Approaches to Managing Alcohol Dependence

About 18 million Americans (1 in 10 adults) have an alcohol abuse problem. There are currently only three FDA-approved medications for the treatment of alcohol dependence: naltrexone (ReVia®), acamprosate (Campral®), and disulfiram (Antabuse®). Other agents used off-label include baclofen and varenicline (Chantix®). 1,3

Drug therapy in combination with psychosocial support may prevent relapse in patients with alcohol dependence. 1 Current medications for the prevention of relapse include naltrexone, acamprosate, and disulfiram. Naltrexone or acamprosate prevent one relapse for every 8 patients treated for one year. 1 To maintain abstinence after a period of alcohol cessation, acamprosate may be considered and is more efficacious than naltrexone. 1,3 Naltrexone is the recommended agent for patients who want to cut down on their drinking, and for prevention of relapse. 1,3 The use of disulfiram is recommended for patients who are highly motivated to quit drinking as this agent does not reduce cravings and is poorly tolerated. Clinicians who decide to use these agents should treat the patient for at least 3 months. 1

A meta-analysis looked at the return to any drinking and a return to heavy drinking in 21 randomized, controlled trials using acamprosate and 20 trials with naltrexone. 5 Acamprosate reduced the risk of having a first drink after abstinence by 16%, whereas naltrexone reduced the risk of heavy drinking in non-abstinent patients by 12%. The authors concluded that the superiority of one agent over the other depends on the therapeutic goal and the motivational status of the alcohol-dependent patient. Differences in patient inclusion and exclusion criteria of the studies limits the comparability of naltrexone and acamprosate. 3

Varenicline and baclofen are other options to help reduce alcohol consumption and to help maintain abstinence after a period of alcohol dependence, although they are not currently FDA approved for the indication. 1,4,5

Varenicline significantly reduced alcohol consumption and cravings in patients with alcohol dependence. 5 In a randomized, double-blind, placebo-controlled trial, 200 patients received either varenicline titrated up to 2 mg/day during the first week or placebo for 13 weeks. Throughout the study period, the weekly percent of heavy drinking days was significantly lower in the varenicline group compared to the placebo group (37.9% vs. 48.4%; p=0.03). Drinks per day, drinks per drinking day, and alcohol craving scores were also significantly lower in the varenicline group compared to the placebo group (p<0.05). Patients on varenicline experienced significantly higher rates of nausea, abnormal dreams, and constipation. The small number of patients seeking permanent abstinence and the allowance of heavy drinking prior to the study may have prevented the investigators from detecting a difference in abstinence rates. 4

Baclofen may be beneficial in sustaining alcohol abstinence and helpful in reducing alcohol cravings and anxiety associated with alcohol dependence. 5 Although current literature is not robust enough to recommend baclofen first-line, data supports the safety and efficacy of baclofen 30-60 mg/day for the treatment of alcohol dependence in patients with normal renal function, regardless of the presence of liver disease. 5

Alcohol cessation can lead to withdrawal symptoms, which may be controlled with benzodiazepines. Control of agitation is the initial treatment goal for patients with alcohol withdrawal symptoms. 2 Benzodiazepines reduce the duration of symptoms and are associated with fewer complications than neuroleptic agents in controlled trials. Currently, data does not show one benzodiazepine to be superior to another for the treatment of alcohol withdrawal. 2 Evidence for the efficacy of switching from one agent to an-
PATIENT INFORMATION:
Type 2 Diabetes—Prevention is Possible

**What is type 2 diabetes?**
Diabetes causes your blood sugar levels to be higher than normal. In healthy people, insulin is released after eating a meal, when blood sugar levels are high. Insulin helps the body take up sugar (glucose) to either use immediately for energy or store in cells for later. Type 2 diabetes is characterized by insulin resistance. In the early stages of the disease, cells are no longer able to respond to insulin, so the body reacts by creating more and more insulin. After a while, the insulin-producing cells become worn out and begin to fail. Type 2 diabetes tends to develop slowly and is largely related to lifestyle. Fortunately, type 2 diabetes is preventable.

**What are the causes of type 2 diabetes?**
Hereditary factors, family history, and age can contribute to the development of diabetes. However, there are many contributing causes you can control, including:

- Excess body weight
- High blood pressure
- Low activity level
- High levels of triglycerides, a type of fat found in the blood
- Poor diet

**How can type 2 diabetes be prevented?**
Although there is a genetic component to the disease, it is estimated that 90% of cases may be attributed to lifestyle and behavioral choices such as excess weight, inactivity, unhealthy diet, and smoking. A few simple changes in your life can drastically reduce your risk of diabetes.

1. **Control your weight:** Excess body weight, particularly around the midsection, is the most significant cause of type 2 diabetes. Obesity increases your risk of type 2 diabetes by 20-40 fold compared to someone with an ideal body weight. If you are overweight, simply losing 7-10% of your current body weight can cut your risk of diabetes in half.

2. **Increase exercise and decrease TV time:** Lack of activity promotes the development of type 2 diabetes. Using muscles more frequently improves their ability to utilize insulin, which helps absorb glucose and normalize blood sugar levels. Long sessions of exercise are not required; walking briskly for 30 minutes daily can decrease the risk of diabetes by 30%.

3. **Swap out unhealthy foods for healthier options:** Trading highly processed carbohydrates such as white rice and white bread for whole grain products is an effective way to reduce the risk of diabetes. Whole grains cause a lower spike in blood sugar levels compared to processed carbohydrates. Sustained spikes in both blood sugar and insulin levels may lead to an increased risk for diabetes. In fact, one study showed that people who ate 2 to 3 servings of whole grains daily lowered their risk of diabetes by 30%.

Avoiding sugary drinks like soft drinks and juices is also a simple way to reduce your risk of diabetes. These drinks not only cause spikes in blood sugar similar to refined carbohydrates, but also contribute to weight gain. Instead of reaching for a soda, opt for water or tea with no sugar added.

Consuming “good” fats, such as those found in nuts, seeds, and olive oil, and avoid trans fats found in fried food and some tub margarines. Although the fat found in fish does not directly help prevent diabetes, it has been proven to lower the risk of heart disease, which is commonly associated with diabetes.

4. **Quit smoking:** The long list of health problems that smoking causes includes diabetes. In fact, individuals who smoke have twice the risk of developing type 2 diabetes than non-smokers.

By Kelsey Palmer, PharmD Candidate

**REFERENCES:**


References continued on page 4
Why Testosterone Replacement Therapy?
Testosterone replacement therapy (TRT) is FDA-approved in men with hypogonadism (lowered natural testosterone production). Hypogonadism is either prepubertal or post-pubertal; postpubertal hypogonadism is commonly referred to as “male menopause.”

Symptoms of postpubertal hypogonadism:
- ↓ libido and sexual performance
- ↓ muscle mass and strength
- ↑ fatigue
- ↑ depression
- ↓ concentration

Men concerned with their testosterone levels should speak to their primary healthcare provider about getting tested for hypogonadism. Blood tests are the most accurate, but they are also the most expensive testosterone test of the three available (the others are saliva and urine tests).

Diagnosis of hypogonadism depends on your symptoms and testosterone level. Normal values of testosterone levels vary depending on the laboratory where the test was performed.

Pros of TRT
- Anecdotal reports of
  - ↑ sense of well-being
  - ↑ energy
  - ↑ bone and muscle mass
  - ↑ libido and sexual performance

There are no published long-term, large placebo-controlled trials evaluating TRT in men with low testosterone levels.

Cons of TRT
- Potential ↑ risk of cardiovascular events (heart attacks, strokes, etc.)
- Potential ↓ in HDL levels
- Potential fluid and sodium retention
- Sleep apnea has been reported with testosterone therapy
- Acne, male pattern baldness, and gynecomastia (breast development in men)

Who SHOULD NOT receive testosterone therapy?
- Men with a hematocrit level above 50% (testosterone increases hematocrit which can lead to an increase in the risk of blood clots)
- Men with prostate cancer or men who have high or increasing prostate specific antigen (PSA) (potential of increasing the risk of prostate hypertrophy or cancer)
- Men with severe heart, liver, or kidney disease

Conclusion
If you are feeling the symptoms of hypogonadism and are interested in testing your testosterone levels, speak to your primary care provider who will point you in the right direction to improve your quality of life.

By Andrew Schuelke, PharmD Candidate

REFERENCE:

Testosterone Replacement Therapy Options

<table>
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<tr>
<th>Testosterone Formulation (brand names)</th>
<th>Advantages</th>
<th>Disadvantages</th>
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| Oral (Android®, Methitest™)           | • Can take by yourself  
• No strict dosing schedule  
• Can stop any time | • Not the most effective  
• High chance of liver toxicity  
• *NOT RECOMMENDED* |
| Long-acting Injectable (Depo-Testosterone®, Delatestryl®) | Inexpensive | • Frequent injections (every 2-4 weeks)  
• Injection site reactions |
| Transdermal Patch (Androderm®)       | • Convenient to use  
• Mimics normal body testosterone level changes | Skin reactions occur in more than 1/3 of patients |
| Transdermal Gel/Solution (Androgel®, Fortesta®, Testim®) | • Less skin irritation than patch  
• Not much fluctuation in testosterone levels | Accidental transfer of gel to other people by contact (Must wash hands) |
| Pellet (Testopel®)                    | • Long-acting  
• Convenient | • Inflammation/pain at pellet site  
• Difficult to adjust dose |
| Buccal (inside of cheek) (Striant®)  | Not much fluctuation in testosterone levels | • May cause mouth and gum irritation  
• May alter taste |
Alcohol Dependence (cont. from page 1)

other is also lacking.\textsuperscript{1} When deciding which benzodiazepine to use, clinicians should consider the following:\textsuperscript{2}

\begin{itemize}
  \item An agent with rapid onset should be considered to control agitation more quickly.
  \item Agents with longer duration of action should be used (i.e., diazepam) for fewer breakthrough symptoms.
  \item Agents with shorter duration of activity (eg, lorazepam) should be considered when there is concern for extended sedation in specific patient populations (i.e., elderly or patients with liver disease).
\end{itemize}

Anticonvulsants (carbamazepine and gabapentin) are recommended as an adjunct to benzodiazepines or as monotherapy when abuse or diversion, interaction with alcohol, or oversedation with benzodiazepines is a concern.\textsuperscript{1,2} However, anticonvulsants are not recommended as monotherapy in the treatment of alcohol withdrawal delirium because they are associated with higher mortality, longer duration of delirium, and more complications compared to benzodiazepines.\textsuperscript{2}

Naltrexone is an option in patients with a history of treatment failures, those who want to prevent heavy drinking, or those with low motivation for complete alcohol cessation. Acamprosate is indicated in patients seeking complete abstinence from alcohol. Varenicline and baclofen are also used; however, more robust data is needed to address their use as first line agents. Patients should be monitored and treated for alcohol withdrawal symptoms when discontinuing alcohol consumption.

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\textbf{REFERENCES:}


Diabetes Prevention References (cont. from page 2)


