Substance Abuse Issues after Traumatic Brain Injury

Living with Brain Injury

Brain Injury Association of America

This brochure was developed for friends, family members, and caregivers of persons with brain injury. It also may be used in discussions with health care professionals and others about the problems one may face when living with brain injury.

Alcohol, Other Drugs and Brain Injury

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Contents:

How much alcohol or other drugs is safe after brain injury?

The answer to this question is complicated because some drugs are illegal and others are not; some drugs may be prescribed by a physician.

Alcohol - because it is a legal substance for adults and is not prescribed by a physician - presents a more complex question. Our starting point is that certainly no one should consume more alcohol after brain injury than would be considered safe for an adult who had not had an injury. Many people do not realize that adult men under age 65 should not have more than two alcoholic drinks each day. For men over age 65 and for adult women, the recommended maximum is one drink per day.

So the question becomes after brain injury should an individual drink even these amounts? Based on information about how alcohol and brain injury add together to affect the brain and how it works, we have concluded that **there is no safe amount to drink**. We suspect that especially during the early period of recovery - the first several years when the brain is attempting to spontaneously heal and otherwise accommodate the injury - alcohol can inhibit these natural processes.

There are many reasons why it is not safe to consume drugs that are illegal. There is a great risk for illegal drugs to interact with prescribed medications to create additional medical problems. Illegal drugs may cause complications of other medical conditions. There is also the potential for being arrested, and greater vulnerability to injury by being the victim of violence. And last (but certainly not least) there is the potential for additional brain

damage from use of these uncontrolled substances.

Taking prescription drugs in greater quantities than they are prescribed is another form of drug abuse, and it too is not advisable. Prescribed medications can be as dangerous as illegal drugs when a person takes more than the prescribed amount, or takes the prescribed amount more frequently than indicated. Medical complications and additional brain damage can result from this kind of substance abuse.

If you have had a brain injury you should not drink alcohol,you should not use illegal drugs, and you should not take prescription medications in greater quantity than prescribed.

How does alcohol or other drugs affect a person who has had a brain injury?

There are multiple reasons why alcohol and other drug use after brain injury is not recommended. The "User's Manual for Faster, More Reliable Operation of a Brain after Injury" (Ohio Valley Center, 1994; <www.ohiovalley.org>) describes 8 reasons:

1. People who use alcohol or other drugs after they have a brain injury don't recover as much.

Some brain cells (neurons) are killed and others are disconnected at the time of a brain injury. Recovery means re-learning by making new connections between neurons. Using alcohol and other drugs

after brain injury gets in the way of your recovery by interfering with new connections between neurons.

2. Brain injuries cause problems in balance, walking or talking that get worse when a person uses alcohol or other drugs.

For people whose brain injury caused problems with balance, walking, or talking, alcohol and other drugs make the problems even worse. Without brain injury, alcohol and other drugs can make people lose their balance or fall down. People who have been drinking or using other drugs may slur their speech. Problems walking and talking caused by your brain injury will be increased by alcohol and other drugs.

3. People who have had a brain injury often say or do things without thinking first, a problem that is made worse by using alcohol and other drugs.

Every brain has a program called, "Good Idea/Bad Idea." The program tells us what is appropriate and what is not. For example, we may think to ourselves that someone's sweater is really ugly, but "Good Idea/Bad Idea" keeps us from saying this out loud. For some people, a brain injury takes away the fine line between good ideas and bad ideas and "lets it all hang out." Alcohol can also cause a person to say whatever comes to mind, no matter who it hurts. Alcohol together with a brain injury shuts off the "Good Idea/Bad Idea" program, and that's a bad idea.

4. Brain injuries cause problems with thinking, like concentration or memory,

and using alcohol or other drugs makes these problems worse.

Many people have to learn new skills, or re-learn old ones, following a brain injury. People have trouble with concentration, memory, word finding, problem-solving and other thinking skills, depending on where the brain is injured. Alcohol and other drugs also interfere with the ability to think and learn new things. Adding alcohol and other drugs with your brain injury just makes thinking that much harder.

5. After brain injury, alcohol and other drugs have a more powerful effect.

The brain is more sensitive to alcohol and other drugs after an injury. There are not as many neurons to absorb the alcohol or other drugs. No matter how much alcohol or other drugs a person was able to use before, it's less now. Also, alcohol interferes with prescribed medications. You get drunk faster and lose the good effect of the medicine.

6. People who have had a brain injury are more likely to have times that they feel low or depressed and drinking alcohol and getting high on other drugs makes this worse.

Being depressed is fairly common after a brain injury. Sometimes it is the injury to the brain that causes depression. It is also the change in a person's life that leads to depression. Everything is different-there are financial worries, and there is boredom. Many people turn to using alcohol and other drugs to try to make this depression go away. They say it makes them less worried, more relaxed and happier. That

may be true, for a while, but it quickly makes things worse. Alcohol depresses the brain and that depresses you.

7. After a brain injury, drinking alcohol or using other drugs can cause a seizure.

Seizures are a problem for about 5% of people who have a brain injury. Even though that is a low number, seizures are serious and steps need to be taken to avoid them. Some people require anti-seizure medication. Mixing alcohol and other drugs with these medications is very dangerous and can INCREASE the chance of seizure. Taking yourself off medications to drink is DANGEROUS. Doubling up on anti-seizure medications to drink is DANGEROUS. Get the facts from your doctor, and then use your brain.

8. People who drink alcohol or use other drugs after a brain injury are more likely to have another brain injury.

Among people who have had one brain injury, the chance of a second injury is three times greater. Brain injuries may cause problems with balance, coordination, vision and judgment that lead to other injuries. By drinking alcohol or using other drugs after a brain injury, you are more likely to have another injury. Also, with each brain injury it takes less force to cause greater harm.

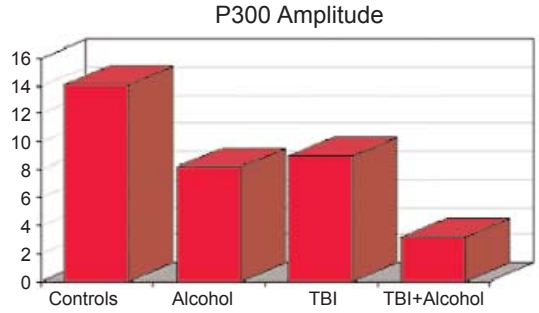
How is the brain affected?

There is mounting research evidence about the bad effects of alcohol and other drug use after brain injury.

Several studies have found use and associated with such unwanted outcomes as unemployment, living alone and feeling isolated, criminal activity, and lower life satisfaction. While these studies have observed associations between substance use and negative outcomes, cause and effect is not fully understood.

Brain injury does damage to your brain; abuse of alcohol or other drugs does too. There is research showing that when brain injury and substance abuse are combined they have a worse effect on the brain than either one has alone.

As an example, Ian Baguley and colleagues from Australia (see graph below) studied the P300 wave in event-related evoked potentials--an indication of how fast the brain detects new information. Their research showed that either heavy social drinking or previous traumatic brain injury requiring hospitalization slowed brain functioning, and when combined they had an "additive effect." An additive effect means that both together (heavy social drinking and previous brain injury) were worse than either one alone.



From Baguley, I. J., Felmingham, K. L., Lahz, S., Gordan, E., Lazzaro, I., & Schotte, D. E. (1997). Alcohol abuse and traumatic brain injury: Effect on event-related potentials. Archives of Physical Medicine and Rehabilitation, 78 (11), 1248-1253.

In this graph based on Baguely and colleagues study, the higher the bar, the faster the research participants responded to new information. Those subjects who were either heavy social drinkers or had been hospitalized for a traumatic brain injury were slower responding then people with neither; and those with both were slower than those who had just one of the conditions.

The effects of alcohol and other drugs are different for people who have had a brain injury. It is important to get the facts about how alcohol and other drugs affect the brain. When your review the data it becomes clear that there is no amount of alcohol or other drugs that is safe for people who have had brain injuries.

What about treatment for substance abuse after brain injury?

Many people benefit from professional help when their drinking or other drug use is too much and is creating problems for them. One sign that a person could use some assistance is when they have tried to cut down on their own, but somehow the problem continues. Another sign is when people who care about a person begin worrying that he or she is drinking to much. Finally, if a persons is facing legal or medical problems-including having another injury- it is advisable to seek help.

In substance abuse treatment, perhaps the most well known and frequently used theory is the **Stages of Change** model developed by James Prochaska and Carlos DiClemente. This model describes how ready a person is to address problems related to their alcohol or

other drug use. Stages start with *precontemplation* (a person sees no problem when there is one), and include *contemplation* (weighing the pros and cons of changing), *determination* (deciding to change), *action* (making a specific plan for change), and *maintenance* (sustaining successful change despite urges to use again). Substance abuse counselors usually tailor treatment to a person's Stage of Change. **Regardless a person's readiness to address an alcohol or other drug use problem, there is always something a professional substance abuse counselor or treatment program can provide.**

Are there treatment approaches that have been proven effective for people with brain injury?

There has not been very much research about what substance abuse treatment methods do or do not work for people who have had brain injuries. Most clinicians feel that techniques found effective for people in general can also be effective for people who have had brain injuries; however, sometimes special considerations or accommodations may be needed to make the treatment useful and effective. Following are brief descriptions of common treatment approaches for alcohol and other drug abuse.

Motivational Interventions have been used to help individuals become ready to participate in treatment. Research in the substance abuse field has demonstrated that motivational enhancement techniques are associated with greater participation in substance abuse treatment and positive treatment

outcomes. Motivational enhancement techniques must be matched to a person's Stages of Change. Motivational interventions seem like a promising approach to facilitating positive change for people with substance abuse problems and brain injuries, though like most therapeutic approaches it needs to be adapted to the individual's ability for insight and self-management.

Cognitive-Behavioral Therapy uses cognitive and/or behavioral strategies to identify and replace an individual's irrational beliefs that arise from substance abuse (e.g., "the only time I feel comfortable is when I'm high") with rational beliefs (e.g., "it's hard to learn to be comfortable socially without doing drugs but people do it all the time"). Cognitive-Behavioral Therapy can be conducted as part of individual or group treatment. Whether or not someone has had a brain injury, Cognitive-Behavioral Therapies need to be adapted to a person's capability for understanding the connections between beliefs and feelings.

Sometimes substance abuse treatment needs to take place in an environment where there is 24-hour per day supervision and treatment. One of the most common residential treatment approaches is the **Therapeutic Community**, or "TC". TC has been used to address the needs of people with substance use disorders for more than 30 years and its methods and effectiveness have been well-documented. TC views substance abuse as a problem of conduct, attitudes, moods, values, and emotional management. The approach focuses on creating a community, including other people addressing these problems, that promotes self-evaluation and recovery. For

persons who have had brain injuries, the TC approach may need to be adapted to allow increased flexibility, decreased intensity, and greater individualization.

When it comes to the use of prescription medications for the treatment of substance abuse, there are not a lot of choices. Foremost among addiction-related medications is **methadone** for the treatment of heroin and other opioid addiction. Methadone cannot be dispensed outside designated methadone treatment programs. A new drug, **buprenorphine**, is available for the treatment of opioid abuse and dependence when prescribed and monitored by a certified physician. In our clinical work we have seen that prescription **medications for depression or anxiety** are sometimes important for getting started on changing alcohol or other drug abuse. Another medication, disulfiram or **antibuse**, is a well-established medication used to discourage alcohol consumption. However, its use by individuals with brain injuries is generally discouraged. **Naltrexone** has been used to reduce a person's cravings for alcohol, but there is no research on its effectiveness for people who have had brain injuries.

Substance abuse treatment often includes both the individual and family or friends. The greater a person's cognitive impairments after brain injury, the more important it becomes that people in his or her surroundings are willing to be involved in the treatment process. Similarly, for people who do not see themselves as having a problem (those who are precontemplative), it is more important that family and friends be willing to join professionals to get a person started addressing their substance use.

How can substance abuse services be adapted for people with brain injury?

There should be a very high priority placed on research about the effectiveness of current substance abuse treatments for persons with brain injury. However, until more is known, current treatments and services need to be adapted to accommodate disability arising from brain injury.

When a person with a brain injury seeks help for a substance abuse problem, significant barriers to treatment may be encountered. The individual, family or friends may need to advocate for the right to appropriate treatment:

- Too many publicly funded substance abuse programs still have physical facilities that prevent or limit accessibility for individuals who use a wheelchair. This is against the law for publicly funded agencies. They should be asked to make services accessible in the same way everyone else receives them.
- Admission criteria may discriminate against individuals with brain injuries, out right or indirectly. For instance, requiring abstinence from all mood-altering substances including prescribed medications prevents some individuals from receiving services. This is not appropriate.

If a person with a brain injury is able to get through the front door, literally and figuratively, a new set of barriers often arise that come from the cognitive impairments and unique learning styles common after

brain injury. Professionals at the Ohio Valley Center for Brain Injury Prevention and Rehabilitation at Ohio State University have made a number of recommendations for working collaboratively with substance abuse treatment professionals. These recommendations assume that a collaborative relationship can be developed with the individual provider that allows for exchange of ideas and information without anyone becoming defensive. Establishing such a relationship is by no means a given, but it is the cornerstone for long-term success in treatment.

Below are recommendations that an individual, family member or friend might make to a substance abuse treatment provider who is inexperienced in working with people with brain injuries. These recommendations cover identification of unique issues, adaptive or compensatory strategies based on the individual's own learning style, provision of feedback regarding inappropriate behavior, and cautions regarding jumping to a conclusion about a person's motivation. These recommendations are also summarized at the end of this brochure in "Suggestions for Substance Abuse Treatment Providers Working With Clients Who Have Had a Brain Injury."

The substance abuse provider should determine a person's unique communication and learning styles.

A substance abuse provider's success in working with an individual with unique cognitive abilities will rely heavily on their ability to identify strengths and weaknesses. We have had our greatest success by avoiding neuropsychological jargon and focusing the provider's attention

on basic issues of communication and learning. Understanding that a particular individual learns better with written, oral or visual input. When expression is an issue, often it is a simple matter of giving providers permission to ask questions so that they can learn to work more effectively with an augmented communication device or understand dysarthric speech.

With regard to learning style, simplifying the concepts of attention and learning can be very useful. In particular we find it important that the provider understand the issues of shortened attention span (including the interaction with fatigue), as well as the impact of environmental stimuli on attention (particularly how noisy or busy locations can affect attention). With regard to new learning, distinctions between language and non-language styles are important, as is understanding memory impairments when the exist. It is important to understand how attention affects both initial comprehension and later recall.

The substance abuse provider should assist the individual to compensate for a unique learning style.

Substance abuse treatment programs have come to rely heavily on the use of groups for educational, not just experiential, purposes. Many compensatory strategies applicable to classroom settings are appropriate in substance abuse treatment, as well. Simple strategies like using written reminders for cueing recall, or schedules to structure time are not standard in many programs (though all clients would probably

benefit). The use of groups also reduces individual attention, which may limit one-on-one opportunities to mediate the treatment experience. In programs that use an Alcoholics Anonymous (AA) treatment approach, materials that have been modified to include greater visual cues as well as less abstract reasoning are available.

The substance abuse provider should provide direct feedback regarding inappropriate behaviors.

For some individuals with cognitive impairments there also may be problems with inappropriate social behavior. In our experience, this behavior can be the most challenging for substance abuse treatment programs. Providers are often caught off guard by impulsive behavior, disinhibited expression of emotions, or intrusion on personal space. Consequently, they are usually ineffective in dealing with these behaviors, as well. Again, a minimal amount of instruction and permission to intervene can go a long way toward making the substance abuse treatment provider more comfortable with socially inappropriate behavior. We have also found that advanced structuring so that something has been said about the behavior before its first occurrence builds both trust and confidence.

The substance abuse provider should be cautious when making inferences about motivation based on observed behaviors.

Perhaps the most destructive factor undermining access to treatment for persons with brain injury is a tendency for

substance abuse treatment providers to conclude a person is not motivated when the behaviors are really a result of cognitive impairments. For instance, the leader of a group asks a question to which each member is to respond. When it is the opportunity for individuals with memory problems to respond, they have nothing to add. Group leaders think this is resistance; however, upon inquiry, individuals report that what they wanted to say when the question was first posed had been forgotten by the time it comes their turn to speak. Perhaps most frequent is the tendency for substance abuse providers to infer that missed appointments or late arrival are signs of resistance to treatment or denial of one's substance abuse problem. There can be many reasons why an individual with a brain injury might miss an appointment or be late, including resistance to treatment and denial. Poor planning, poor memory, difficulties arranging or handling transportation need to be considered as alternative hypotheses before the counselor jumps to the conclusion that the missed appointment is somehow related to motivation.

The relationship that is established between a client and a substance abuse counselor is the single most important factor for successful treatment of alcohol and other drug problems. This relationship is often called the therapeutic alliance. You will know you are developing a therapeutic alliance if after meeting with your counselor a few times you feel like he or she listens and understands you, has confidence in you and your ability to change, and is someone you can trust. The need for a positive therapeutic alliance is especially critical for individuals with both a traumatic

brain injury and a substance abuse problem.

What about AA or other self-help approaches?

Professional treatment sometimes has natural limits and continuing care beyond formal treatment is critical to achieving a long-term, satisfactory outcome for individuals affected by substance use disorders. Self-help or peer support programs can be an important intervention and an easily available source of continuing care. Self-help approaches began with **Alcoholics Anonymous**, or "AA", and have grown to address a wide variety of addictions. **Rational Recovery** and **Moderation Management** are two other self-help approaches for alcohol problems. **Narcotics Anonymous (NA)** and **Cocaine Anonymous (CA)**, both based on AA, are two of the largest self-help organizations addressing illegal drug use.

AA, NA and CA use the "12-step" method, with its focus on developing personal responsibility within the context of peer support. AA, NA, or CA groups are not for everyone at all stages of recovery. For those still at a point that they are resistant to exploring their use of substances as problematic, the introduction of AA/NA/CA may be too early and counterproductive. Forcing a self-help group on a person who is precontemplative may create greater resistance later in the process of recovery when AA/NA/CA could be very helpful. A person may find support in other areas of their life that are as productive as AA/NA/CA, and it may be better to cultivate these natural supports.

However, we have always found that people who participated in self-help groups before their injury can be more open to involvement after.

When attendance at AA, NA or CA groups are being considered there is a certain amount of planning that needs to take place. We think it is important to accompany a person who has had brain injury and has never attended self-help groups to the first few meetings. Having someone to share the initial experience with, and talk about it afterward, can make the difference between dropping out or staying with the group. We have also found that it is very useful to become familiar with the nuts and bolts of self-help groups before attending. It is useful to be able to anticipate what will happen at a meeting. Included at the end of this brochure is a description of the "Nuts and Bolts of Using Self-Help Groups." We suggest looking this over before attending a meeting.

Internet Resources

General

- Substance Abuse and Mental Health Services Administration <www.samhsa.gov>
- National Institute on Alcohol Abuse and Alcoholism <www.niaaa.nih.gov>
- National Institute on Drug Abuse <www.nida.nih.gov>
- Alcohol Screening <www.alcoholscreening.org>

Treatment Approaches

- Cognitive Behavior Therapy <www.nacbt.org>
- Motivational Interviewing

<www.motivationalinterview.org/clinical/overview.html>
- Therapeutic Communities of America <www.tcanet.org>

TBI and Substance Abuse
- Ohio Valley Center for Brain Injury Prevention and Rehabilitation <www.ohiovalley.org>
- SynapShots (section on Substance Abuse) <www.SynapShots.org>

Self-Help Groups
- Alcoholics Anonymous <www.alcoholics-anonymous.org>
- Cocaine Anonymous <www.ca.org>
- Moderation Management <www.moderation.org>
- Narcotics Anonymous <www.na.org>
- Rational Recovery <www.rational.org>

Additional Information

Suggestions for Substance Abuse Treatment Providers Working With Clients Who Have Had a Brain Injury

The substance abuse treatment provider should determine a person's unique communication and learning styles.

- Ask how well the person reads and writes; or evaluate via samples.
- Evaluate whether the individual is able to comprehend both written and spoken language.
- If someone is not able to speak (or speak easily), inquire as to alternate methods of expression (e.g., writing or gestures).

- Both ask about and observe a person's attention span; be attuned to whether attention seems to change in busy versus quiet environments.
- Both ask about and observe a person's capacity for new learning; inquire as to strengths and weaknesses or seek consultation to determine optimum approaches.

The substance abuse treatment provider should assist the individual to compensate for a unique learning style.

- Modify written material to make it concise and to the point.
- Paraphrase concepts, use concrete examples, incorporate visual aids, or otherwise present an idea in more than one way.
- If it helps, allow the individual to take notes or at least write down key points for later review and recall.
- Encourage the use of a calendar or planner; if the treatment program includes a daily schedule, make sure a "pocket version" is kept for easy reference.
- Make sure homework assignments are written down.
- After group sessions, meet individually to review main points.
- Provide assistance with homework or worksheets; allow more time and take into account reading or writing abilities.
- Enlist family, friends or other service providers to reinforce goals.
- Do not take for granted that something learned in one situation will be generalized to another.

- Repeat, review, rehearse, repeat, review, rehearse.

The substance abuse provider treatment should provide direct feedback regarding inappropriate behaviors.

- Let a person know a behavior is inappropriate; do not assume the individual knows and is choosing to do so anyway.
- Provide straightforward feedback about when and where behaviors are appropriate.
- Redirect tangential or excessive speech, including a predetermined method of signals for use in groups.

The substance abuse treatment provider should be cautious when making inferences about motivation based on observed behaviors.

- Do not presume that non-compliance arises from lack of motivation or resistance, check it out.
- Be aware that unawareness of deficits can arise as a result of specific damage to the brain and may not always be due to denial.
- Confrontation shuts down thinking and elicits rigidity; roll with resistance.
- Do not just discharge for non-compliance; follow-up and find out why someone has no-showed or otherwise not followed through.

If information about a person's cognitive abilities or neurobehavioral problems are available from a medical rehabilitation

professional (physiatrist, rehabilitation psychologist, neuropsychologist, speech-language pathologist or occupational therapist), substance abuse treatment providers would be well-advised to gain permission to consult with that professional.

The Nuts and Bolts of 12-Step Self Help Groups

Finding a meeting

Most phone books will list a number for the closest AA/NA/CA central office, which can provide you with a list of meetings. Your local substance abuse treatment agency can also direct you to meetings. Or you can go to <www.alcoholics-anonymous.org> and look up you regional group's website to find contact numbers.

Kinds of Meetings

There are four basic types of meetings based on whether they are "Open" or "Closed", and whether they use a "Lead" or "Discussion" format. Open means that the meeting is just that- open to anyone that would like to attend regardless of admitting a problem with alcohol or other drugs. A closed meeting is only for those willing to admit a problem. Lead meetings are meetings in which a primary speaker will share their personal story of recovery. Discussion meetings are round table discussions and normally occur in smaller, more intimate settings. Our recommendation is that a person unfamiliar with self-help groups start with an Open Lead meeting.

What to Expect.

Most meetings will last about an hour. It will be helpful to arrive 10-15 minutes early to allow time for introductions, choosing a seat (save them with a hat or coffee cup), and just adjusting to the surroundings. At AA/NA/CA meetings it is normal to use only first names (this is part of the anonymity). At AA meetings greetings are usually a handshake, at NA meetings hugs are a common form of greeting. There will usually be a literature table that you can look over. If you arrive on time, you will be conspicuous. Choosing your seat is important. We suggest that you sit in the middle of the room, toward the front where the "old timers" will usually sit. These are the folks that a new person should get to know. On the fringes of the room will normally be those who are required to be there by the courts and not really invested in recovery-they will be the last in and the first out.

At most Lead meetings there will be coffee and possibly a snack. There may be a 50/50 drawing. The meeting will begin with the Chair having some participants lead a group reading of the Twelve Steps and Twelve Traditions. There will be acknowledgement of those that have reached important milestones in their recovery, and announcements of importance to the group. The leader will then introduce the speaker. The speaker will then give their lead. They will tell what their life was like before they started to drink or use, what happened after they started to drink or use, what brought them to recovery, and what their life is like now. There will then be time for responses to the speaker and a closing using the Lord's

Prayer. An offering will be taken which is entirely optional and is used to support the group through the purchase of literature, coffee, and other expenses. After the meeting there will be people standing around visiting (another good time for introductions), while others clean up the room. Sometimes plans will be made to go out for a meal or coffee together.

Sponsorship

Sponsorship is another form of support available in self-help groups. It is often very helpful to have people new to recovery and AA/NA/CA connected with a "sponsor" to help them along the way. For persons with brain injury the sponsor needs to be aware that they may have some unique needs and require a certain amount of accommodation. There are some guidelines for potential sponsors that were developed under the auspices of the Brain Injury Association of America when it was the National Head Injury Foundation. This "Letter to Sponsors" is available at the NASHIA website <www.nashia.org> under resource materials developed for the webcast on substance abuse and TBI.

Supporting Attendance

It is hard to go to any unfamiliar place, and a self-help meeting can be even more daunting. Attending the first few meetings with a companion can be very helpful. If the companion is familiar with AA/CA/NA, they can introduce the individual to some of the "old timers" (persons with quality recovery and good motivation) until they feel some familiarity with the group. Because of problems a person may have generalizing what goes

on in the meeting to their own situation, time should be set aside after the meeting to talk about the experience, answer questions, and reinforce the points that made an impact.

12 Steps

All AA/NA/CA rely on the Twelve Steps as a means to recovery. As originally written the Twelve Steps are rather abstract, and may not be understood by some people with cognitive impairments. An alternative version of the 12 Steps was developed for the NHIF White Paper that is more concrete and is available at the NASHIA website <www.nashia.org> under resource materials developed for the webcast on substance abuse and TBI. Not everyone with a brain injury may be able to "work the steps"; however, they can still benefit from the other helpful aspects of AA/NA/CA, including fellowship with non-users, a safe place to socialize, and exposure to the stories of those attempting to recover. The social environment of a self-help group provides many different avenues for learning or practicing new ways to look at our behavior and make changes.

About the Author's

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members about the issues of substance abuse and brain injury throughout the United States and has co-authored several articles, a book chapter and materials on this subject. He is a member of the International Association of Motivational Interviewing Trainers. He has been a chemical dependency professional since 1988 in the state of Ohio. He worked in a publicly funded not-for-profit agency prior to joining the staff of the Ohio Valley Center. Prior to entering the chemical dependency field he had careers as a pastor and corporate accountant. He has a Bachelor of Science degree in Social Science from Northern Arizona University, Flagstaff, Arizona and a Master of Divinity degree from the Iliff School of Theology, Denver, Colorado.

Notes

Substance Abuse Issues after Traumatic Brain Injury is one in a series of brochures on "Living with Brain Injury."

Depression

Employment

Substance Abuse

Information: 1.800.444.6443
www.biausa.org

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