlusion Pressure' or LOP]. Once

this pressure is measured in mmHg, then the BFR bands are set at a certain percentage of that pressure measured in mmHG [50-80%]. In other words, BFR starts by occluding the arterial flow from the torso to the limbs - and then proceeding with exercise or rehabilitation at a lower pressure.

Some BFR advocates, with inexpensive equipment, recommend using the Borg Scale; a simple self-determination of the perceived exertion on a scale of 1 to 10. The ideal tightness for these BFR (or Occlusion) bands is reportedly 7 on the Borg Scale; but, if there is numbness, the BFR advocates recommend loosening the pressure.

In contrast, KAATSU starts at homeostasis or the stable state of equilibrium in the body with complete patent (i.e., open) arteries and veins. From this point, the "KAATSU Cycle" is used to very gradually and precisely increase the pressure until an "optimal pressure" for each person and each limb is reached (note: the pressure on each limb can be different if there is

an injury or significant difference in limb strength, range of motion, or girth).

***That is, BFR starts at the point of occlusion where there is no arterial blood flow to the limbs - but KAATSU starts at the point of homeostasis where there is complete and open arterial blood flow to the limbs.***

Even when the KAATSU Air Bands have significant air pressure inside them, there is no occlusion of arterial or venous flow [see photos above and read [here](#)]. The KAATSU Air Bands are specifically designed to allow this condition to occur even at the highest KAATSU pressure possible.

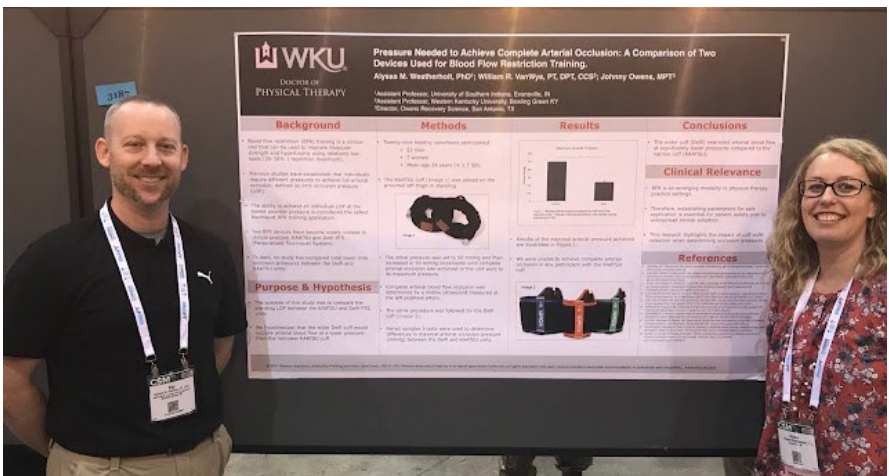
Decades of testing with different materials, elasticities, and widths enabled the KAATSU inventor, Dr. Sato, to develop this innovative design. KAATSU protocols were researched at the University of Tokyo Hospital under the supervision of experienced cardiologists including Doctors Nakajima and Morita.

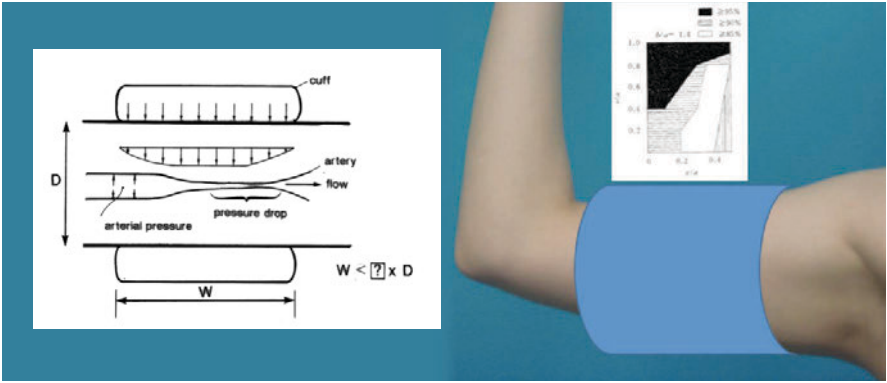
Also importantly, the structure and composition of the KAATSU Air bands are different than other BFR and Occlusion Bands on the market today.

Most importantly, when the KAATSU Air Bands are inflated, they take on a parabolic shape. This enables a very mild effect on the veins and arteries of the arms and legs. That is the veins and arteries are NOT compressed as they are with standard blood pressure effects. They are only minimally compressed so arterial flow continues unimpeded. This is the reason why there is no occlusion and the effect is an engorgement of blood in the limbs with KAATSU.

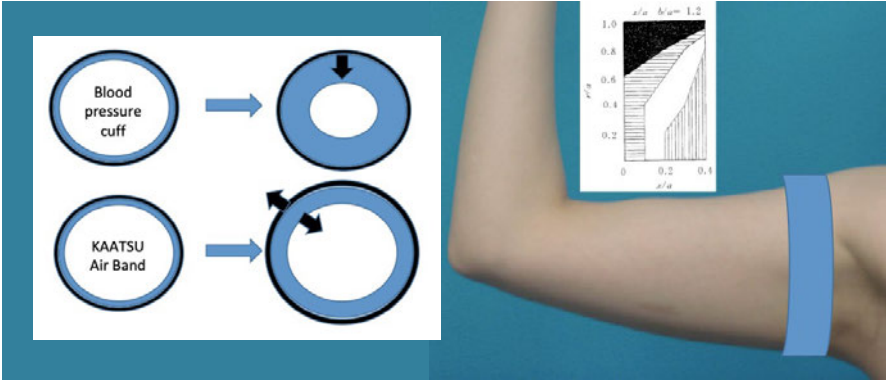
BFR or Occlusion bands are engineered to cut off or restrict blood flow - similar to blood pressure cuffs. Their structure and materials are purposefully designed to achieve this objective. The width of the bands apply a pressure that is effective in reducing or restricting arterial flow.

In contrast, the KAATSU Air Bands are specifically engineered to maintain arterial flow, and only slightly modify the venous flow. The width and the center axis of the inflated KAATSU Air Bands are significantly different than BFR or Occlusion Bands or modified tourniquets or cuffs. This means that the pressure transmission region of the KAATSU Air Bands - especially within the limb on the arteries and veins, is significantly less than the larger, wider BFR bands.





Larger pressure transmission region and effects of BFR bands.



Smaller, narrower pressure transmission region of KAATSU Air Bands.

When the optimal pressure is reached with the KAATSU Air Bands, the KAATSU users see a pinkness or a beefy redness in their limbs as the blood fills the capillary vascular space. When the limbs are moved in this state, there is alternating distension and emptying of the venous/capillary vascular space.

The KAATSU Air Bands gradually apply pressure to the veins. This modifies the venous outflow in the limbs. As the pressure increases during the KAATSU Cycle mode, this modification of the venous outflow eventually modifies the arterial inflow. As exercise or movement continues with the

KAATSU Air Bands on, the blood flow into the limbs must soon match the (venous) blood flow out of the limbs. Given about 80% of the body's blood is in the venous system, there is some capacitance for holding extra blood in the limb, and when that capacity is reached, the blood flow in must match the blood flow out of the limb.

Physiologically, exercise becomes unsustainable when light and easy exercises or movement (e.g., KAATSU Walking or unweighted KAATSU limb movements) are conducted with this impeded circulation. The pO<sub>2</sub> and pH gradually (or quickly, depending on the KAATSU intensity) drop to critical levels with even mild exercise. Additionally, higher levels of lactate are generated during KAATSU (compared to non-KAATSU exer-



**There is no part of the KAATSU protocols which tries to achieve arterial occlusion. This is why KAATSU is not occlusion training, tourniquet training, or O-training,**

cise). ATP levels drop as the ADP and Pi levels rise, and ATP dependant electrolyte pumps (e.g. Ca++) cannot maintain proper electrolyte gradients. In this state, there are a significant amount of metabolite and hormonal changes and increases that are subsequently realized.

The fact that KAATSU Air Bands do not approach occlusion pressure, nor result in Blood Flow Restriction, was identified by Professor Alyssa Weatherholt of the University of Southern Indiana, Professor William VanWye of Western Kentucky University, and Johnny Owens of Owens Recovery Science (the exclusive distributor of the Delfi Portable Tourniquet System for Blood Flow Restriction equipment). They presented a study called Pressure Needed to Achieve Complete Arterial Occlusion: A Comparison of Two Devices Used for Blood Flow Restriction Training [see above].

The researchers concluded the wider cuff of the Delfi Portable Tourniquet System for Blood Flow Restriction is able to restrict arterial blood flow at significantly lower pressures compared to the narrow cuffs [KAATSU Air Bands] using the KAATSU Master. The key finding of this study is as follows:

*"We were unable to achieve complete arterial occlusion in any participant with the KAATSU cuff."*

The KAATSU equipment is designed and is specifically manufactured to avoid arterial occlusion in the limbs. This fact is precisely why KAATSU was originally defined by Dr. Yoshiaki Sato, the KAATSU inventor, and leading Japanese cardiologists at the

University of Tokyo Hospital as a Blood Flow Moderation (BFM) device. KAATSU equipment is specifically not a Blood Flow Restriction (BFR) device.

While the vernacular nuance between BFM and BFR may be overlooked by many (venous flow modification versus arterial flow restriction), the modification of venous flow is critical to understanding the safety and goal of KAATSU, as certified KAATSU Specialists understand.

*"There is no part of the KAATSU protocols which tries to achieve arterial occlusion. This is why KAATSU is not occlusion training, tourniquet training, or O-training," explains Steven Munatones. "This is why KAATSU equipment does not use blood pressure cuffs or surgical tourniquets that are specifically designed to occlude, or manufactured to restrict arterial flow. Rather, the stretchable KAATSU Air Bands are designed with flexible, elastic air bladders that inflate inwards, towards the limb, at very moderate pressures to minimally modify venous flow.*

*This pressure is gentle on the body and uniform, because the limb is evenly and safely compressed by a bed of air. This principle and practical engineered solution leads to blood pooling in the limb - not arterial occlusion. This fact was independently determined by researchers and the leading Delfi proponent of BFR.*

Furthermore, the patented KAATSU Cycle allows normal arterial and venous flow every 20 seconds which means it is safe, effective and gentle for people of all ages (including up to 104 years - see [here](#)).

In summary:

1. The purpose of KAATSU equipment and its protocols is a reduction in venous flow via blood flow moderation, a term first coined in the 1990s by Dr. Sato and Doctors Nakajima and Morita, cardiologists at the University of Tokyo Hospital.

2. The pneumatically controlled KAATSU Air Bands are designed to achieve a reduction in venous flow, and is a very different approach from BFR and widely-promoted use of blood pressure cuffs that are specifically designed to achieve limb occlusion.

3. When the KAATSU equipment is used, its users agree to follow the specific protocols as defined by its inventor, Dr. Sato. Specifically, KAATSU protocols and equipment are designed not to occlude.

4. The stretchable, pneumatically controlled KAATSU Air Bands are not (blood pressure) cuffs. A cuff is a term that refers to devices specifically engineered for limb occlusion.

5. KAATSU Specialists understand the importance of users to know both their

Base SKU pressure and their Optimal SKU pressure while using in the KAATSU Cycle and KAATSU Training modes. To refer to KAATSU pressure without reference to both Base SKU and Optimal SKU pressures is misleading.

There is another paper written by Jeremy P. Loenneke, Christopher Fahs, Lindy Rossow, Robert Thiebaud, Kevin T. Mattocks, Takashi Abe, and Michael G. Bemben (Blood flow restriction pressure recommendations: a tale of two cuffs) that addresses this subject from another perspective.

Fourth, proper and safe KAATSU extensively (or exclusively in most cases) utilizes the patented KAATSU Cycle mode. In the KAATSU Cycle mode, there is only 20-30 seconds of pressure applied at a time. The pressure is regularly and intermittently released (turned off) - and, most importantly, the pressure starts off gently and only gradually increases to the user's optimal pressure levels. This enables the vascular system to become more elastic during the session, enabling a greater vascular capacity to handle higher pressure and increased blood circulation.



## Featured Products



### KAATSU C3

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Full package with 4 KAATSU Air Bands

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[DETAILS](#)



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- Bands can be universally utilized with any KAATSU equipment
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[DETAILS](#)

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The Villages



# KAATSU IN THE NEWS

KAATSU has received recognition and coverage in prominent and prestigious publications.



## "Can You Work Out Less, Get More Results?"

By Eleanor Warnock and Rachel Bachman  
The Wall Street Journal



*With Kaatsu, people do a light workout while wearing pressurized belts, first on the upper arms and then on the legs.*

## "Could the Kaatsu Workout Be the Most Efficient Exercise?"

By WSJ Video  
The Wall Street Journal



*Japanese bodybuilder Yoshiaki Sato says he has a way for Hollywood's aging action stars to stay as youthful and fit as ever.*

## MilitaryTimes

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### "Kaatsu training is blowing fitness researchers' minds"

By Jon R. Anderson, Staff Writer  
MilitaryTimes



*Read the article and discover why so many people are so excited about KAATSU Training.*

## Outside

### "You Should Probably Try This Japanese Blood-Flow Routine"

By Devon Jackson, Staff Writer  
OutsideOnline.com



*Footballers of both kinds have caught on. Here's what you need to know.*

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# NEXT-GENERATION KAATSU MASTER 2.0

www.kaatsu-global.com

The new **KAATSU Master 2.0** is the fourth-generation **KAATSU** device that enables **real-time monitoring and archiving of user's physiological data**. The **2.0** is ideal for use by **individuals, corporations, organizations, physical therapy clinics, universities, hospitals, and teams**.

2.0 is combined with the Masimo MightySat™ Finger Pulse Oximeter and a wrist blood pressure monitor that capture and archive your oxygen saturation, pulse rate, Perfusion Index, Pleth Variability Index and blood pressure readings in real-time.

## FEATURES

- Designed for performance, recovery, rehabilitation and wellness applications
- Touch-screen tablet offers personalized and comprehensive KAATSU Cycle options
- Dual air compressors enable each limb to be simultaneously inflated to different optimally pressures
- WIFI connectivity enables real-time monitoring and automatic storage of data in the KAATSU Cloud
- Video feedback and interaction with KAATSU Master Specialists for real-time consultation
- Access to KAATSU Cloud where user information is automatically uploaded and archived
- Rechargeable battery
- Used with both the KAATSU Air Bands or KAATSU Aqua Bands
- Band pressure up to 500 SKU (Standard KAATSU Units)
- Reimbursable with CPT codes

## BENEFITS

- effective muscle toning
- improved circulation
- faster recovery from competition or vigorous workouts
- anti-aging benefits
- improved speed
- enhanced stamina
- increased strength
- greater range of motion
- significant time savings
- convenience - exercise anywhere anytime
- offers 6 levels of the KAATSU Cycle

## PACKAGE

2.0 comes with 4 sets of KAATSU Air Bands or KAATSU Aqua Bands (Small, Medium, Large or Extra Large) and certification for KAATSU Specialists

## DATA MONITORING

Masimo MightySat™ Fingertrip Pulse Oximeter and a Wrist Blood Pressure Monitor measures and monitors the following data during exercise or rehabilitation:

- Pulse Rate (PR) or the number of heart pulses per minute indicates your overall fitness and exertion levels
- Oxygen Saturation (SpO2) or the oxygen level in the blood indicates changes due to your heart or lung function, oxygen use by your body, and altitude
- Perfusion Index (PI) indicates the strength of blood flow to the finger as blood circulation changes
- Respiration Rate (RRp) or the number of breaths per minute indicates how well your heart and lungs are functioning and how quickly you recover from exercise
- Pleth Variability Index (PVI) or the variation in perfusion index over your breathing cycle which may indicate changes in hydration, breathing effort, perfusion or other factors.
- Blood Pressure (BP) indicates your systolic blood pressure and diastolic blood pressure.

## 2.0 ALSO MEASURES AND ARCHIVES ADDITIONAL INFORMATION INCLUDING:

- KAATSU Time (KT) or the amount of time spent doing KAATSU per session
- Capillary Refill Time (CRT) or the amount of time in seconds that it takes for your capillaries to refill with blood
- KAATSU Exercise (KE) or the type of exercise, movement or rehabilitation you do with KAATSU
- KAATSU Cycle Function (KCF) or the specific type of KAATSU Cycle (e.g., Cycle 20 or Customized Cycle)

## BAND SIZES

KAATSU Air and Aqua Bands are available in 4 sizes: Small, Medium, Large and Extra Large. Measure the circumference of the top of your arm (right by your armpit) and the circumference of the top of your leg (right alongside your groin). Those circumferences will determine the appropriate size for your KAATSU Air Bands.

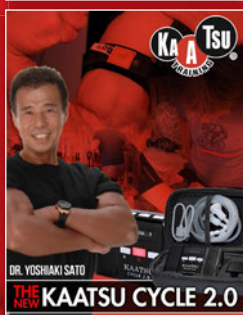
## ARMS

Small: circumference of upper arm is less than 11.5 inches (29 cm)  
Medium: circumference of upper arm is between 11.5 - 14 inches (29-35 cm)  
Large: circumference of upper arm is between 14 - 16.5 inches (35-42 cm)  
Extra Large: circumference of upper arm is between 16.5 - 21 inches (42-54cm)

## LEGS

Small: circumference of upper leg less than 16 inches (40 cm)  
Medium: circumference of upper leg is between 16 - 21 inches (40-53 cm)  
Large: circumference of upper leg is between 21-26 inches (53-66 cm)  
Extra Large: circumference of upper leg is between 26-32 inches (66-81 cm)

# PREVIOUS ISSUES



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For customer service,  
(or to order KAATSU products)

Call Toll-FREE: +1-866-217-3460

Email: [info@kaatsu.com](mailto:info@kaatsu.com)

Learn more about KAATSU, visit: [KAATSU.COM](http://KAATSU.COM)

Get the latest updates here:  
[KAATSUBLOG.COM](http://KAATSUBLOG.COM)

# LIFEFORCE IQ PRESENTS KAATSU



"Our goal is to awaken human potential by sharing precise effective tools and methods to maximize the health, happiness and performance of people who want to realize their potential," explains David Weinstein of LIFEFORCE IQ and OASIS in Boca Raton, Florida.

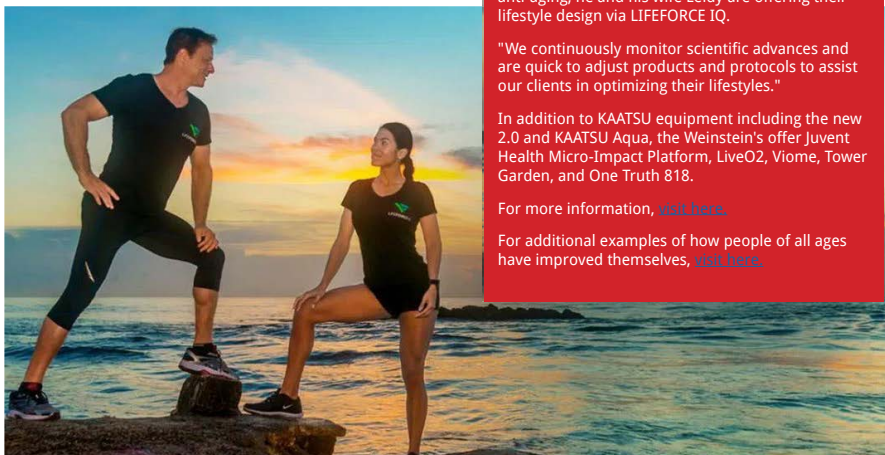
Weinstein was an investment banker for 35 years, specializing in biotechnology and medical companies. With that background and knowledge, combined with his lifelong interest in athletics and anti-aging, he and his wife Leidy are offering their lifestyle design via LIFEFORCE IQ.

"We continuously monitor scientific advances and are quick to adjust products and protocols to assist our clients in optimizing their lifestyles."

In addition to KAATSU equipment including the new 2.0 and KAATSU Aqua, the Weinstein's offer Juvent Health Micro-Impact Platform, LiveO2, Viome, Tower Garden, and One Truth 818.

For more information, [ask.kaatsu.com](http://ask.kaatsu.com).

For additional examples of how people of all ages have improved themselves, [ask.kaatsu.com](http://ask.kaatsu.com).



# MR. UNIVERSE MASTERS KAATSU

