

# Alcohol Use After Traumatic Brain Injury

For more information, contact your nearest TBI Model Systems. For a list of TBI Model Systems, go to: <http://www.msktc.org/tbi/model-system-centers>

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## Introduction

Alcohol use and TBI are closely related. Up to two-thirds of people with TBI have a history of alcohol abuse or risky drinking. Between 30-50% of people with TBI were injured while they were drunk and about one-third were under the influence of other drugs. Around half of those who have a TBI cut down on their drinking or stop altogether after injury, but some people with TBI continue to drink heavily, which increases their risk of having negative outcomes.

After TBI, many people notice their brains are more sensitive to alcohol. Drinking increases your chances of getting injured again, makes cognitive (thinking) problems worse, and increases your chances of having emotional problems such as depression. In addition, drinking can reduce brain injury recovery. For these reasons, staying away from alcohol is strongly recommended to avoid further injury to the brain and to promote as much healing as possible.

## Facts about TBI and alcohol

### Alcohol and brain injury recovery

- Recovery from brain injury continues for much longer than we used to think possible. Many people notice improvements for many years after injury.
- Alcohol slows down or stops brain injury recovery.
- Not drinking is one way to give the brain the best chance to heal.
- People's lives often continue to improve many years after brain injury. Not drinking will increase the chance of improvement.

### Alcohol, brain injury and seizures

- Traumatic brain injury puts survivors at risk for developing seizures (epilepsy).
- Alcohol lowers the seizure threshold and may trigger seizures.
- Not drinking can reduce the risk of developing seizures.

### Alcohol and the risk of having another brain injury

- After a brain injury, survivors are at higher risk (3 to 8 times higher) of having another brain injury.

- Drinking alcohol puts survivors at an even higher risk of having a second brain injury. This may be because both brain injury and alcohol can affect coordination and balance.
- Not drinking can reduce the risk of having another brain injury.

## Alcohol and mental functioning

- Alcohol and brain injury have similar negative effects on mental abilities like memory and thinking flexibility.
- Alcohol magnifies some of the cognitive problems caused by brain injury.
- Alcohol may affect brain injury survivors more than it did before their injury.
- The negative mental effects of alcohol can last from days to weeks after drinking stops.
- Not drinking is one way to keep your mental abilities at their best and stay sharp and focused.

## Alcohol and mood

- Depression is about 8 times more common in the first year after TBI than in the general population.
- Alcohol is a “depressant” drug, and using alcohol can cause or worsen depression.
- Alcohol can reduce the effectiveness of anti-depressant medications. People who are taking antidepressants should not drink alcohol.
- One way to improve problems with sadness or depression after TBI is to stop or cut down on the use of alcohol.

## Alcohol and sexuality

- Lowered desire is the most common effect of TBI on sexuality.
- Alcohol reduces testosterone production in males.
- Alcohol reduces sexual performance (erection and ejaculation) in men.
- Alcohol reduces sexual satisfaction in men and women.

- Avoiding alcohol improves sexual ability and activity in men and women.

## How much alcohol is “safe” after TBI?

After TBI the brain is more sensitive to alcohol. This means that even one or two drinks may not be safe, especially when you need to do things that require balance, coordination and quick reactions, such as walking on uneven surfaces, riding a bicycle or driving a car. The fact is, there is no safe level of alcohol use after TBI.

## Alcohol and medications

Alcohol is especially dangerous after TBI if you are taking certain prescription medications. Alcohol can make some medicines less effective and can greatly increase the effects of others, potentially leading to overdose and death. Using alcohol along with anti-anxiety medications or pain medications can be highly dangerous because of the possible multiplying effect.

## What about using other drugs?

Alcohol is a drug. Almost everything mentioned above about alcohol applies equally to other drugs. If your drug of choice is something other than alcohol—such as marijuana, cocaine, methamphetamine or prescription drugs, anti-anxiety medications (benzodiazepines such as Ativan, Valium, or Xanax), or pain medication (opioids like Percocet, Oxycodone or Oxycontin)—many of the same principles apply. In addition, use of illegal drugs or misuse of prescription drugs can lead to legal problems.

If you use multiple drugs like alcohol and marijuana, or alcohol and pain pills, there is a higher risk of addiction and overdose. Using alcohol and pain medications together, or alcohol and anti-anxiety medications, has killed many people. Contact your doctor if you are drinking and using prescription drugs.

## What should you do?

The stakes are higher when people choose to use alcohol after having a TBI. Some people

continue drinking after a TBI and don't have any desire to change that behavior. Others know they probably should stop or reduce alcohol use, but don't know how or have tried in the past and not been successful.

There are many ways to stop using alcohol or other drugs and many ways to reduce the potential for harm. The great majority of people who have stopped having alcohol problems did it on their own. They got no professional help or counseling and did not use Alcoholics Anonymous (AA). Don't underestimate your ability to change if you want to.

## There are many ways to change, cut down or stop drinking

The key ingredients to changing your drinking are: (1) find people who will support your efforts to change your drinking; (2) set a specific goal; (3) make clear how you will meet your goal; (4) identify situations or emotions that can trigger drinking, and figure out ways to cope with those triggers ahead of time; and (5) find ways to reward yourself for sticking to your plan and meeting your goals.

If you have questions or concerns about your drinking, there are many ways to get information or help:

- Take a confidential on-line drinking assessment: <http://www.alcoholscreening.org/>.
- Talk to your physician about your concerns, and ask about medications that can help you resist relapse or reduce cravings for alcohol, such as naltrexone (Revia).
- Psychologists or other counselors in your brain injury rehabilitation program can help you get started on a treatment program that is right for you.
- Alcoholics Anonymous (AA) has helped millions of people. There are meetings in most towns and cities (<http://www.aa.org/>).
- Moderation Management (<http://www.moderation.org/>) and Smart Recovery (<http://www.smartrecovery.org/>) are alternatives to AA that do not use the 12-step model.

- Substance Abuse and Mental Health Services Administration (SAMHSA) is a federal program that can help you find a treatment facility wherever you live (<http://findtreatment.samhsa.gov/>; 800-662-4357).
- Private treatment: look in the Yellow Pages under substance abuse, chemical dependency counselor, or addiction treatment.

## Reduce the harm from drinking

For those who don't want to stop drinking, it is still possible to reduce some harm from drinking:

- Eat food and drink water before you drink alcohol. This will help reduce the sharp spike in blood alcohol level that can cause nausea, vomiting, falls, blackouts and alcohol poisoning.
- Plan your transportation so you don't drink and drive: have a non-drinking designated driver; plan to spend the night where you are doing your drinking; or drink only at home.
- To avoid dangerous peaks in blood alcohol concentrations, drink beer rather than hard liquor, or mix hard liquor with water instead of with sweet, carbonated beverages.
- Sip your drinks slowly (no more than one per hour). Drinking too fast can make the pleasant feelings of alcohol go away.
- Drinking in bars slows some people down because of the expense. However, be sure you do not drive after drinking.
- Take vitamins B1 (thiamine), B12 and folate to reduce the chances of alcohol-related brain damage.
- Keep your drinking to no more than two drinks per day. Or cut back on certain days of the week, such as weeknights.
- Take a drinking "holiday" (days or weeks when you decide not to drink at all). This can remind you of some of the benefits of being sober.

## How family members can help

No one can force another person to stop using alcohol or drugs, but you can have an influence. Attending Al Anon meetings can be a good

source of support for a friend or family member of someone who abuses alcohol or drugs, and it can help promote change. Planning an “intervention” where family and friends confront the person may help.

A program called Community Reinforcement and Family Training (CRAFT) has been found to work best. CRAFT takes a more positive, motivational approach that helps loved ones make not drinking more rewarding for the person with the alcohol problem. Research has shown that alcoholics are more likely to go into treatment if their loved ones follow the CRAFT method. To learn about CRAFT, see the book *Get Your Loved One Sober* in the Resources section below, or find a counselor familiar with this approach.

## Reference

Bombardier, C.H. & Turner, A. (2009). Alcohol and traumatic disability. In R. Frank & T. Elliott (Eds.), *The Handbook of Rehabilitation Psychology*, Second Edition (pp. 241–258). Washington, DC: American Psychological Association Press.

## Resources

- Brown, J., Corrigan, J., & Hammer, P. (2010). “Substance Abuse and TBI.” Brainline Webcast #4, Defense and Veterans Brain Injury Center. ([http://www.brainline.org/webcasts/4-TBI\\_and\\_Substance\\_Abuse/index.html](http://www.brainline.org/webcasts/4-TBI_and_Substance_Abuse/index.html))
- Corrigan, J., & Lamb-Hart, G. (2004). Alcohol, Other Drugs, and Brain Injury. Columbus, Ohio: Ohio Valley Center for Brain Injury Prevention and Rehabilitation, Ohio State University Dept. of Physical Medicine and Rehabilitation. (Available from the Brain Injury Association, <http://www.biausa.org/LiteratureRetrieve.aspx?ID=43235>.)
- Meyers, R.J., & Wolfe, B.L. (2004). *Get Your Loved One Sober: Alternatives to Nagging, Pleading, and Threatening*. Center City, MN: Hazelden Publications.
- Substance Abuse Resources and Disability Issues (SARDI); <http://www.med.wright.edu/citar/sardi/index.html>.

## Source

Our health information content is based on research evidence whenever available and represents the consensus of expert opinion of the TBI Model System directors.

## Authorship

*Alcohol Use After Traumatic Brain Injury* was developed by Charles Bombardier, PhD, in collaboration with the University of Washington Model Systems Knowledge Translation Center.

## Disclaimer

This information is not meant to replace the advice from a medical professional. You should consult your health care provider regarding specific medical concerns or treatment.