

CE 1.5 contact hours

ABSTRACT: Largely underutilized in North America, the use of medications to treat alcohol dependence is frequently a successful method of reducing alcohol craving and promoting abstinence. Recovery from alcohol addiction can be a complicated process, requiring nutritional, social, psychological, spiritual, and physical aspects of healing and self-directed behavioral change. Nurses can intervene in alcohol use disorder via screening, referrals, support of medical and behavioral treatments, and spiritual care that emphasizes hope, forgiveness, and relief from shame and guilt.

KEY WORDS: alcohol dependence, alcohol deprivation effect, alcohol use disorder, AUD, naltrexone, nursing, pharmacotherapy, Sinclair Method

BY JOHN C. UMHAU

Conquering THE CRAVING TREATMENT TO CURB ALCOHOL USE DISORDER



John C. Umhau, MD, MPH, CPE, is board certified in addiction medicine. He was formerly with the National Institute on Alcohol Abuse and Alcoholism and currently practices at alcoholrecoverymedicine.com

The author founded and manages Alcohol Recovery Medicine.

Accepted by peer-review 12/21/2018.

Copyright © 2019 InterVarsity Christian Fellowship/USA.

DOI:10.1097/CNJ.0000000000000624

Supplemental digital content is available for this article. Direct URL citations appear in the printed text and are provided in the HTML and PDF versions of the article at journalofchristian-nursing.com.

Alcohol use disorder (AUD), commonly called alcoholism, affected 6.2% of people in the United States age 18 and older in 2015 and is the third leading preventable cause of death in the United States (National Institute on Alcohol Abuse and Alcoholism [NIAAA], 2018). Despite the psychological and social trauma AUD causes, early symptoms are often ignored when treatment is most effective. This denial puts alcohol abusers at greater risk of death by allowing their health to deteriorate before they seek medical attention. Denial, combined with ignorance of available treatments, may explain why treatment using medication reaches less than 10% of patients with AUD (Jonas et al., 2014). Nurses with knowledge of AUD and current medical treatment methods can provide screening and referral services to patients in community, as well as in primary and acute care settings.

DIAGNOSING AUD

The NIAAA defines AUD as “a chronic relapsing brain disease characterized by compulsive alcohol use, loss of control over alcohol intake, and a negative emotional state when not using” (2018, para. 1).

The Diagnostic and Statistical Manual (DSM-5[®]) refers to AUD, rather than alcohol abuse or alcoholism, emphasizing the disease aspect of this condition. The

DSM-5® diagnostic criteria from the American Psychiatric Association (2013) can be found online in Table 1 as Supplemental Digital Content 1, <http://links.lww.com/NCF-JCN/A66>. Although people react to alcohol in different ways, the NIAAA (2018) recommends the following maximum safe levels of drinking, where one drink equals one 12-oz bottle of beer, one 5-oz glass of wine, or 1.5 oz of 80-proof distilled spirits:

- For healthy men up to age 65: No more than 4 drinks a day AND no more than 14 drinks in a week.
- For healthy women (and healthy men over age 65): No more than

the biological condition of the brain, as well as conscious control over behavior. Thoughts about drinking are generated by nerve cells and neurochemical signals, such as dopamine, which drives motivation, and endorphins, brain opiates that signal pleasure and reward. Pleasurable experiences stimulate the creation of a complex pattern of neurochemical messengers and nerve cell adaptations to create a physical structure of memories in the brain. Addictive substances, such as alcohol, can prompt an endorphin signal to accelerate the creation of these *rewarding* memories and can produce well-worn brain thought paths which, over time,

alcohol on brain function makes this effect even worse.

Brain damage accompanying AUD is mediated by a proinflammatory effect of alcohol-induced cytokines. Cytokines, signaling molecules that influence cells throughout the body, are responsible for symptomatic response to illness, such as anorexia, pain, malaise, and fatigue. Inflammatory brain cytokines can promote neurodegeneration and reduce production of neurotransmitters, such as serotonin; inflammatory cytokines also are hypothesized to promote brain disorders, such as depression, posttraumatic stress disorder (PTSD),

3 drinks in a day AND no more than 7 drinks in a week.

- Any drinking while pregnant is defined as “excessive drinking.”

CAUSES AND EFFECTS OF AUD

Susceptibility to AUD is influenced by genetic, environmental, and psychosocial factors (Erickson, 2018), and the progression of the disease is based on

create an overwhelming and uncontrollable craving (Koob, 2009).

When alcohol is temporarily avoided, the brain adapts with neurochemical changes that increase the desire for alcohol in a process called the *alcohol deprivation effect* (Sinclair, 1989). This can make abstinence difficult for a person with AUD, and the damaging effect of

impulsive behavior, and alcoholism (Umhau et al., 2014).

According to this hypothesis, the detrimental effect of excessive alcohol begins by altering the intestinal microbiome and increasing gut permeability, causing a *leaky gut*. This permits excessive endotoxin from dead gram-negative bacteria in the gut to enter the circulation, leading to liver

inflammation and cirrhosis, as well as neuroinflammation and brain atrophy, as shown in Figure 1. An American fast food diet may exacerbate this process. Such a diet, abundant in omega-6 fat—such as in corn, soy, and peanut oils, and processed food containing additives and reduced fiber—can inhibit healthy bacterial diversity and promote overgrowth of endotoxin-producing, gram-negative bacteria. High fructose corn syrup also promotes increased inflammation from endotoxins, resulting in liver inflammation (Lim, Mietus-Snyder, Valente, Schwarz, & Lustig, 2010).

Although drinkers may experience mild withdrawal and cytokine-related symptoms as part of a hangover, a life-threatening condition may occur when heavy drinkers abruptly cease drinking. After 3 to 7 days of abstinence, heavy drinkers may experience shaking, shivering, sweating, seizures, confusion, and hallucinations due to delirium tremens, a potentially fatal condition. The rapid development of these symptoms is a true medical emergency and may require hospital detoxification and treatment.

INTERVENTIONS TOWARD TREATMENT

Nurses in primary care settings can intervene in patients' alcohol abuse behavior, using evidence-based screening tools. This brief intervention for individuals over age 18 helps patients recognize and address their need for help (Moyer, 2013; Tomson, Romelsjö, & Åberg, 1998). Begin by asking a patient how much he or she drinks, using the CAGE questions (O'Brien, 2008). Two positive responses indicate AUD.

- Have you ever felt you should **Cut down** on your drinking?
- Have people **Annoyed** you by criticizing your drinking?
- Have you ever felt **Guilty** about your drinking?
- **Eye opener:** Have you ever needed a drink first thing in the morning?

The AUDIT screening tool, originally developed by Saunders, Aasland, Babor, De La Fuente, and Grant (1993), also is useful in a clinical setting (Table 2). If screening is positive, the nurse can start with: "I believe that you have an alcohol use disorder, and you will feel better if you stop drinking. I strongly recommend

that you quit drinking, and I'm willing to help." This approach may start an alcohol abuser on the road to recovery.

Bibliotherapy, the use of written self-help materials, is another method used to help patients (Apodaca & Miller, 2003). Books, brochures, or apps are also useful in reducing alcohol consumption (see <https://www.alcoholrecoverymedicine.com/resources>). When a person with AUD is reluctant to receive help, Community Reinforcement and Family Training (CRAFT) can teach family members communication methods to motivate AUD patients to reduce drinking and engage in treatment (Meyers & Wolfe, 2009). The CRAFT technique avoids the detachment and confrontation promoted by other methods and has proven effective in engaging the person with AUD in treatment and decreasing drinking (Miller & Meyers, 2004).

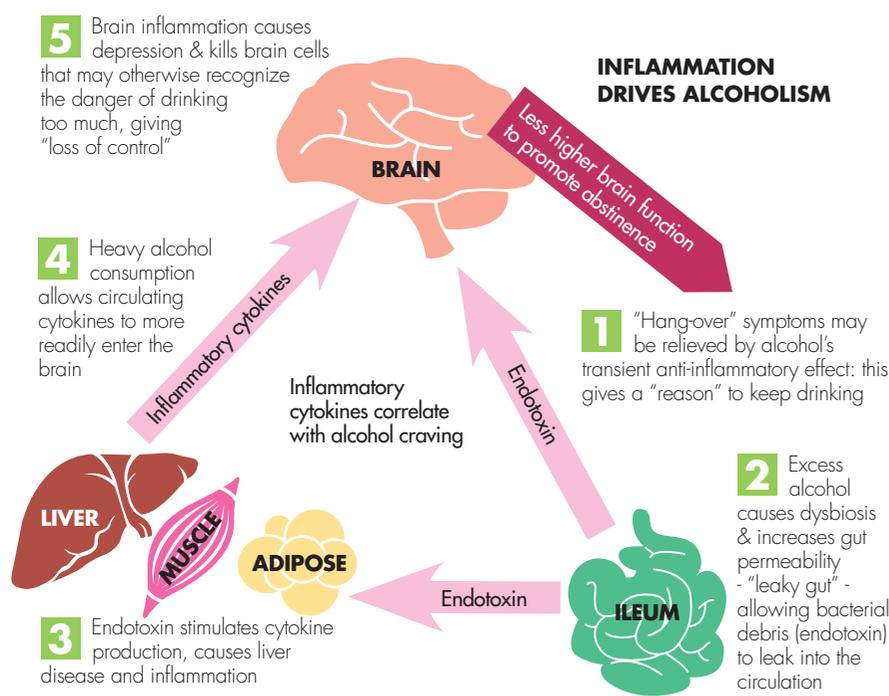
THE CASE FOR MEDICATION-ASSISTED TREATMENT

Robust scientific evidence supports medication-assisted treatment (MAT), the use of medication to reduce alcohol consumption. However, less than 9% of patients who could benefit receive Food and Drug Administration (FDA) approved treatment with medications, such as naltrexone, acamprosate, and disulfiram (Kranzler & Soyka, 2018; Mann, Aubin, & Witkiewitz, 2017). Other medications used "off label" to reduce drinking include topiramate, baclofen, prazosin, and ondansetron (Müller, Geisel, Banas, & Heinz, 2014).

Acamprosate (trade name: Campral) is a proven aid to promote abstinence and can reduce persistent symptoms that accompany abstinence, such as insomnia, anxiety, restlessness, and the state of unease and dissatisfaction that comes with not drinking alcohol (Jonas et al., 2014; Umhau et al., 2010). Taken three times a day, acamprosate does not affect the liver and is useful for patients who cannot tolerate naltrexone. Side effects are stomach upset and diarrhea.

Disulfiram (trade name: Antabuse) has been used since the 1950s to help people maintain abstinence. For up to

FIGURE 1: Inflammatory Effect of AUD



Source: J. Umhau, 2014. Used with permission.

TABLE 2. The Alcohol Use Disorders Identification Test (AUDIT)^a

Questions	0	1	2	3	4	Subtotal
1. How often do you have a drink containing alcohol? (beer, wine, vodka, etc.)	Never	Monthly or less	2 to 4 times a month	2 to 3 times a week	4 or more times a week	
2. How many drinks containing alcohol do you have on a typical day when you are drinking?	1 or 2	3 or 4	5 or 6	7 to 9	10 or more	
3. How often do you have five or more drinks on one occasion?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily	
4. How often during the last year have you found that you were not able to stop drinking once you had started?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily	
5. How often during the last year have you failed to do what was normally expected of you because of drinking?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily	
6. How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily	
7. How often during the last year have you had a feeling of guilt or remorse after drinking?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily	
8. How often during the last year have you been unable to remember what happened the night before because of your drinking?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily	
9. Have you or someone else been injured because of your drinking?	No	n/a	Yes, but not in the last year	n/a	Yes, during the last year	
10. Has a relative, friend, doctor, or other healthcare worker been concerned about your drinking or suggested you cut down?	No	n/a	Yes, but not in the last year	n/a	Yes, during the last year	
Total:						

^aScores range from 0 to 40. A score of 8 or greater indicates harmful or hazardous alcohol use.

Source: <https://www.drugabuse.gov/sites/default/files/files/AUDIT.pdf>. Used with permission.

14 days following a dose, patients who drink alcohol will experience an unpleasant reaction, including flushing, vomiting, headache, and chest pain. Liver function must be monitored with disulfiram (Brewer, Streeb, & Skinner, 2017).

Naltrexone, an oral opioid antagonist, blocks the effect of endorphins released by drinking alcohol (Jonas et al., 2014). Naltrexone (trade names: ReVia, Depade, Nodict, Vivitrol) is effective at reducing relapse in people who have completed a period of detoxification, and in reducing alcohol consumption in people who continue drinking. This drug may work particularly well for individuals with a strong family history of alcoholism. People with AUD who respond to naltrexone typically report they are able to remain abstinent, drink less, experience less pleasure from drinking, and that the (endorphin) *buzz* from drink is missing. Naltrexone dosage usually starts at 25 mg once daily (or lower in very heavy drinkers) and is increased to 50 mg/day, as tolerated. The FDA recommends 50 mg daily for treatment of AUD (Substance

Abuse and Mental Health Services Administration, 2016). Compliance with naltrexone may be improved with dosing at 100 mg on Monday and Wednesday, 150 mg on Friday, which is supported as accepted medical practice.

Naltrexone is relatively well tolerated. Side effects include headache or nausea, which typically resolve over time and can be minimized by taking the pill with food and fluids. Oral naltrexone may adversely affect the liver, so liver enzymes should be monitored. If a patient has been using opioids, naltrexone can cause severe withdrawal symptoms; persons taking naltrexone must use nonopioid medicine for pain relief. Suicidal thoughts are a rare but important side-effect. Naltrexone does not block alcohol intoxication. Because the drug may enhance some aspects of intoxication, such as impairment of peripheral vision and divided attention, patients must be reminded not to drink and drive. Vivitrol, a long-lasting, injectable form of naltrexone, is given once a month and is particularly useful with poorly compliant patients.

THE SINCLAIR METHOD

The targeted method of treating AUD with naltrexone is supported by Sinclair's research (2001) with animals, which found that alcohol's reinforcing effect could be blocked with naltrexone. Sinclair found that animals given the drug before every drink of alcohol would extinguish or cause extinction of their drinking behavior. Similarly, over time, using naltrexone one hour before every drink often helps a person with AUD to lose the desire for alcohol (Sidebar 1).

Figure 2 depicts naltrexone blood concentration and helps explain why the euphoric blocking effect of naltrexone is maximal one hour after taking a naltrexone pill (Meyer et al, 1984). Since a sip of alcohol can produce an intense craving for more drinking, blocking this effect with naltrexone is critical for success; sometimes, a higher or repeated dose is required, depending on the individual (Umhau, 2019). Some patients find naltrexone most effective if they drink slowly and use less concentrated forms of alcohol (e.g., beer or wine), as the rapid effect of stronger drinks may overcome naltrexone's opiate-blocking effect.



Nurses can reinforce to individuals that AUD is a disease and that medical treatment has a high potential for success.

SIDEBAR 1. Successful Targeted Naltrexone Therapy

After enjoying alcohol on the weekends for many years, a 40-year-old professional woman started losing control of her drinking. She attended Alcoholics Anonymous, but after 60 days of abstinence, the alcohol craving became overwhelming, and she started drinking again.

When she presented for medical treatment of AUD, she was able to avoid drinking during the work week, but on weekends, one glass of wine with her husband led to a drinking binge, ending when she passed out. Blackouts began; on Mondays, she was hung over, unable to work, and terrified that one day she would hurt someone while driving drunk.

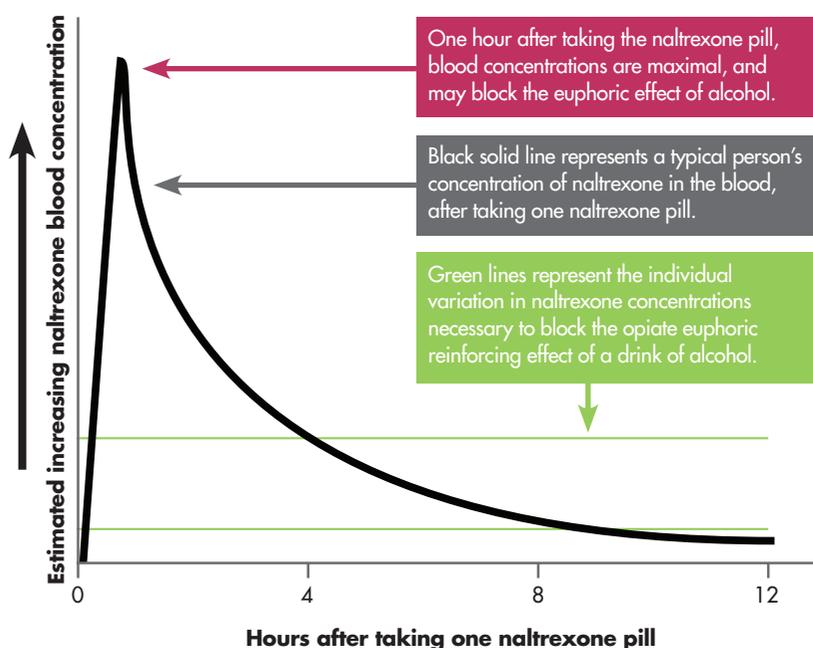
Aside from the AUD, she was extremely healthy and fit. She wanted to try the Sinclair Method, so I advised that she take naltrexone an hour before her first class of wine. After the first weekend, she wrote:

Dr. Umhau, I took my first full dosage on Friday night, waited a little over an hour, and had a glass of wine. I enjoyed it, but for entirely different reasons. I was able to enjoy the taste of it. More importantly, I didn't get that manic feeling that takes over when I normally drink. It's like something was switched off in my brain. I was also able to think about other things, like errands I needed to do the next day, rather than being consumed by thoughts of drinking more. I drank the glass in a little over 30 minutes, which is much slower than my usual pace. When I finished the glass, I looked at the rest of the bottle and almost didn't care. I folded some laundry and went to bed. I'm pretty astonished. I didn't have any side effects and slept well, which is a much-needed change from my usual passing out. The next day, I felt fine and was able to have a productive day. I can't remember the last time I had a productive day after drinking. Thank you again. I'm fairly certain you are saving my life.

The potential benefit of targeted, rather than everyday use, of naltrexone is that endorphins produced by healthy, nondrinking behaviors, such as taking a walk or enjoying a game, will not be blocked so that these healthy behaviors can be reinforced. The idea is to promote the development of different brain pathways to replace pathways that promote drinking. Supplemental Digital Content 3, Table 4, <http://links.lww.com/NCF-JCN/A68>, outlines some potential benefits and harms from the Sinclair method.

The gradual reduction in the desire to drink, induced by naltrexone, makes treatment acceptable to people who would otherwise reject help because they are not ready to give up drinking completely (Mann et al., 2017). Figure 4 illustrates how the craving for alcohol is reduced with continued use of naltrexone. Figure 3, found online as Supplemental Digital Content 4 at <http://links.lww.com/NCF-JCN/A69>, shows the gradual extinction of drinking behaviors, as self-recorded by a patient on a phone app. Not all patients achieve extinction of alcohol craving with naltrexone, but research suggests that 78% will (Sinclair, 2001). If a patient should ever fail to take naltrexone, he should stop drinking, take naltrexone, and wait one hour before resuming the drink. Typically, the

FIGURE 2: Naltrexone blood concentration level



process of extinction takes 4 to 6 months. However, the beneficial effect is reversed if drinking occurs when the blood concentration of naltrexone does not sufficiently block the euphoric effects of alcohol. For this reason, it is risky for someone with AUD to continue to drink once extinction has occurred. AUD is a chronic disease; the optimal outcome occurs when a patient's craving for alcohol is reduced, and they become abstinent.

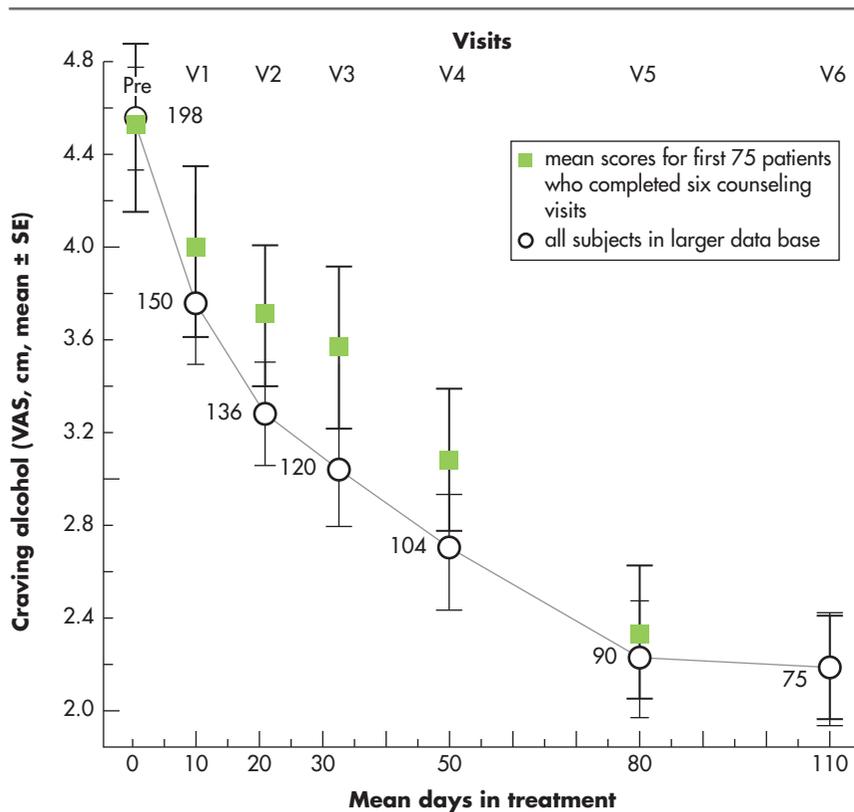
While well known in Europe, the Sinclair method (Sidebar 2) has not been widely used in the United States. When the FDA first approved naltrexone for alcohol treatment in 1995, physicians were instructed to give it only to patients who were abstinent after a period of detoxification. Although abstinence is clearly the safest treatment outcome, insisting on abstinence first as an initial goal can be a significant treatment barrier (Leeman et al., 2008).

NONMEDICAL AUD TREATMENT

Nutritional Therapy. People with AUD are often malnourished, due to poor dietary intake and impaired utilization of nutrients. Excessive alcohol use is associated with low serum magnesium, selenium, and zinc, as well as many vitamins, raising the risk for Wernicke encephalopathy, alcoholic polyneuropathy, and brain dysfunction (Ham & Choi, 2005). Liver inflammation can be exacerbated by high intake of high fructose corn syrup and low omega-3 fats (Simopoulos, 2013). Alcoholism disrupts the metabolism of omega-3 fats, especially eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA), which are critical for brain function (Umhau et al., 2013). Many patients experience improved concentration, as well as a marked reduction in anger and depression, with fish oil, a concentrated source of DHA and EPA (Umhau, Trandem, Shah, & George, 2012).

Behavioral Therapy. Psychological interventions, such as cognitive behavioral therapy, motivational interviewing, and relapse prevention, are widely used to treat AUD (Miller & Wilbourne,

FIGURE 4.
Progressive Decrease in Alcohol Craving with Naltrexone Use



Craving recorded prior to beginning naltrexone treatment (50 mg, 1 hr. before drinking) and at six scheduled counseling visits (V1–V6) using the Visual Analogue Scale (VAS). Decrease in craving was significant ($F(6,444) = 19.84, p < 0.0001$ using repeated measures ANOVA for the first 75 who completed six visits. Circles show results from all subjects in the program with the number contributing next to the circle. Source: Sinclair (2001). Used with permission.

2002). The principles of motivational interviewing include expressing empathy and optimism through reflective listening, while developing discrepancy between the patient's current behaviors and their personal values or goals (Jhanjee, 2014). Cognitive behavioral therapy (CBT), a structured psychological intervention with an emphasis on modifying irrational thoughts and negative mood, commonly helps patients cope with cravings and relapses. Relapse prevention is a form of CBT and focuses on helping alcoholics develop skills to manage and avoid situations of high risk for alcohol use. Supportive peer groups, particularly Alcoholics Anonymous (AA), are widely available and can encourage a lifestyle of self-improvement and long-term recovery. Supplemental Digital Content 2, Table 3, <http://links.lww.com/NCF-JCN/A67> shares the 12 steps of AA.

Research suggests that continuing care for AUD is associated with better outcomes. Residential rehabilitation programs lasting a month or more have helped many people, although some programs employ unproven treatment modalities. In many American cities, a self-supporting "Oxford House" can aid recovery through encouraging abstinence (Jason & Ferrari, 2010). For those with limited resources, Gospel Rescue Missions, Teen Challenge, and the Salvation Army are Christian-based, long-term residential rehabilitation programs.

Faith-Based Recovery. Faith-based programs such as AA have a long history of helping people trapped by alcohol. The cornerstone of AA is the Twelve Steps, which are based on principles such as dependence on and guidance from God, moral inventory, and restitution. Although AA is no longer

SIDEBAR 2. A Personal Experience with The Sinclair Method

After trying every available treatment for alcohol use disorder, including Alcoholics Anonymous (AA), expensive rehab, hypnotherapy, and cognitive behavioral therapy, I stumbled upon The Sinclair Method (TSM) in 2009. I was a binge drinker and had a few months of sobriety under my belt, but I knew that a relapse was imminent. I obtained a prescription and started TSM as soon as the pills arrived. The effect was immediate. I could barely finish one glass of wine. Within 3 months, I had reached “extinction,” meaning that I didn’t think about alcohol. The obsession and planning and worry and stress surrounding the constant loop of alcohol-related thoughts were gone. I felt like I had returned to my preaddicted state.

The method worked so well for me that I have devoted my life to its advocacy. I traveled to Finland to talk with Dr. Sinclair and thank him personally. With his encouragement, I wrote a book and then made a documentary, created a TEDx talk, and opened a nonprofit foundation.

I know TSM works. Naltrexone is inexpensive, and the treatment can be as simple or as comprehensive as the patient requires. The Sinclair Method works with minimal technology, as well as with the latest technology, such as breath analyzers, drink log apps, and online resources. Also, TSM has been adapted and customized for different situations and can be used with or without talk therapy.

I believe that one day Medication Assisted Treatment (MAT) will be used routinely as the first line of defense to help people with alcohol use disorder, saving them from the severe consequences by reaching them before they hit “rock bottom.” Many nurses and other practitioners are familiar with naltrexone, but most do not prescribe it as per TSM protocol. For example, although Dr. Umhau has used naltrexone since 1995, he did not learn until much later to prescribe it in a targeted manner. Once his patients began using TSM, he saw naltrexone’s real benefit.

Many patients find it very difficult to admit that they have a bad relationship with alcohol due to the shame and stigma surrounding addiction. If a patient is concerned about their drinking levels and wants to try a specific treatment, nurses can provide life saving support. —**Claudia Christian, Founder, C Three Foundation**

overtly Christian, the program focuses on a “higher power,” an emphasis that may have influenced the development of secular organizations supporting recovery. Secular Self-Management and Recovery Training (SMART Recovery) implements evidence-based motivational and cognitive-behavioral strategies in a mutual-help group context. Distinct from AA, which has a nonprofessional, horizontal authority structure, SMART Recovery possesses a centralized structure and uses trained facilitators to run group meetings. Celebrate Recovery (CR) is an explicitly Christian-based recovery program based in local churches. More than 5 million individuals have completed CR in the United States and worldwide (CR, 2018). Celebrate Recovery groups are not focused on a particular substance and typically are accepting of the Sinclair Method.

One benefit of faith-based groups is their ability to help participants overcome the guilt and shame that can be severe obstacles to recovery (Bradshaw, 2005). These emotions can subtly convince people that their behavior has been so damaging that they don’t deserve recovery. The apostle Paul addressed this: “I do not understand what I do. For what I want to do I do not do, but what I hate I do” (Romans 7:15, NIV). When someone reports a dramatic recovery from AUD following a conversion experience, the person may have found relief from oppressive shame and guilt, as he or she internalized Christ’s forgiveness.

Because MAT can be used before people hit rock bottom, starting MAT early represents a compassionate approach and may reduce the need for expensive inpatient detoxification. Additionally, the relatively low cost of naltrexone makes it applicable for use in the developing world. Supplemental Digital Content 5, Table 5, <http://links.lww.com/NCF-JCN/A71> offers 10 Good Rules to reduce harm from AUD.

THE NURSE’S ROLE: COMPASSION, CAREFUL ATTENTION, SPIRITUAL CARE

With a compassionate and informed approach, nurses can reinforce that AUD is a disease that needs treatment. Medical treatment, along with other therapies, has high potential for success. Govier and Rees (2013) advocate the recognition of *teachable moments* when a nurse provides, during the course of care, evidence-based information that allows individuals to make informed decisions. Because these interactions are naturally occurring, a person is more likely to listen to and receive information about the harm of alcohol overuse.

Patients with AUD often deny alcohol use or abuse. When admitting or caring for a hospitalized patient who may have AUD, watch for the clinical signs of alcohol withdrawal, which might occur due to the patient’s sudden cessation of alcohol use. Symptoms typically begin within 8 hours after the last drink and usually peak by 24 to 72 hours, but can occur 5 days later. Some of the common symptoms are anxiety, shakiness, sweating, dilated pupils, headache, nausea and vomiting, tremors, and tachycardia. *Delirium tremens*, a severe form of withdrawal, causes agitation, fever, hallucinations, confusion, and seizures, and is life threatening (National Library of Medicine, 2019).

During physical assessment, observe for gastrointestinal tract disorders—bleeding due to gastric ulcer or esophageal



varices—common to chronic, heavy drinkers. Assess nutritional status and consider a patient's history of mental health diagnoses, such as depression or PTSD.

Once in AUD treatment, nurses can help patients identify negative thinking, self-destructive patterns, and resentment caused by difficult family dynamics that may interfere with medication compliance and recovery. If the patient is self-medicating with alcohol as a result of co-occurring mental illness, nurses can recommend appropriate behavioral healthcare.

Research suggests that individuals who attend support meetings regularly and have a sponsor are most likely to be successful (Zemore, Subbaraman, & Tonigan, 2013). Nurses can educate patients about options and suggest appropriate groups. Because the character of each support group is different, encourage patients to find a group that allows for honest exchange between members and gives support for living free of the effects of AUD.

Spiritual care can improve patient outcomes in AUD. Following spiritual assessment, use a patient's acknowledg-

Persons taking naltrexone must use non or non-opioid medicine for pain relief.

ment of spiritual or religious beliefs to encourage positive coping with the disease and painful life circumstances. Affirm that spiritual/religious beliefs can give strength and hope. "Faith and religious beliefs can be sources of hope, meaning, self-concept, empowerment, support, and motivation to take responsibility for treatment" (Neathery, 2018, p. 90).

Explain that treatment is a process of recovery that takes time and has ups and downs. Include family and close friends, as well as spiritual/religious figures, in the treatment plan and urge that patients accept these positive forms of support (Westera, 2016).

Remind individuals that concepts of forgiveness and freedom from shame and guilt are part of the healing process. Neathery (2018) suggests helping patients to reframe old, negative thoughts toward biblically aligned thinking.

CONCLUSION

Although AUD devastates a person's body, mind, and future, multiple avenues of treatment and support can liberate people addicted to alcohol. Early treatment means easier recovery because the brain pathways that stimulate alcohol craving are less deeply entrenched. Medications, such as naltrexone, offer powerful promise to patients who desire to seek recovery. Compassionate nurses, healthcare staff, and welcoming faith communities who are unconditionally accepting of addicted individuals on a recovery path can accelerate and promote change that brings healing and a new start to people captive to alcohol. 🌱🌱

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders (DSM-5®)*. Washington, DC: Author.

Apodaca, T. R., & Miller, W. R. (2003). A meta-analysis of the effectiveness of bibliotherapy for alcohol problems. *Journal of Clinical Psychology, 59*(3), 289–304. doi:10.1002/jclp.10130

Bradshaw, J. (2005). *Healing the shame that binds you: Recovery classics*. Deerfield Beach, FL: Health Communications, Inc.

Brewer, C., Streeb, E., & Skinner, M. (2017). Supervised disulfiram's superior effectiveness in alcoholism treatment: Ethical, methodological, and psychological aspects. *Alcohol and Alcoholism, 52*(2), 213–219. doi:10.1093/alcalc/agw093

Celebrate Recovery. (2018). *History of Celebrate Recovery*. Retrieved from <https://www.celebraterecovery.com/about/history-of-cr>

Erickson, C. K. (2018). *The science of addiction: From neurobiology to treatment*. New York, NY: WW Norton & Company.

Govier, A., & Rees, C. (2013). Reducing alcohol-related health risks: The role of the nurse. *Nursing Standard, 27*(50), 42–46. doi:10.7748/ns2013.08.27.50.42.e7138

Ham, B. J., & Choi, I. (2005). Psychiatric implications of nutritional deficiencies in alcoholism. *Psychiatry Investigation, 2*(2), 44–59. Retrieved from <http://psychiatryinvestigation.org/upload/pdf/0502005017.pdf>

Jason, L. A., & Ferrari, J. R. (2010). Oxford House recovery homes: Characteristics and effectiveness. *Psychological Services, 7*(2), 92–102. doi:10.1037/a0017932

Jhanjee, S. (2014). Evidence based psychosocial interventions in substance use. *Indian Journal of Psychological Medicine, 36*(2), 112–118. doi:10.4103/0253-7176.130960

Web Resources

- **Alcoholics Anonymous—**
<http://www.aa.org/>
- **Celebrate Recovery—**<http://www.celebraterecovery.com/>
- **C Three Foundation—**
www.cthreefoundation.org
- **National Institute on Alcohol Abuse and Alcoholism Alcohol Treatment NavigatorSM—**
<https://alcohol.treatment.niaaa.nih.gov/>
- **Alcohol Withdrawal—**
<https://medlineplus.gov/ency/article/000764.htm>
- **Substance Abuse and Mental Health Services Administration—**
www.samhsa.gov/atod/alcohol
- **Alcohol Recovery Medicine—**
<https://www.alcoholrecoverymedicine.com>

Jonas, D. E., Amick, H. R., Feltner, C., Bobashev, G., Thomas, K., Wines, R., . . . , Garbutt, J. C. (2014). Pharmacotherapy for adults with alcohol use disorders in outpatient settings: A systematic review and meta-analysis. *JAMA, 311*(18), 1889–1900. doi:10.1001/jama.2014.3628

Koob, G. F. (2009). Dynamics of neuronal circuits in addiction: Reward, anti-reward, and emotional memory. *Pharmacopsychiatry, 42*(Suppl. 1), S32–S41. doi:10.1055/s-0029-1216356

Kranzler, H. R., & Soyka, M. (2018). Diagnosis and pharmacotherapy of alcohol use disorder: A review. *Journal of the American Medical Association, 320*(8), 815–824. doi:10.1001/jama.2018.11406

Leeman, R. F., Palmer, R. S., Corbin, W. R., Romano, D. M., Meandzija, B., & O'Malley, S. S. (2008). A pilot study of naltrexone and BASICS for heavy drinking young adults. *Addictive Behaviors, 33*(8), 1048–1054. doi:10.1016/j.addbeh.2008.04.007

Lim, J. S., Mietus-Snyder, M., Valente, A., Schwarz, J. M., & Lustig, R. H. (2010). The role of fructose in the pathogenesis of NAFLD and the metabolic syndrome. *Nature Reviews. Gastroenterology & Hepatology, 7*(5), 251–264.

Mann, K., Aubin, H. J., & Witkiewitz, K. (2017). Reduced drinking in alcohol dependence treatment, what is the evidence? *European Addiction Research, 23*(5), 219–230. doi:10.1159/000481348

Meyer, M. C., Straughn, A. B., Lo, M. W., Schary, W. L., & Whitney, C. C. (1984). Bioequivalence, dose-proportionality, and pharmacokinetics of naltrexone after oral administration. *Journal of Clinical Psychiatry, 45*(9), 15–19.

Meyers, R. J., & Wolfé, B. L. (2009). *Get your loved one sober: Alternatives to nagging, pleading, and threatening*. Center City, MN: Hazelden Publishing.

Miller, W. R., & Meyers, R. J. (2004). The community reinforcement approach. In E. H. McCance-Katz & W. Clar (Eds.), *Psychosocial treatments* (1st ed., pp. 59–70). London, UK: Routledge.

Miller, W. R., & Wilbourne, P. L. (2002). Mesa Grande: A methodological analysis of clinical trials of treatments

for alcohol use disorders. *Addiction*, 97(3), 265–277. doi:10.1046/j.1360-0443.2002.00019.x

Moyer, V. A. (2013). Screening and behavioral counseling interventions in primary care to reduce alcohol misuse: U.S. Preventive Services Task Force recommendation statement. *Annals of Internal Medicine*, 159(3), 210–218. doi:10.7326/0003-4819-159-3-201308060-00652

Müller, C. A., Geisel, O., Banas, R., & Heinz, A. (2014). Current pharmacological treatment approaches for alcohol dependence. *Expert Opinion on Pharmacotherapy*, 15(4), 471–481. doi:10.1517/14656566.2014.876008

National Institute on Alcohol Abuse and Alcoholism. (2018). *Alcohol facts and statistics*. Retrieved from <https://www.niaaa.nih.gov/alcohol-health/overview-alcohol-consumption/alcohol-facts-and-statistics>

National Library of Medicine. (2019). *Alcohol withdrawal*. Retrieved from <https://medlineplus.gov/ency/article/000764.htm>

Neathery, M. (2018). Treatment and spiritual care in mental health: Recovery as a journey, not a destination. *Journal of Christian Nursing*, 35(2), 86–93. doi:10.1097/CNJ.0000000000000475

O'Brien, C. P. (2008). The CAGE questionnaire for detection of alcoholism: A remarkably useful but simple tool. *Journal of the American Medical Association*, 300(17), 2054–2056. doi:10.1001/jama.2008.570

Saunders, J. B., Aasland, O. G., Babor, T. F., De La Fuente, J. R., & Grant, M. (1993). Development of the alcohol use disorders identification test (AUDIT): WHO collabora-

tive project on early detection of persons with harmful alcohol consumption—II. *Addiction*, 88(6), 791–804. doi:10.1111/j.1360-0443.1993.tb02093.x

Simopoulos, A. P. (2013). Dietary omega-3 fatty acid deficiency and high fructose intake in the development of metabolic syndrome, brain metabolic abnormalities, and non-alcoholic fatty liver disease. *Nutrients*, 5(8), 2901–2923. doi:10.3390/nu5082901

Sinclair, J. D. (1989). *Method for treating alcohol-drinking response: Google Patents*. Retrieved from <https://patents.google.com/patent/US4882335>

Sinclair, J. D. (2001). Evidence about the use of naltrexone and for different ways of using it in the treatment of alcoholism. *Alcohol and Alcoholism*, 36(1), 2–10. doi:10.1093/alcalc/36.1.2

Substance Abuse and Mental Health Services Administration. (2016). *Naltrexone*. Retrieved from <https://www.samhsa.gov/medication-assisted-treatment/treatment/naltrexone>

Tomson, Y., Romelsjö, A., & Åberg, H. (1998). Excessive drinking—brief intervention by a primary health care nurse: A randomized controlled trial. *Scandinavian Journal of Primary Health Care*, 16(3), 188–192. doi:10.1080/028134398750003160

Umhau, J. C. (2019). Therapeutic drug monitoring and the clinical significance of naltrexone blood levels at the time of a first drink: Relevance to the Sinclair Method. *Alcohol and Alcoholism*, 54(2), 192. doi:10.1093/alcalc/agg014

Umhau, J. C., Momenan, R., Schwandt, M. L., Singley, E., Lifshitz, M., Doty, L., ..., Heilig, M. (2010). Effect

of acamprosate on magnetic resonance spectroscopy measures of central glutamate in detoxified alcohol-dependent individuals: A randomized controlled experimental medicine study. *Archives of General Psychiatry*, 67(10), 1069–1077. doi:10.1001/archgenpsychiatry.2010.125

Umhau, J. C., Schwandt, M., Solomon, M. G., Yuan, P., Nugent, A., Zarate, C. A., ..., Heilig, M. (2014). Cerebrospinal fluid monocyte chemoattractant protein-1 in alcoholics: Support for a neuroinflammatory model of chronic alcoholism. *Alcoholism, Clinical & Experimental Research*, 38(5), 1301–1306. doi:10.1111/acer.12367

Umhau, J. C., Trandem, K., Shah, M., & George, D. T. (2012). The physician's unique role in preventing violence: A neglected opportunity? *BMC Medicine*, 10, 146. doi:10.1186/1741-7015-10-146

Umhau, J. C., Zhou, W., Thada, S., Demar, J., Hussein, N., Bhattacharjee, A. K., ..., Hirvonen, J. (2013). Brain docosahexaenoic acid [DHA] incorporation and blood flow are increased in chronic alcoholics: A positron emission tomography study corrected for cerebral atrophy. *PLoS One*, 8(10), e75333. doi:10.1371/journal.pone.0075333

Westera, D. (2016). *Spirituality in nursing practice: The basics and beyond*. New York, NY: Springer Publishing.

Zemore, S. E., Subbaraman, M., & Tonigan, J. S. (2013). Involvement in 12-step activities and treatment outcomes. *Substance Abuse*, 34(1), 60–69. doi:10.1080/08897077.2012.691452



Instructions for Taking the **CE Test Online**

- Read the article. The test for this CE activity can be taken online at www.NursingCenter.com/CE/CNJ. Find the test under the article title. Tests can no longer be mailed or faxed. You will need to create a username and password and log in to your free personal CE Planner account before taking online tests. Your planner will keep track of all your Lippincott Professional Development online CE activities for you.
- There is only one correct answer for each question. A passing score for this test is 17 correct answers. If you pass, you can print your certificate of earned contact hours and access the answer key. If you fail, you have the option of taking the test again at no additional cost.
- This CE test also is available for viewing at www.journalofchristiannursing.com in the table of contents for this issue under **CE Test Preview**
- Visit www.nursingcenter.com for other CE activities and your personalized CE planner tool.
- For questions, contact Lippincott Professional Development: 1-800-787-8985.

Registration Deadline: Sept. 3, 2021.

Disclosure Statement: The authors and planners have disclosed that they have no financial relationships related to this article.

Provider Accreditation:

Lippincott Professional Development will award 1.5 contact hours for this continuing nursing education activity.

Lippincott Professional Development is accredited as a provider of continuing nursing education by the American Nurses Credentialing Center's Commission on Accreditation.

This activity is also provider-approved by the California Board of Registered Nursing, Provider Number CEP 11749 for 1.5 contact hours. Lippincott Professional Development is also an approved provider of continuing nursing education by the District of Columbia, Georgia, and Florida, CE Broker #50-1223.

Payment and Discounts:

- The registration fee for this test is \$17.95 for nonmembers, \$12.95 for NCF members.

CE For more than 54 additional continuing education articles related to addiction, go to NursingCenter.com/CE.