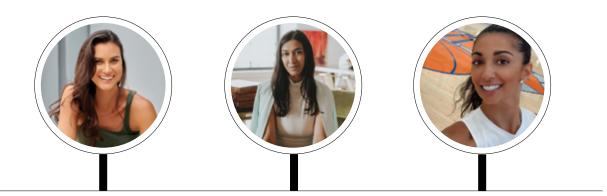


Strengthening brain health and mental health in athletes of all ages and fitness levels is a no-brainer for these three rising female leaders in sport.

WORDS I Rachel B. Levin



Meet Cesalina Gracie, Trish Goyal, and Louisa Nicola,

three leaders who are helping athletes see the true power of their potential. They are finding new ways to help boost brain health and mental health in athletes of all ages and experience levels. In the process, they're proving how important physical activity is across our lifespans and why now is the time to put performance in motion.

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In each of Cesalina Gracie's mother-daughter jiu-jitsu classes in Los Angeles, she introduces a different principle of the martial art. When strength is the focus of the lesson, she asks the girls, who are as young as three years old, "What does it mean to be strong?"

The first responses she gets are usually about physical strength. But Gracie-who is the granddaughter of Brazilian jiu-jitsu founder Carlos Gracie Sr.—pushes the girls to think about where else, aside from our bodies, we can be strong. "And then they start thinking, 'Oh, we can be strong in our hearts," she says. "We can be strong in our minds."

Gracie has dedicated her Manamii School of Empowerment to teaching girls and women how to build emotional and mental fortitude through practicing jiu-jitsu. "Most people think that jiu-jitsu is about ... becoming a fighter," she says. "What jiu-jitsu really is, is the art that teaches you how to deal with your emotions [and] how to remain in control of your nervous system so you can make better decisions."

The idea that physical activity can strengthen our emotional and mental resilience isn't a new one. Decades of research have shown that regular exercise helps keep our brains sharp and supports our emotional wellbeing. And, on the flip side, having better brain health and mental health can boost our athletic performance.

But Gracie is among a crop of rising female leaders in sport who are finding innovative ways to help people of various ages and fitness levels reap these rich benefits. In the process, they're proving how important physical activity is at every stage of our lives. >



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### A strong start Studies have shown that young children who are

Studies have shown that young children who are physically active have better thinking skills and fewer depressive symptoms than kids who are sedentary. Gracie finds that even her three-year-old students are able to grasp how physical activities can impact their mental state. She herself began competing in jiu-jitsu when she was just five years old.

Gracie helps students make the connection between their minds and bodies through body language drills such as "posture of the champion." She asks them to imagine an invisible line pulling their hearts to the sky. This stance of assertiveness—which she contrasts to postures of shyness and fear—communicates that "you're facing life with your heart," says Gracie. "You literally shift how you perceive the world and how people perceive you."

She believes that when young girls develop assertiveness, they grow into women who can speak up for themselves and set boundaries for self-protection. She cites domestic violence and workplace harassment as examples of threats that too many women have to navigate. "You can protect your mental health in your relationships through the self-confidence and the mental skills that you develop from [jiu-jitsu] training," she says.

As mothers and daughters spar on the mats, they discover that strategy is more important than mere physical strength. Unlike other martial arts such as karate and muay thai that rely on power and explosiveness, "jiu-jitsu is completely based in leverage,"

## Anti-aging for your brain

Studies show that you can lower the risk of cognitive decline as you age through physical activity. Moderate-intensity aerobic activity (e.g., tennis and brisk walking), resistance training (e.g., weightlifting), and stretching/toning exercises (e.g., yoga and tai chi) all do the trick.

says Gracie. Accordingly, girls and women can develop physical and mental competence to defend themselves against stronger adversaries.

Gracie says she sees profound changes in girls who attend her classes, both in their "courage to face life [and] the adventures that they decide to take on." One girl who was being bullied at school began to stand up for herself and other kids. Another overcame a phobia of horses that had developed after a bad accident. Yet another decided to try skiing, which she previously feared. >



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### Serving up social connections

Midlife can be a challenging time to stay physically active, as work and family commitments mount. But it's also a critical time to stick with it. Research shows that cardiovascular fitness in midlife is linked to better brain health and a lower risk of depression in our later years.

Trisha Goyal, who is the founder and CEO of the tennis-networking platform Break the Love, knows firsthand how tough it can be to find time for your favorite sport as a working adult. Goyal began playing tennis in high school but stopped playing halfway through college. When she tried to pick up her racket again after moving from New York to Connecticut for a job at ESPN, she struggled to find matches. Women's tennis clinics at local country clubs were held on weekday afternoons, right in the middle of her workday. Coordinating players and courts on her own proved challenging with her busy schedule.



# It's never too late to benefit from fitness.

Middle-aged and older adults can add years to their life by becoming more physically active, even if they've been more sedentary in the past.

She missed not only the workout she got from tennis, but also the social experience that she had always enjoyed from it. "Whenever I wanted to ... embed myself in a new community, tennis was a go-to way to do that," she says.

So, she decided to reinvent the tennis club, using technology. The online platform she spearheaded makes it easy to find and grow your own tennis community. Currently active in Washington, D.C., and select cities in New York, California, and Florida (with plans for expansion), Break the Love allows users to utilize its messaging function and court finder to set up their own games and join classes specifically geared for newbies and those needing a refresher. They can also join affinity clubs, which are tennis groups for players with similar interests off the court.

The majority of Break the Love's users are in the 25- to 39-year-old range. Goyal has seen how these young working adults benefit emotionally from court time with their peers. Anecdotally, the game boosts their mental health by lifting their Zoom-fatigued spirits and introducing them to new friendship groups. "We want to replace happy hour," says Goyal.

But the number of older adults using the platform is on the rise. In addition to tennis, Break the Love also offers pickleball, which Goyal says is particularly popular with retirees. She's pleased to see seniors making connections on the platform, since social interaction is important for bolstering mental health as we age.

For Goyal and her Break the Love team, "the biggest data point that matters ... is actually a sense of belonging," she says. "We want to be known not as the tennis platform, but the platform that is ... increasing happiness levels."

PHOTO | SHOJI VAN KUZUMI

### Powered by the brain

Given that physical activity is so good for our brains and psyches, it's tempting to assume that elite athletes—who spend their careers engaged in intense physicality—would be immune to brain health and mental health issues. Of course, that's not the case.

The pressures of competing at the highest levels in sport can bring on anxiety. And, according to New York-based neuroscientist Louisa Nicola, those who train elite athletes often overlook the brain.

"Anything that we do in terms of movement, thinking, breathing ... [is] controlled by the brain," she says. "If [you] want to become a better athlete, become faster, be able to think faster, stay on the field for longer, not fatigue as fast, you have to start with the brain."

Nicola competed as a triathlete for Australian teams before studying clinical neurophysiology and founding her company Neuro Athletics. She trains the brains of NFL and NBA players to keep them at the top of their game. At this elite level, "Just increasing their performance by [a] mere one percent means the world," she says.

For example, Nicola worked with one seasoned NBA player who was experiencing a decline in his performance without any obvious cause. After scanning his brain, she pinpointed an area of his peripheral vision that was not

### **BRAIN FOOD**

These are a few of Louisa Nicola's favorite supplements to keep your brain it top shape.

- EPA/DHA These omega-3 fatty acids are essential for normal brain function and lower the inflammation associated with neurodegenerative diseases.
- Electrolytes Electrolyte minerals including sodium, potassium, and magnesium—which are depleted when you sweat—are vital for cognitive function.
- Vitamin B12 Low levels of this vitamin have been linked to cognitive impairment.



PHOTO | RAEGAN STATLER

working optimally. "We did a lot of vision exercises and we got him back to performing at his peak," she says.

Nicola also designs lifestyle protocols for each athlete—and these include habits that anyone can adopt to improve their brain health. She focuses a lot on sleep hygiene (10pm is lights out for her athletes) because of the myriad benefits sleep has for the brain. "Sleep is our most underrated high-performance tool," she says. Hydration is another major emphasis because electrolyte balance is necessary for healthy brain function.

While being physically active is imperative at every age and fitness level, so too is rest and recovery. According to Nicola, taking it easy after a hard workout—by putting our feet up, getting a massage, or doing an activity that relaxes us—benefits our brains and psyches, too. "Train plus rest equals performance," she says. "You can't get better [as an athlete] without recovering." A

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