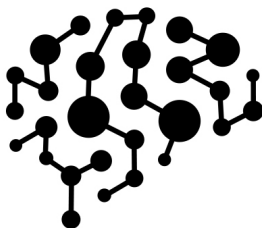


ONE GOLDEN NUGGET



**HOW TO
SURVIVE
AND
THRIVE
VOLUME III**

**JOE FOSTER, FOUNDER OF REEBOK,
RETURNS WITH POWERFUL NEW STORIES OF
RESILIENCE AND INNOVATION, CHANGING THE
WORLD ONE PAGE AT A TIME.**

Joe Foster



DR DAVE WILLIAMS

Former Astronaut and CEO of LEAP Biosystems

Shoemaking was in my blood. My grandfather pioneered the spiked running shoe, and my brother Geoff and I carried that legacy forward, ultimately founding Reebok. Likewise, Dr. David Williams inherited his adventurous spirit from his father, a dedicated mountaineer. But his curiosity extended beyond exploration as his scientific mind was shaped by his mother, a nurse. Just as my grandfather redefined athletic footwear and Geoff and I carved our own path in the industry, Dave blended his parental influences, proving, as the saying goes, that the apple doesn't fall far from the tree.

With his blend of Welsh, Scottish, and Canadian heritage, Dave not only embraced his multicultural background but also the sense of adventure his upbringing offered him. His memories of growing up in Montreal during the '50s and '60s evoke a simpler, more idyllic time, where self-reliance and resilience were instilled in him from an early age.

He fondly recalls the freedom of childhood, "exploring the woods, wading in creeks, and wandering through apple orchards" without a care. Gone from home all day, he would pack a tin of beans and some sausages, light a fire, and cook his own meals. With no one around to bail him out, the vast countryside became both his playground and his teacher. He says, "If you fell off your raft in the middle of the stream, you'd have to figure out how to solve the problem."



Exploration and adventure were in his blood, but the sights he saw on television only ignited that spirit. He recalls, just a week before his seventh birthday, “watching the first Mercury space flight on a little black-and-white television. Alan Shepard was lifting off to go into space, and I thought, that’s what I want to do.”

However, with a nascent space programme in Canada that focused only on satellites at the time, Dave was told his dreams were impossible. Undeterred, he turned his attention to another uncharted frontier — the deep sea. “I thought, if I can’t go to space, I’ll become a scuba diver and explore the underwater world,” Dave recalls. By the age of twelve, he was already scuba diving and studying the physics of diving, the physiology of decompression sickness, and other challenges that came with it.

Dave credits his curiosity to his upbringing, where he and his friends spent their childhood building model airplanes, dismantling small engines, trying to build go-carts, and powering their bikes with lawn mower engines mounted on their frames. As he explains, “The concept of following your passions and nurturing curiosity was something my parents were really good at.” That constant parental support allowed his curiosity to flourish at home. School, however, was a different story. The traditional education system failed to capture his interest or fully engage his inquisitive mind.

Although Jacques Cousteau and his Canadian counterpart, Joe McGinnis, fuelled Dave’s passion for deep sea exploration, his ultimate dream was always to reach space. He eventually became both an astronaut and an accomplished aquanaut, but his journey began with studying neurobiology, and physiology for his undergraduate and postgraduate degrees to ultimately specialise in medicine. More than four decades later, he still remembers the intimidation he felt upon starting university, explaining, “It was a highly competitive environment, and I had countless doubts about my ability to succeed.”



**“You need to be willing to
accept and control risk.”**



It wasn't just the competition that worried Dave; the financial burden of spending twelve years at university was just as daunting. "My family was an amazing family to grow up in, but we didn't have any financial resources for me to go to university," he explains. With no safety net, he had to cover tuition, living expenses, and educational materials on his own, working weekends and some evenings as a lifeguard to make ends meet.

Balancing work and academics inevitably took a toll on Dave's studies. He cut back his work hours to focus more on studying and tried to make up for lost income through scholarships. Although he secured some funding, it came too late. His grades had already suffered, preventing him from pursuing his goal of becoming a doctor.



Dave was accepted into the Physiology Department at McGill University for postgraduate studies in neuroscience, but after his first year, he was told he would have to complete a master's degree first. To him, this was a crushing setback — it meant his dream of becoming a scientist and medical doctor had been derailed. "I can't understate how deflated I felt, but I either had to accept what they said or figure out another way to move forward on this road to success," he reflects.

He dedicated another year and a half to his studies, focusing on a crucial comprehensive physiology exam, where he not only excelled but achieved the highest mark among all students, including those in the PhD programme. The achievement was a turning

point. As he shares, “The relief was incredible, and I was finally accepted into medical school at McGill in 1979 based on my performance, demonstrating that I had the academic wherewithal to master such complex information.” It wasn’t just thanks to his academic brilliance, but to the relentless hard work he was willing to put in. Upon graduating, his tenacity and hard work were recognised when he was awarded the Wood Gold Medal for his clinical performance.

As a clinician, Dave worked at one of the top trauma centres in the Toronto area before becoming an astronaut. After retiring from the space programme, he took on the immense responsibility of running a large, modern hospital and navigating the constant challenge of tight budgets. “They never seem to be big enough,” he notes.

His lifelong aspiration of becoming an astronaut became a reality early in his clinical career. He responded to an advertisement in the newspaper and was selected as one of four candidates from a field of over 5000 applicants. Reflecting on the achievement, he shares, “Getting into the space programme was a huge honour and success, representing Canada in space and, in a way, even representing Wales in the UK. Completing three spacewalks and setting the Canadian record for spacewalks was incredible and a moment of immense pride for me and my family.”

Although Dave had seemingly achieved all his dreams, his life took an unexpected turn in 2004 when, at the age of fifty, he was diagnosed with prostate cancer. A routine annual physical revealed an abnormality in his blood test. Thankfully, this test caught the disease at its most treatable stage.



**“Don’t underestimate the
power of hard work.”**

He reflects on that period, saying, “When you hear the words, ‘you have cancer,’ it’s really tough. My initial reaction was thinking I was going to die until I spent some time trying to find a path forward.” Determined to fight the disease, Dave sought out one of the best surgeons in the field, underwent surgery, and focused on his recovery. Four years later, he was cleared to fly in space.

As a cancer survivor in space, Dave may have drawn strength from his early fascination with human endurance in extreme environments. His success in such a harsh setting, travelling at twenty-five times the speed of sound and facing temperatures from -200 to +200 degrees, speaks to his resilience, determination and commitment to teamwork. “We could not have achieved the mission objectives without the support of the highly skilled teams in mission control.”

It’s also a reflection of his greatest passion, and how space travel has given him “a unique planetary perspective,” which he explains further:

“When you first lift off, it takes just 8.5 minutes to reach space, and the moment you look out the window you’re struck by the breathtaking beauty of Earth. In that instant, you realise you’ve joined a small and privileged group of humans who have left the planet and seen it from orbit. The first instinct is to search for home, to locate the city you’re from, and to identify familiar



landmarks. But as time passes, your perspective shifts. You begin to take in the planet as a whole, appreciating its spectacular beauty. This pale blue dot is an incredible oasis of life set against the infinite blackness of space.

But the more you orbit the Earth, the more you notice the impact of human activity. You see pollution clouding the air over cities, oil slicks in the ocean, and ships illegally dumping waste into the water. The scars of deforestation in the Amazon are visible, where fires have been deliberately set to clear land for agriculture. In winter, some industrial cities are blanketed in black snow, a stark contrast to the untouched white snow over rural landscapes. From space, it's painfully clear — humanity is leaving an undeniable mark on the planet, and often, a tragic one.

From space, national borders disappear, and you see Earth for what it truly is: a shared home, a global village. The COVID-19 pandemic proved this reality on the ground; what begins in one part of the world inevitably spreads, affecting all of us.

If we are to secure a future for generations to come, we must embrace this planetary perspective. We need to work together, manage our resources responsibly, and recognise that our actions, whether local or global, shape the fate of our world. From space, it's obvious: there is no 'them,' only us."





“Life gives us opportunities, and there’s the safe pathway, or the risky pathway. It is often the latter that is most rewarding.”



Perhaps if more people could see the world from this perspective, there would be less conflict and destruction, and a greater appreciation for the planet we all share. The good news, according to Dave, is that advancements in virtual reality now make it possible for anyone to experience this unique planetary perspective. “With just £5,000 to buy a high-quality headset, you can see Earth as if you were floating in space,” he explains. “It’s not quite the same as being there, but it’s about as close as you’re ever going to get without being there.”

As the CEO of Leap Biosystems, Dave leads innovations in augmented and virtual reality for remote healthcare. Drawing from his vast experience, he passionately advocates for the power of using innovative technologies like IMAX to offer a glimpse of Earth from an astronaut’s perspective. “It allows us all to experience the awe-inspiring beauty of our planet from space while prompting us to reflect on how we, as a species, are collectively stewarding our world,” he states.

Beyond the political, environmental, and social dimensions of space travel, Dave, using his medical background, highlights the profound physiological changes astronauts experience in microgravity. He notes that upon returning from space, he was nearly two inches taller due to the absence of gravitational compression on his back while in orbit. However, this is just one of many adaptations the human body undergoes. Every system is affected. Balance is disrupted as the vestibular apparatus in the inner

ear struggles to orient itself, muscles weaken due to reduced use, and bone density decreases significantly. Despite these challenges, Dave remains hopeful that insights from space medicine will drive advancements in healthcare on Earth.

Dave reveals that Leap Biosystems “is very interested in developing new technologies to develop artificial intelligence-enabled augmented reality solutions to help healthcare providers deliver medical care in space and remote communities on earth.” As a crew medical officer, he recalls treating colleagues in orbit twice, though he always had the support of a flight surgeon at the space centre. While this system works in space, Dave points out that as missions travel farther, “clinical autonomy” will become essential. Embracing these new technologies will not only enable humans to venture deeper into space for longer periods but could also revolutionise the delivery of high-quality medical care on Earth.

As the author of multiple award-winning books and scientific publications, Dave’s insights into the space programme’s leadership model hold particular relevance for the business world. As a deep-sea explorer, doctor, astronaut, and seasoned corporate leader, he champions a distributed model of leadership — one that values and utilises each team member’s unique skill set. He contrasts this with companies led by dogmatic CEOs who insist on having things done solely their way, emphasising that the highest-performing organisations are those that trust and empower their experts rather than centralising all decision-making at the top.

This approach is explored further in his book *Leadership Moments from NASA: Achieving the Impossible*, co-written with Elizabeth Howell. The book examines key moments in NASA’s history, focusing on the leaders behind them, their personalities, and the challenges they faced in making extraordinary decisions.

Dave is a remarkably accomplished yet humble individual. A veteran of space travel, he is a member of the Canadian Aviation Hall of Fame, has received seven honorary degrees and numerous awards, and has been appointed to both the Order of Canada and the Order of Ontario. However, for Dave, his greatest achievements lie closer to home. Happily married to Cathy for forty years, with two children who share his adventurous spirit, he cherishes the simple, meaningful moments with family above all else. His most valuable wisdom, a reflection of his fulfilling and ambitious life, is best summed up by the man himself: “It’s about focusing on the journey, the people you share it with, and the joy found in life’s simplest moments.”



**“There are moments that are
important, and then there are
moments that are perhaps a little
more important.”**







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