

# Substance Use and Your Body

*Making Healthy Choices for Your Mind and Body*



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Did you know that you are a prevention superhero for your child? You can be the strongest protector against risky behaviors for the children you love by choosing to live a healthy lifestyle and establishing expectations that they do the same. Making the healthy choice is not always the easy choice. Both adults and children are faced with making difficult decisions multiple times a day that could impact their health. This may be something as simple as choosing to have an apple rather than potato chips for your evening snack or deciding to go for a walk with your family/friends overusing social media.

Sometimes these healthy choices may be more complicated, like choosing not to misuse substances when the opportunity presents itself. When it comes to making healthy choices, there are factors in every person's life that can put that person at greater risk for substance use or protect that person from making the risky decision to use substances. Being involved in regular physical activity can act as a protective factor against substance misuse and abuse. The level of protection from regular physical activity is multiplied when it is coupled with bonding time with the people you love.



[Did you know a person's ability to engage in physical activity or athletic competition can also be greatly impacted by substance use?](#) The chart below shows the impact of substances commonly used by youth and the impact they have on a person's ability to engage in physical activity.

Alcohol	Marijuana	Vaping
<ul style="list-style-type: none"> <li>• Decreased strength</li> <li>• Cramping</li> <li>• Pain</li> <li>• Dehydration</li> <li>• Impaired balance</li> <li>• Decreased/slower Reaction time</li> <li>• Lower Endurance</li> </ul> <p>Learn from the California State University Prevention Department about the <a href="#">impact of alcohol on athletic performance</a>.</p>	<ul style="list-style-type: none"> <li>• Impaired reaction time</li> <li>• Reduced coordination</li> <li>• Impaired concentration</li> <li>• Increased fatigue</li> </ul> <p>This feature article from <a href="#">ESPN</a> shares the potential dangers of marijuana.</p>	<ul style="list-style-type: none"> <li>• Increasing blood pressure and heart rate</li> <li>• Decreasing lung capacity</li> <li>• Increasing risk for lung infections</li> <li>• Physical injuries from burns and explosions</li> <li>• Altered mental status</li> </ul> <p>Read more about the impact of vaping on athletes in <a href="#">Sports Medicine Reports</a>.</p>

For help answering your child's tough questions about substance use please see the [SAMHSA Talk They Hear You Guide](#).

## Youth Substance Use: 2019 Michigan Youth Risk Behavior Screener Survey (YRBSS)



Young people will encounter opportunities to try drugs and alcohol. 25% of high school students, or 1 in 4, reported that they were offered, sold, or given an illegal drug on school property.

Most teens are not regular consumers of alcohol and drugs.



25.4%, or about 1 in 4 high school students in Michigan, reported that they currently drank alcohol.



About 1 in 5 high school students, 21.6%, reported they currently use marijuana.

Although it may feel like "everyone is doing it," it is important to remind young people that "Most Teens Don't" use alcohol and drugs.

## Substance Use on the Rise: Vaping Products



Only 4.5% of high school students report that they currently smoke cigarettes, meaning they smoked a cigarette in the last 30 days. That's less than one out of every 20 students.



Vaping, however, is increasing in use. 20.8%, or about 4 in 20 high school students, reported that they currently use electronic vapor products.



49.8%, nearly 1/2 of high school students, reported that they had ever tried any electronic vapor product.

2019 Michigan YRBSS

Did you know The National Institute on Drug Abuse (NIDA) has found that “[higher levels of exercise were associated with lower levels of alcohol, cigarette, and marijuana use](#)” across all grades (8th, 10th, and 12th) surveyed through Monitoring the Future. Further, the study by NIDA found that “[Higher levels of athletic team participation were associated with higher levels of smokeless tobacco use and lower levels of cigarette and marijuana use across grades.](#)”

### *Risk and Protective Factors*

Every individual has characteristics about them that may make them more susceptible to or more resistant against behavioral and health issues. These characteristics could be biological, psychological, or environmental. The good news is that many of the factors that could contribute to youth substance use or mental health challenges can be minimized by reducing risk factors and increasing the protective factors for that child. You can learn more about risk and protective factors [HERE](#).

Risk and protective factors play an important role in the health outcomes for all individuals. One of the most important protective factors your child can have is YOU, an adult that they can trust and depend on. As a trusted adult, you play a key role in setting behavior expectations for your child. This can include avoiding substance use and developing a lifelong appreciation for taking care of their body and mind by participating in physical activities. School sports and clubs can provide a release and outlet for a child and help delay or prevent the substance use. The longer we can delay first use, the more developed the brain will be and the less likely it is the individual will become addicted.

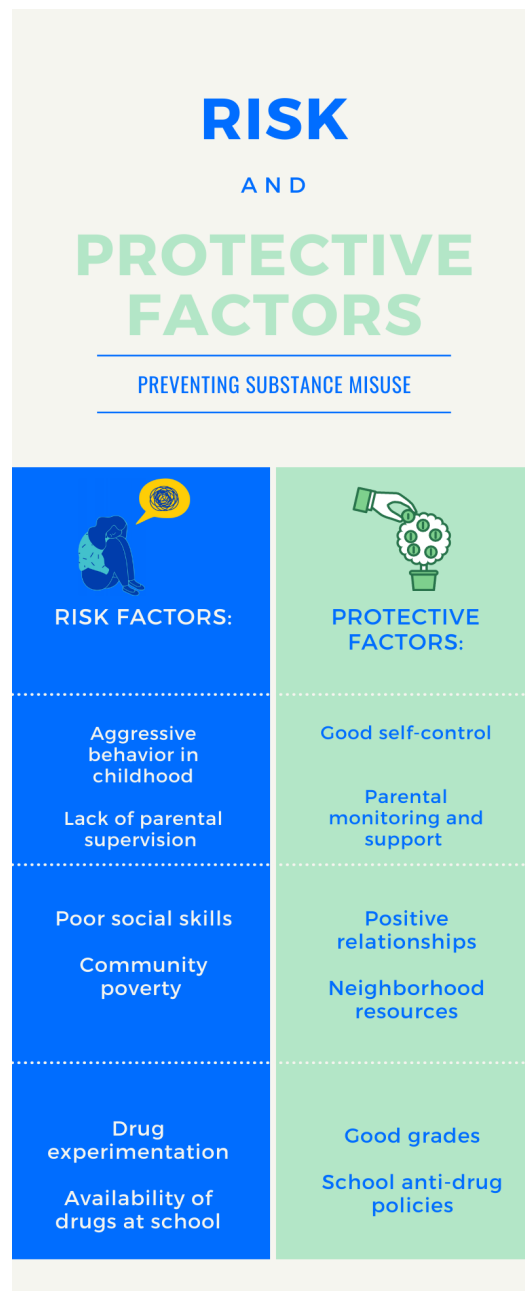
[Wait21](#) is a youth education platform that educates and empowers youth to lead healthy lifestyles and avoid behaviors that might lead to developing a substance use disorder or [addiction](#). Did you know research suggests that participating in sporting activities positively influences well-being and fosters a sense of purpose and belonging centered around sports and activity? In addition, “...participation in sport has been identified as a key resilience factor for young people with numerous Adverse Childhood Experiences (ACEs)...” <sup>1</sup>

As an engaged adult, you are a protective factor against substance use in your child’s life. We can move together, think together and be together to build up the protective factors that help us and our children make healthy choices for our minds and bodies.

## Move Together

Making the healthy choice to be physically active with your friends and family has positive outcomes for your mind, your body, and your relationships. Research has shown time and time again that, “[virtually any form of exercise, from aerobics to yoga, can act as a stress reliever](#).” Exercise increases the production of the natural feel-good chemicals in the body like endorphins and dopamine. Regular physical activity is a healthy coping strategy for managing anxiety and depression.

Physical activity, even in moderate amounts, can release positive chemicals in the body that boost your mood. [The positive feelings created by exercising can cause a “natural high”](#). Mental health experts have said that “...when people accomplish something physical, such as increasing the number of sit-ups they can do, they believe they will be able to accomplish other goals and have better control over what happens in life. This gives them a higher expectation of success and a better mental outlook,”. Also, “there is a significant and immediate reduction in anxiety and tension that can be measured every half hour for the next two hours after exercise.” Please visit this [activity toolkit](#) for fun activities to get you up and moving while learning about making good choices and avoiding substance use.



<sup>1</sup> [Norris, G., & Norris, H. \(2021\). Building Resilience Through Sport in Young People With Adverse Childhood Experiences. \*Frontiers in sports and active living\*, 3, 663587.](#)



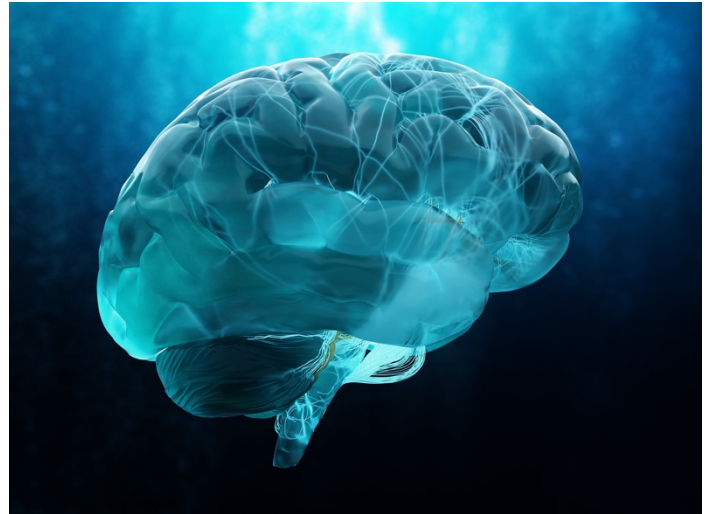
## Think Together

### Adolescent Brain Development

Although the brain has reached 90-95% of its size by the time a person is six years old, a great deal of brain development and remodeling occurs as children grow. In fact, the brain is not fully developed until the mid-twenties. The prefrontal cortex, the decision-making part of the brain, is the last part of the brain to develop. Adolescents' decision making can be driven by emotion and impulse because the adolescent brain relies on the amygdala. [Read more here.](#)

Because children's brains are still developing, every decision can impact the long-term growth of the brain. Consuming substances like alcohol, tobacco, or drugs impacts the adolescent brain differently than an adult's brain. [Because an adolescent brain is not yet fully developed, consuming substances can impact the actual growth and development of the brain.](#) For example, although recreational marijuana is legal in Michigan for adults, it is

illegal for consumption by people under the age of 21. Marijuana and marijuana products impact an adolescent's brain differently than they impact an adult's brain. During adolescence the receptors in a young person's brain are increasing and growing, because their brains have not yet fully developed. Marijuana consumption seems to impact the growth and development of these receptors negatively impacting cognitive and emotional development. In fact, did you know ["One study found that teens who regularly use marijuana lose an average of 5.8 IQ points by the time they reach adulthood."](#)



Many of the healthy behaviors that support a young person's growth like sleep, family discussions, and routine physical activity support adolescent brain development. [Watch this video](#) together to learn more about adolescent brain development. Positive routines, like physical activity together, support young people as they make decisions to keep their mind and body healthy. Fun fact: Practicing mindfulness has been proven to add gray matter to the prefrontal cortex, so being mindful assists in adolescent brain development. This can be as simple as teaching your kids to take two [deep breaths](#) before responding or reacting to a tough situation, or starting a [yoga practice](#) to help your young person learn to focus on the present moment.

### Substances and the Brain

"Dopamine is known as the 'feel-good' hormone. It gives you a sense of pleasure. It also gives you the motivation to do something when you're feeling pleasure" says the [Cleveland Clinic](#). Dopamine is part of our body's reward system. When we exercise, our bodies release dopamine.

# GET YOUR DAILY HAPPINESS CHEMICALS

The happy brain chemicals that make you feel good



## 2 How Deficiency Affects You



## 3 How to Increase Happiness Levels



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Using substances like alcohol, tobacco, or drugs also releases dopamine. In fact, using substances like marijuana or nicotine releases more dopamine than the body typically releases even on our very best days. The body becomes accustomed to this massive release of dopamine when an individual begins using drugs regularly; the brain stops producing its own dopamine. When an individual begins habitually using drugs, their body becomes

conditioned to crave the drug because it becomes part of the daily routine, but the body also becomes reliant on the drugs to produce dopamine. Physical activity has been shown to be effective at multiple levels of substance misuse including prevention, reduction, and recovery. Studies have shown that moderate to vigorous aerobic physical activity can be an [effective treatment for those with substance use disorder](#); physical activity helps support individuals in recovery by supporting healthy dopamine production.

Thinking together about the impact of substances on our bodies and health can help prepare children and adolescents to make healthy decisions for their minds and bodies in the future. Children and adolescents want to know what their parents think about alcohol, tobacco, and drugs. Educate yourself about substances and the impact they have on the body. Learn about drug trends at trusted websites like [Talksooner.org](#), [Prevention Network](#), or [Get Smart About Drugs](#). Visit [Talksooner.org](#) to get talking tips designed for all age groups, early childhood through young adulthood.

Having conversations about long- and short-term goals as well as future goals and plans can help our children think about the things, they want that may be more difficult to obtain if they use substances. Help your young person think about how they will work toward those goals and how they will refuse tobacco, drugs, and alcohol if someone offers it to them. Practice refusal skills with your young person.

Think Together: Practice Refusal Skills			
Refusal Skill Strategy*	If someone asked you to...	you could say.	Now you try. Work together to write one way you could refuse.
Suggesting another activity	Hey, want to go to Jamie's house tomorrow night? His parents are going out of town and I heard someone's brother is buying beer for the group.	Let's go to the Y to play basketball instead of going to Jamie's party.	
Giving a reason	Get over here! You have to try these Pot Tart edibles we swiped from my dad. They are so crazy good, but eat them slowly. They are strong!	I don't want any, thanks. I have a game tomorrow and want to feel my best.	
Stating your feelings and opinion	You want a hit of this? It's Juul's Mango pod. So good. My favorite flavor vape ever.	I don't want to vape because I don't want to put chemicals in my body and I don't like the way it makes my head feel fuzzy.	
Simply saying a direct no	Here, have one of my mom's pills. They will help your headache go away so fast!	No, that's not for me.	

\*adapted from the [Michigan Model for Health™ Curriculum](#)

Practicing refusal skills together gives young people the opportunity to think through ways to say no before they get into those situations for real. This [activity](#) from the National Institute on Drug Abuse (NIDA) helps adolescents nurture their mental and emotional health.

## Be Together

Simply spending time together can impact the choices our children make. Adult caregivers are role models for their children so know that your views on drugs and alcohol will affect how they feel about them.

The same holds true for the value you place on being active and leading a healthy lifestyle. Try to make talking about your expectations around drugs, alcohol and being safe a part of your time being active together. You can incorporate the topic as you go for a hike in the woods or play at a park. Often kids are more likely to share when they are distracted by other

activities and do not have to make eye contact. Just remember to be calm, keep the conversation age appropriate and share the dangers of drugs for their developing brains and bodies. Watch this brief video with your child to help them understand how people become addicted. [Wait21 Understanding Addiction As A Disease](#)

Staying involved in your child's life is one way to help keep them safe from the dangers of substance use. Encourage your kids to take part in hobbies, sports, and clubs that interest them. This can help with positive interactions and [self-esteem](#). [Know who their friends are and where they spend their time](#). Kids who have friends who use drugs are more likely to try drugs themselves.

Celebrate [Red Ribbon Week](#), the largest drug-use prevention campaign in the United States, as a family or help organize events, like a 5k race, and other activities with your child's school. Here is a list of [Natural High Activities](#) to get the conversation started with your child.

## Social Development Strategy: Building Skills to Avoid Substance Misuse

The [Social Development Strategy](#) is a framework which organizes protective factors into a simple strategy for action to promote positive youth development. This works by first providing a child with the knowledge and skills they need to be successful, then providing opportunities for the youth to practice those skills, and finally recognizing and praising the child for their efforts and improvement in using the skill. This creates





bonding between the adult and child and reinforces the desired healthy behaviors, including avoiding substance use.

Physical activity can easily be incorporated into the use of the Social Development Strategy with your child. First choose a physical activity that you would like to do or learn together. This could be anything from swimming, biking, push-ups, paddle boarding, dancing, or joining a sports team. Work on teaching your child those *skills* or, if you are not able to participate yourself, become their biggest cheerleader as they learn from someone else. Whatever the physical activity might be, they are now going to need plenty of *opportunities* to participate in that activity. Be intentional about setting aside time for them to practice the activity, or better yet, join them when they do. Help your child set achievable goals for themselves related to their chosen activity. Be sure to provide lots of *recognition* and praise as they work towards their goals.

Did you know young people who participate in a sport or physical activity are less likely to engage in illicit drug use? [A study in Addictive Behavior](#) reports that “further investigation revealed that participation in sports reduced the risk of overall illicit drug use, but particularly during high school.” Encouraging physical activity and modeling a healthy lifestyle makes you a protective factor for the kids in your life. You are one of the strongest shields against risky behaviors for the children you love.

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## AUTHOR BIOGRAPHY



### **Christina Holmes MAT, Certified Prevention Specialist**

Christina is the Regional School Health Coordinator for Clinton, Eaton, and Ingham Counties. She currently works in the Prevention Program Services department at the Eaton Regional Education Service Agency (RESA), serving schools and families through the implementation of several grant programs. Christina taught in the middle and high school classroom for eight years before moving to Eaton RESA seven years ago. She believes in the power of education and has a passion for ensuring young people have the knowledge and skills to lead a healthy life.



### **Kelly Johnson-Sager, MAE, Certified Prevention Specialist**

Kelly is the Regional School Health Coordinator for the seven counties of the central Upper Peninsula. She currently works as a health education consultant for the Marquette-Alger RESA, and coordinates grant programs around prevention, social emotional learning, and mental health. Kelly has been with MARESA for ten years and is passionate about working with students and adults to promote overall health and well-being.



## Resources for Learning More About Substances and Substance Misuse

Join your local county coalition to prevent substance misuse. What is a coalition?  
[Watch this video to learn more about coalitions.](#)

[Drugs: What Parents Need to Know from Kids Health](#)

[Chippewa Valley Coalition for Youth and Families](#)

[Learn how to Safely Dispose of Prescription Medications](#)

[My Life, My Quit](#)

[Parents Against Vaping E-cigarettes](#)

[Talk Sooner](#)

