

OFF THE COAST OF CAPE COD, WHERE SHARKS CIRCLE TO FEAST ON SEALS, TWO SEA KAYAKERS WERE NAVIGATING THE ISOLATED WATERS WHEN THEY WERE SUDDENLY RENDERED HELPLESS



Dr. Rod MacKinnon and his friend, Dr. Bruce Bean, had an incapacitating experience. “We’re going to die,” thought Rod. Almost simultaneously, in their separate kayaks, their bodies were seized by one of the most baffling conditions an athlete can face: **muscle cramps**. They were experiencing such debilitating pain that neither could steady their kayaks. This was not a good time to capsize.

Rod and Bruce felt fear mixed with confusion. They were two fitness-obsessed geniuses — Rod, a Nobel Prize-winning neuroscientist, and Bruce, a neurobiology professor at Harvard — who had checked all the boxes of nutrition and hydration before their launch. But what they discovered the hard way was that the familiar preventative measures (bananas, magnesium tablets and sports drinks) were based on wild guesses, not science.

Rod and Bruce survived the onslaught of cramps but that excruciating moment in the kayak flipped the switch on the trait that has defined MacKinnon’s scientific career: curiosity. He asked questions: Why do we cramp? What is the cause? What is the cure? Over a period of four years, Rod worked to unravel the mystery, to separate misguided assumptions from scientific reality, and discovered this surprising truth: When it comes to preventing muscle cramps, it’s not about treating the muscle, it’s about treating the nerve.



DECONSTRUCTING THE SPORTS CRAMP

Rod's conclusion was rooted in his research on the structure of ion channels, work that won the Nobel Prize in 2003. Ions carry information through the nervous system via cellular stop-and-go switches. Nerve cells are called into action by the opening and closing of ion channels (called "TRP channels"), which trigger action potentials to move along the axons of the nerve cells to the muscles.

Simply put, cramps are caused by an excessive firing of motor neurons in the spinal cord, not by the muscle. Under normal circumstances, motor neurons control muscle contractions without incident. But when the nerves are destabilized, painful cramps can occur.

Rod reasoned that the nervous system could also be recruited to prevent muscle cramps.

Then, Rod heard stories about bicyclists and some athletic teams using pickle juice to treat muscle cramps. He also heard about marathon runners who used mustard stirred into warm water to relieve their cramps. How could it possibly work? What did pickle juice and mustard have in common? All of a sudden it occurred to him that maybe it was the activating effect of pickle juice and mustard on TRP channels in the mouth. Rod made the connection that no one else had: It's the stimulation of the sensory nerves in the mouth, throat, esophagus and stomach that triggers a response from the nervous system and calms down the motor neurons in the spinal cord. How amazing!

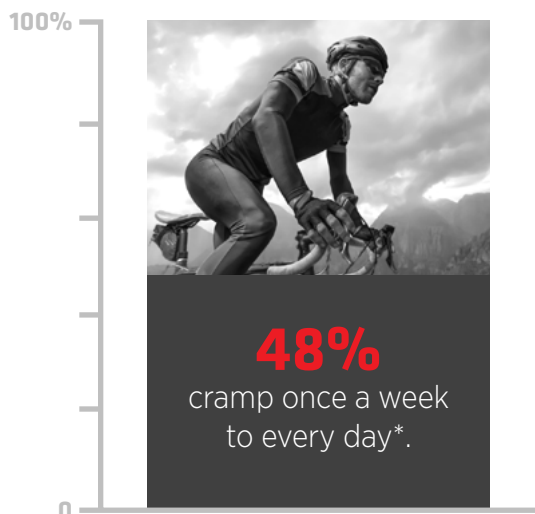
This was Rod's "Aha!" moment: The nervous system could be prodded, using those very receptors, to cue a cascade of nerve stimulation, also involving pathways from the mouth, throat, esophagus, and stomach, projecting signals to the motor neurons of the spinal cord.

The anecdotal stories of pickle juice and mustard led Rod to develop a scientifically proven formula using more effective ingredients. After years of lab research, the result of Rod's persistence is a breakthrough sports beverage, which will be available to the public in 2016. Rod has developed the first clinically proven remedy, to prevent and treat muscle cramps.¹ The formulation includes a proprietary blend of active ingredients and organic sugar and lime juice. Focused on the body's neural wiring, Rod's proprietary formulation is the foundation of a new category in nutrition: Neuromuscular Performance.

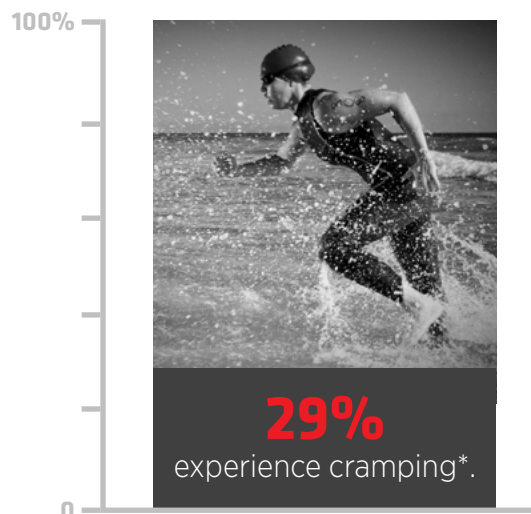
When communication between muscle and nerve are in perfect sync, the door is open to explore benefits that reach beyond a cramp remedy and we are now researching whether this same proprietary formulation can enhance recovery and affect the circulatory system and joint pain. The promise is rooted in science. The potential is untapped.

Focused on creating and sustaining the right nervous system conditions in the body, neuromuscular performance is the innovative path for anyone driven to excel.

Of the 21 million people who experience cramps while playing sports and/or exercising



Of the 24 million people who identify as endurance athletes



Sources: Flex Pharma Market Study (2014), Flex Pharma Omnibus (2014), U.S. Census Data (2013)
*Based on the U.S. population: 242 million people

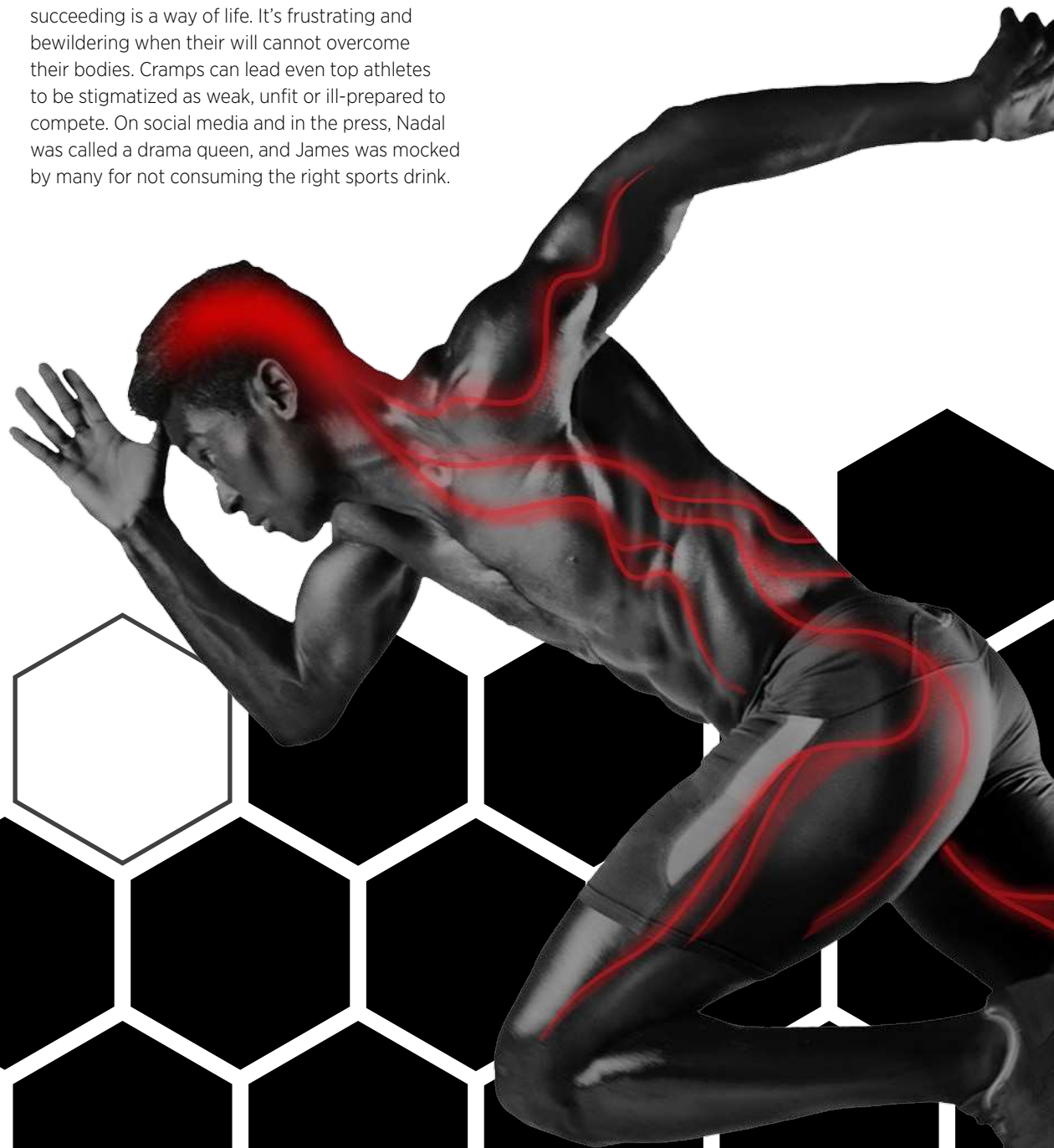
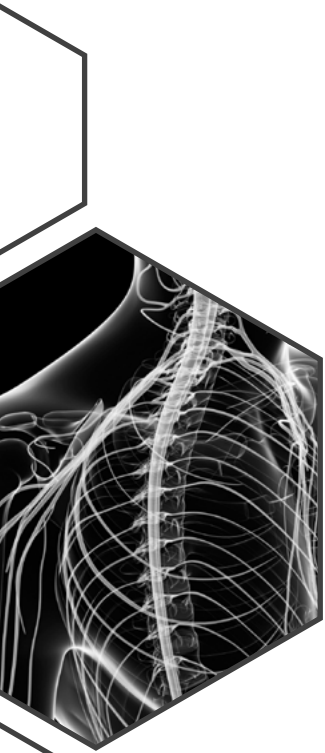
THE MIND-BODY CONNECTION

For even the most supremely fit athletes, cramping can bring them to their knees. Cramps forced LeBron James to the sidelines in Game One of the 2014 NBA Finals. Tennis great Rafael Nadal writhed in pain after an intense match in 2011. Even the ultimate endurance athletes aren't immune. Triathlete Chris McCormack collapsed twice from muscle cramping in separate world championship races before ultimately earning two IRONMAN® World Champion titles.

For alpha athletes, training, competing, and succeeding is a way of life. It's frustrating and bewildering when their will cannot overcome their bodies. Cramps can lead even top athletes to be stigmatized as weak, unfit or ill-prepared to compete. On social media and in the press, Nadal was called a drama queen, and James was mocked by many for not consuming the right sports drink.

As Rod's research underscores, these criticisms are unfair and not based on science. Cramping is not the fault of athletes. But throughout history, athletes have been left as victims of perception and helpless to control cramps — until now.

Rod's proprietary formulation helps restore control and create the best ally an athlete can have — the ultimate confidence in their bodies.



COOL SCIENCE IN ACTION

This genius formula has a kick made for achievers. Its strong and spicy taste unleashes a sensation from head to toe — all in a shot-sized bottle. From the first burn to the warm afterglow, you can feel it working. Athletes can take it as a part of their daily regimen. Strong taste, strong finish.

It's a sports beverage that athletes can count on and has received NSF's "Certified for Sport®" certification — the gold standard in sports banned substance testing chosen by professional sports leagues (including MLB, NFL and PGA) — so you know the proprietary formulation includes the ingredients listed on the label and does not contain contaminants or banned or prohibited substances.

Sports drinks boast of carbohydrates and electrolytes and sometimes vitamins, but they offer no clinically proven relief for sports cramps. The same is true for oranges, bananas, magnesium tablets, and other concoctions.

This proprietary formulation is a potential game-changer for the 34 million Americans who experience exercise-related cramps. It took rigorous testing before Rod hit upon the proprietary formula to precisely calibrate a mixture of ingredients designed to stimulate ion channels in the mouth, esophagus, and stomach. Here's how the ingredients work:

- Receptors on nerves are activated by the proprietary formulation, resulting in signals that flow directly to the spinal cord.
- These neuronal signals prompt the spinal cord to send what are essentially *calming* messages to other parts of the body.
- And because cramps are the expression of destabilized, over-excited nerves, biological relaxing cues naturally reduce that input, causing motor neurons to normalize and cramped muscles to relax.

The science behind Rod's proprietary formulation is literally freeing. The sports beverage enables the body to perform at its maximum flow state without the fear of cramping. The threat is gone for many athletes.

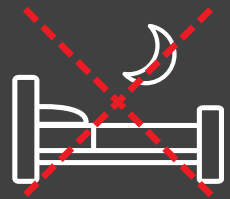
REMEDIES THAT DO NOT TREAT THE NERVE



POTASSIUM

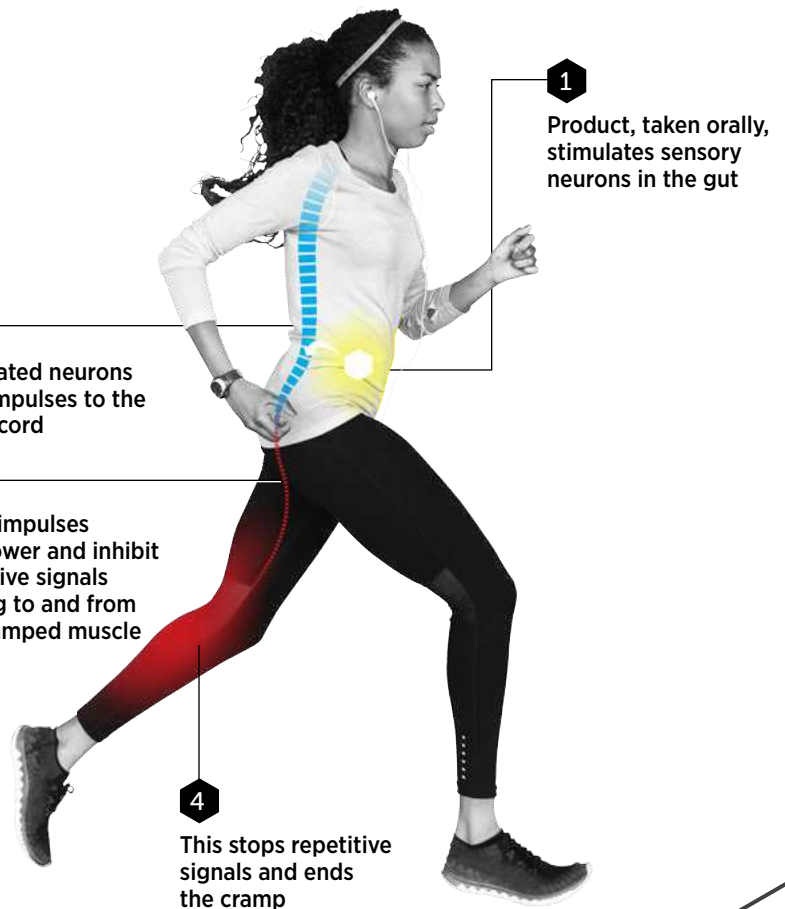


HYDRATION



REST

HOW FLEX PHARMA'S TREATMENT WORKS



THE FLEX PHARMA TEAM

Rod's proprietary formulation is the centerpiece of Flex Pharma, a Boston-based biotechnology company co-founded by MacKinnon in 2014. The company's medical researchers are pursuing treatments for athletes and pharmaceutical remedies and drugs to treat major muscle issues for patients with ALS, MS and nocturnal cramps.

Dr. Christoph Westphal MD, Ph.D. a Harvard medical doctor, brought together a scientific dream team. To build on Rod's neuromuscular performance platform, he immediately turned to some of the best minds at Harvard in forming the Scientific Advisory Board, including neurobiologist and Flex Pharma co-founder, Dr. Bruce Bean, Ph.D., who has worked with Rod on a treatment since their kayak journey, and Chris Walsh, Ph.D., Professor Emeritus at Harvard Medical School.

Rod and the Flex Pharma scientists developed a laboratory model to induce cramping and conducted three separate studies in the United States that, in aggregate, showed a threefold reduction in participants' muscle cramping, as measured by surface EMG. Previous studies have shown that a laboratory model for inducing cramps in healthy participants is correlated to their emergence naturally. Each of the studies was conducted at an independent clinical research laboratory and monitored by an Institutional Review Board. Participants in the studies included healthy males and females, between 19 and 65 years of age, none of whom reported any serious side effects from taking the formulation.

Flex Pharma's work dovetails with Rod's research that shows cramps and spasms are the result of a complex neuronal process. Flex Pharma is now working with leading exercise physiologists to develop human cramping models and explore new treatments.

With a robust group behind it, this discovery has gone from the brainstorm of a Nobel Prize winner in a kayak to a breakthrough product in a category never imagined: Neuromuscular Performance. By asking why, Rod discovered how — how cramps happen and how to prevent them.

"It's the nerve!"™



†This statement has not been evaluated by the FDA. This product is not intended to diagnose, treat, cure, or prevent any disease.