



THE
MAC PARKMAN
FOUNDATION
— FOR —
ADOLESCENT CONCUSSIVE TRAUMA
WWW.MPFACT.COM



2022 - 2023 **IMPACT REPORT**

INTRODUCTION

The Mac Parkman Foundation honors the loss of a great young man to mental illness and brain damage caused from contact sports and subconcussive trauma. Our purpose is to increase awareness of the risks of allowing kids to play contact sports while their brains are developing and how the subsequent damage to their brain affects their mental health. We accomplish this through advocacy, supporting research, education and outreach to medical, psychological, coaching/athletic and parental communities.

Today, millions of children play contact sports while their brain is in critical phases of development. It is now known that the long-term exposure of a child's brain to subconcussive trauma or repeated head injuries (RHI), leads to damage that is linked to mental illness to include depression, anxiety, schizophrenia, impulsivity and suicidality. Every year hundreds of children take their lives and thousands upon thousands more suffer from mental illness as a result of playing contact sports.

Are you aware of these facts?

Probably not because the current focus on sports of all types is on concussions. Why? Because concussions have obvious signs and/or symptoms, i.e., they are seen, felt and/or reported.

The real danger, however, is sub-concussive trauma or repeated head injuries, the hundreds and thousands of smaller hits that do not result in concussions but damage the brain at the microcellular level.

Over time, repeated sub-concussive hits not only injure the brain, but induce swelling and inflammation that prevent proper healing. The resulting damage to the brain is conclusively linked to mental illness in hundreds of research papers and studies, yet parents, coaches and the medical and psychiatric community are not educated on this, the research community focuses on concussions and CTE, and government organizations provide no guidance.

Why We Exist

In September of 2020, at age 17, Mac Parkman, carrying the weight of a deep depression and mental illness, died by suicide.

Just like other child athletes, Mac sustained injuries including three documented concussions which were treated according to the two-week concussion protocol that most medical centers and sports programs follow.

What we did not know is that the continued exposure of his brain to year-round subconcussive trauma from repeated head injuries (RHI) was damaging his brain and not allowing it to heal. Over time, this damage progressed until the damage led to the development of mental health issues to include depression and schizophrenia which Mac decided to bravely hide from his family, coaches, and friends to shield them from sharing his pain. Mac continued to fight bravely until his mental anguish increased to the point where he could not handle it and resulted in him deciding to leave this life behind.

After his death, the family struggled with why this had happened and looked for answers anywhere they could, eventually donating his brain to the VA-BU-CLF Brain Bank for brain trauma research – their findings were not only unexpected, but heartbreaking as they did identify changes to Mac's brain caused by repeated head injuries sustained during participation in contact sports. This led them to conduct their own research which, along with the BU-CTE findings, proved that Mac's mental illness was caused by brain damage which was caused by years of unintentional exposure to repeated head injuries through contact sports.

The family now realizes that Mac had been struggling with something he did not understand, and he did not know how to talk to them, his friends, or coaches in order to seek help. What is know now could have saved Mac Parkman, and while it's too late for Mac, our knowledge and the foundation can help save other children.

THIS IS ONE OF THE LARGEST PREVENTABLE CAUSE OF MENTAL ILLNESS FOR TEENAGERS AND YOUNG ADULTS IN THIS COUNTRY. WE NEED YOUR HELP!





Our Mission

To serve as a source of information, resources, and communications to the community of parents, coaches/Athletic trainers, and medical staff that require knowledge about sports-related sub-concussive trauma and to raise awareness of the long-term implications of concussive and sub-concussive trauma to our children to include physical pain and emotional/mental health issues such as depression, personality disorders, and other mental health issues. We will support this mission through collaboration with other sports, medical, educational, and military organizations, advertising, fundraising, and communications.

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Bruce Parkman

What We Know

Today, millions of parents allow their children to play contact sports in a vacuum of knowledge, and with no guidance, those children's brains and futures are endangered. The current focus on CTE and concussions doesn't include the impact of repeated head injuries which most parents feel to be harmless but are suffered every time our kids put on a helmet, head a ball, make a tackle, hit the ice or mat. Additionally, this focus is solely on adults and ignores the population most vulnerable and impacted by RHI and sub-concussive trauma – Our Children.

The lack of focus on sub-concussive trauma/RHI has resulted in a knowledge gap surrounding the long-term impact of sports-related concussive and sub-concussive trauma to the adolescent brain effecting parents, coaches, athletic trainers, and medical practitioners. Combined with minimal research from our National Health Associations on adolescents and disinformation campaigns by sports associations concerned about potential impacts on revenue, this knowledge prevents stakeholders from making informed decisions regarding sports participation, providing follow-up evaluations and longer-term monitoring or intervention. This tragic combination of a lack of awareness and professional knowledge contributes to the increasing number of American athletes, young and old, with hidden or identified psychological disorders that can lead to serious self-harm, aggression, and even suicide.



Between 1.7 and 3 million sports- and recreation-related concussions happen each year. Around 300,000 of those are from football. 5 in 10 concussions go unreported or undetected. 2 in 10 high school athletes who play contact sports – including soccer and lacrosse – will get a concussion this year.



40% of people diagnosed with a concussion will experience mental health issues



A child athlete can experience up to 1,500 subconcussive hits in a single season

Continuous and unrelenting physical damage causes irreparable harm to the brain resulting in mental illness due to an abnormally functioning brain.

“Young males have the highest odds of developing novel suicidal ideation within 365 days following a concussion.”

~Alexander Ballatori

We know that Mac Parkman put everything he had into his fight against depression. We wish we knew he was suffering as much as he was or that he would have understood what was happening to him so he could have talked about it with us or his coaches so that we could have helped him.

We could not help Mac, but we can use what we have learned from Mac to ensure that what happened to him does not happen to others. We won't sit idly by while other children continue to be harmed nor ignore those children and adults who are suffering from disorders as a result of playing contact sports in their youth.

April 2023

NEWS

Louisville shooter Connor Sturgeon was star athlete but suffered 'multiple concussions'

April 10, 2023 | 5:28pm

By Ronny Reyes



If we have proof that adult brains are affected by subconcussive trauma, how can we ignore the fact that a child's developing brain is exponentially MORE vulnerable to the same trauma?

We have enough PROOF, let's do something with it and stop making excuses.

Thank you,

Bruce Parkman



Louisville shooter was star athlete who suffered so many concussions he wore helmet for basketball: classmate

Slides of tissue taken from Kosta Karageorge's brain (in the frame on top). Ann McKee, a neuropathologist, found early signs of permanent brain damage. Erik Jacobs for The New York Times

High school football player that committed suicide had brain damage

Increasing number of young athletes, like Tyler Hilinski, suffering from CTE

Volleyball star Hayley Hodson had it all, until blows to her head changed everything Los Angeles Times

Study: 1 in 9 Kids Develop Mental Health Issues After Concussion

College Football Player Dies; Brain Injury Suspected

Frostburg State senior Derek Sheely died Sunday after collapsing at practice.



Kelly Catlin: cycling world champion suffered concussion in months before suicide

Parents' agony as rugby player son, 14, dies from 'second impact syndrome' after playing on for 25 minutes following heavy collision

The terrifying link between concussions and suicide

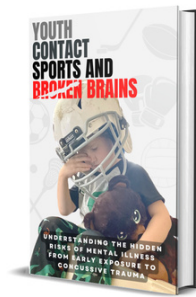
The Washington Post
Democracy Dies in Darkness



ACHIEVEMENTS

The Mac Parkman Foundation has taken the lead in promoting research, studies, and awareness about the risks of children playing contact sports and the associated damage to their brain and mental illnesses that can result. With partnerships across the country with CTE, Neurology, Family Foundations

and leading research centers like Boston University Center for CTE and the Mt. Sinai Neuropathology Brain Bank & Research CoRE, the Mac Parkman has supported numerous studies to demonstrate that our children are being harmed by early participation in contact sports.



→ Wrote and published the first book, Youth Contact Sports and Broken Brains, written to educate parents on the dangers of concussions and subconcussive trauma caused through contract sports and best practices that parents, coaches, and trainers should follow to create a safe environment of play for kids in sports.

→ Established a network of like-minded foundations to include the American Brain Coalition, the Concussion Legacy Foundation, the Patrick Risha Foundation, the 38 Challenge and more to focus on raising awareness of the risks of mental illness linked to long term subconcussive exposure/RHI.

GROWTH, EDUCATION, & RESEARCH

Funded Research

→ **Funded the research behind the paper:** “Young males have the highest odds of developing novel suicidal ideation within 365 days following a concussion” by Alexander Ballatori and Shane Shahrestani.

→ **Funded the research behind the paper:** “Risk factors for developing novel depression and anxiety following mild traumatic brain injury” by Alexander Ballatori and Shane Shahrestani.

→ **Provided a \$250,000 grant to the Boston University Center for Chronic Traumatic Encephalopathy** to fund research “White Matter Injury and Neuropsychiatric Symptoms in Young Contact Sport Athletes: Using machine learning to characterize neuropathology after repetitive head impacts” by Dr. Ann McKee and Dr. John Crary. This study will be used in outreach and education to families around the world.

→ **Funded the research behind the paper:** “Multivariable analysis of patient demographics to predict the development of novel psychiatric disorders following concussion” by Alex Ballatori and Shane Shahestrani.

→ **Conducted outreach and awareness events at tradeshow and events across several states** to highlight our research findings and to continue to build our networks to improve awareness of our mission to protect children.

→ **Created a podcast series called "Kids Lives Matter"** interviewing some of the leading experts on CTE and Neurology and adult athletes suffering from mental illness from long term exposure to CTE.

Community Growth & Reach

(January 1st 2022 through December 31st 2022)

The Community is Embracing Our Message!

Our leading social channels are up significantly in 2022!

Reach

Compare your reach from this period to the previous one.

Facebook Page reach

42,871 ↑ 324.9%

Instagram reach

2,474 ↑ 13.6K%

→ We tend to outperform our peers.

Instagram followers ⓘ

2K

Higher than others
Typically: 502

New Instagram followers ⓘ

512

Higher than others
Typically: 17

Content interactions ⓘ

119

Similar to others
Typically: 87

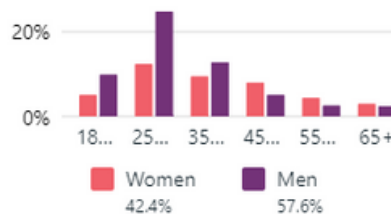
→ We have found our target with a younger audience.

Audience

Facebook Page likes

3,532

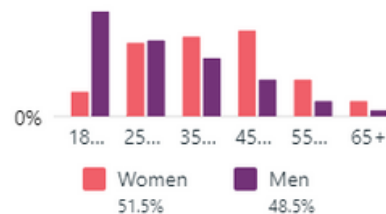
Age & gender



Instagram followers

1,983

Age & gender



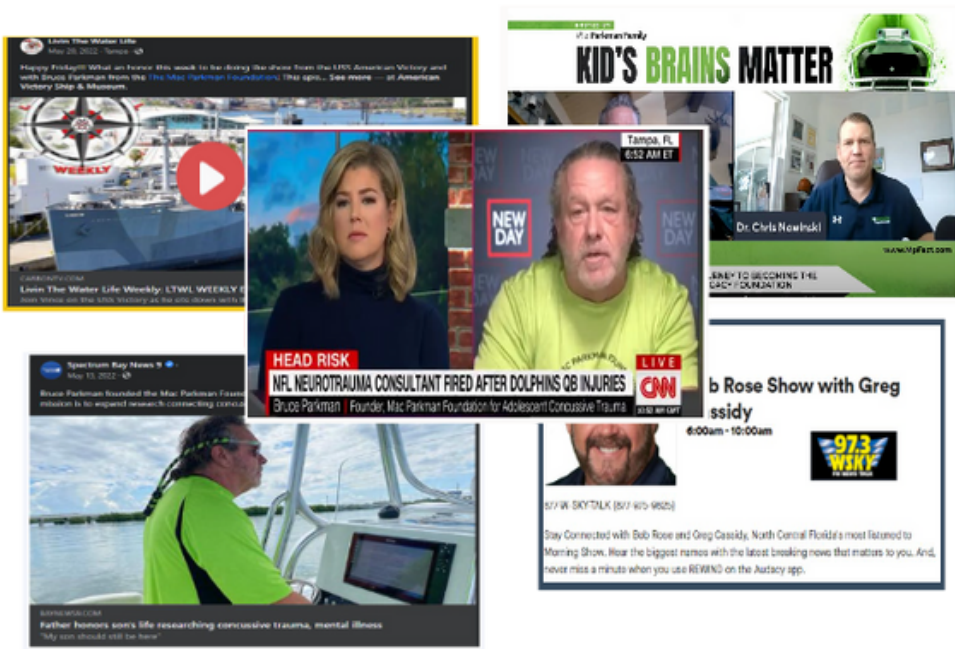
Education & Awareness

Connecting the dots between youth contact sports, subconcussive trauma, brain injuries and progressive mental health issues among adolescent athletes.

The Mac Parkman Foundation continues to spread awareness and educate the community - parents, coaches, doctors, and trainers on sub-concussive trauma and its links to mental illness. Our efforts focus on funding research that will further show that concussive and sub-concussive trauma is detrimental to a young developing brain.

Leveraging our message and community growth The Mac Parkman Foundation has gotten the attention of media.

From national news outlets and podcasts to local news and radio the community recognizes the importance of this critical issue.



What does that mean?

Our message is getting out there and influencing the generational change that needs to happen.

With social media algorithms, the more engagement the wider the reach.

The data is letting us know that our message is being seen and engaged by more and more people --> in the target demographic that we want!



To raise awareness of brain damage from contact sports and mental illness in adolescents, we recognize March 10 every year as "Mismatched Socks for Mac Day."

Mac was colorblind and fondly remembered for his habit of wearing mismatched socks. Mac's approach to life taught us to look beyond superficial details and care more about the things that matter. By remembering him on this day, we aim to spread awareness and encourage others to take action to address these critical issues affecting our youth.





Funds Raised

So far, \$260,000.00 has been raised
for 2023 - 2024.

Our goals are similar to last year, spreading awareness and educating parents, coaches, doctors, and trainers on repeated head injuries in sports and the link to mental illness. We will continue to fund research to further show that concussive and sub-concussive trauma from repeated head injuries are detrimental to a young developing brain and support the creation of standards that foster a safe environment of play for all young athletes.

OUR 2023 GOALS

Our goals are similar to last year, spreading awareness and educating parents, coaches, doctors, and trainers on sub-concussive trauma and its links to mental illness. We will continue to fund research to further show that concussive and sub-concussive trauma are detrimental to a young developing brain.

1

Continue to fund research

Research around the impact on adolescents in the areas of CTE and brain damage is still in its infancy and the ability to diagnose brain damage/CTE en vivo remains an objective. We will continue to help conduct research projects to develop protocols for diagnosing Traumatic Encephalopathy Syndrome (TES) as well as studies around early identification/intervention of adolescents with mental illness and brain studies. Until more is known, the best approach is more research, greater awareness, and prevention.

3

Legislature

Sports are great for kids, but there are limits to what kids should be doing at a young age, or there should be. As a foundation, our goal is to prohibit contact sports before the age of 14 and to promote non-contact forms of those sports to protect our children. Recent conversations with lawmakers in Washington D.C. and in state capitals indicate strong support for legislation that will support these objectives. We can be supportive of sports for kids while still wanting to make sure they are safe on the field or court!

2

Raise Awareness

Create greater awareness around sub-concussive trauma and how these injuries impact our children with over exposure. There are millions who are living with mental illness, it is a constant battle every day of their lives; we need to ensure this stops happening for today's children and future generations, but also provide coverage for those who are suffering now.

4

Education, Advocacy and a Path forward

Lead efforts to establish and implement best practices in concussion and sub concussive protocols. Create a centralized community of trust for parents, coaches, athletes, and athletic trainers to learn about the risks of concussions and sub concussive related trauma, encouraging open dialogue so treatments and preventative measures can be set up and utilized to ensure proper healing. Compile a list of the best practices, and create a safe and informative path forward for all involved

MESSAGE FROM OUR LEADERS



#KidsBrainsMatter



There should be no reason for our foundation to exist, but unfortunately, it does because children, like Mac are suffering needlessly every day. There is no need for children to suffer or die just because we are unaware of, or ignore the decades of research, studies and more importantly the logic, that says that exposing a child's developing brain to prolonged and repeated head injuries harms them. We have made sure that the rationale for our mission is substantive and valid, we now will take it forward in the name of Mac and all the other children and parents whom have or are suffering from the impact that contact sports has had on their lives and futures. We ask your help in funding this important cause to educate parents, legislators and the medical/psychiatric communities, for nothing in this world matters more protecting our children from harm.



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