

Brain Health = Mental Health

by Dr. Kristen Gilliland

Dr. Kristen Gilliland started a youth substance use prevention program at Vanderbilt University after the devastating loss of her 22-year-old son, Anders, to an accidental overdose. The prevention program focuses on teaching youth about the impact of stress and substance use on the developing brain. She specifically focuses on the risks and neurobiological changes associated with high-potency cannabis use during adolescence after watching her son suffer with cannabis-induced schizophrenia prior to his death.



[Watch Dr. Gilliland's Video on Marijuana Here](#)

On March 5, 2019, the police delivered the most earth/heart shattering news – my 22-year-old son, Anders Meisenheimer, had died from an accidental overdose. From that moment, I felt as if my life ended. I had to will myself to get out of bed every day knowing my son was no longer with me. I knew I had to go on doggedly for his twin brother, Jonas. After all, his heart was shattered too.



Anders had developed an opioid and stimulant addiction after his psychiatrist diagnosed him with schizophrenia when he was 17. His schizophrenia was most likely induced by his continued use of marijuana. Anders began using marijuana at age 14. We lived in California, where medicinal marijuana was legal and easy for anyone to obtain. Anders found friends who were experimenting with marijuana. When he got caught, he

explained that marijuana helped lessen his anxiety. To help with his anxiety, I found a therapist he seemed to like; however, he continued using marijuana. As time went on, I noticed Anders' anxiety escalated. On top of the anxiety, he began to experience hallucinations. I then sought help from a psychiatrist for the hallucinations. Anders tried the prescribed anti-psychotics but was non-compliant. Instead, he chose to use heroin and cocaine to deal with the constant voices and delusions that plagued him.

After losing Anders, I knew I had to honor his memory to help others. I spoke to him daily and asked, "How can I help?" Then, one morning it hit me! Anders had gone through fear-based drug prevention programs. I wondered, instead of fear, could we use scientific facts and compassion as prevention? That was a great place to start! I applied my educational background and pedagogical skills to build an outreach program that teaches youth about their developing brain and the impact that stress and substance use have on that development as a means of drug prevention. I had been an Associate Professor at Cal Poly, San Luis Obispo, where I taught Neurochemistry, the Chemistry of Drugs and Poisons, and Organic Chemistry. I transitioned to the Warren Center for Neuroscience Drug Discovery at Vanderbilt University in 2018 to research new treatments for schizophrenia. In 2018, I delivered a TEDx presentation titled, Rewiring Revolution: Neuroplasticity's Impact on Wellbeing. It was crystal clear to me: I had to start addressing youth mental health. This involved teaching children how to identify, accept, and work through their emotions instead of trying to escape or numb oneself. After all, Anders' story began with anxiety—his anxiety led to marijuana use, which triggered schizophrenia, which led to addiction. To take it one step further:

- What if I taught children how their brain develops and why adolescence is an emotional time using very basic biology and neuroscience?
- What if I taught kids how to practice self-compassion, mindfulness, and emotion regulation as coping skills for stress?



In 2021, I became the Director of Outreach and Advocacy for the Warren Center. Since then, I have been educating adolescent-aged children, young adults, and their parents on mental health challenges and substance use. I share my son's story with middle schools, high schools, community centers, recovery programs, law enforcement, prevention centers, addiction psychiatrists, and counselors across the United States. I teach the importance of practicing self-compassion and mindfulness. I created an educational documentary titled, "Speaking Through Me," which was released in August of 2023. One of my colleagues suggested I submit it to film festivals. To my complete amazement, the film won the "Audience Favorite" and the "Jury's Honorable Mention" at the Tromso Education Film Festival in Norway, and the "Best Amateur Documentary < 40 minutes" at the Raw Science Film Festival in Los Angeles! I now wake up daily with a purpose. I have the best job in the world, in which I get to empower youth with knowledge about the most incredible supercomputer they will ever own: their developing brain. Every time I educate and inspire youth and/or their parents about how amazing, yet vulnerable, the developing brain is, I feel my son Anders right there beside me helping me to spread this most important and needed message!