Acamprosate

Generic name	Acamprosate
Available brand	Campral
Available strengths and formulations	333-mg delayed-release tablet
Available in generic	Yes

General Information

In 2004, the U.S. Food and Drug Administration approved **acamprosate** (**Campral**) for the treatment of alcohol dependence. There are two other drugs in addition to acamprosate for alcohol abstinence: naltrexone and disulfiram. Acamprosate is used for the long-term management of alcohol abstinence and not for treatment of acute alcohol withdrawal. For patients to have any enduring benefits, it should be used in conjunction with psychosocial interventions that include support groups and counseling.

The mechanism of action of acamprosate in treatment of alcohol abstinence is not completely understood (see also "Medications for Substance Use Disorders: Introduction"). The simple explanation is that in chronic alcohol abuse, alcohol suppresses inhibitory **neurons** (nerve cells) and increases excitatory neurons in the central nervous system, so the normal balance of inhibitory and excitatory neurons is altered. With abstinence from alcohol, there is excessive excitatory relative to inhibitory neuronal activity, which contributes to the symptoms of alcohol withdrawal and **delirium tremens** (alcohol withdrawal symptoms characterized by rapid deterioration of mental status and violent tremors). The evidence suggests that acamprosate interacts with both excitatory and inhibitory neurons to restore this balance. Acamprosate cannot ameliorate the acute symptoms of alcohol withdrawal (benzodiazepines such as lorazepam are used for these symptoms).

In retrospective studies, it was found that acamprosate alone is seldom successful in the treatment of alcohol dependence. Other factors are associated with achieving successful abstinence: the type, intensity, and duration of treatment programs; the management of other problems (e.g., depression); the use of community-based support groups (e.g., Alcoholics Anonymous and Narcotics Anonymous); and the use of compliance-enhancing methods to ensure medication adherence. Abstinence rates were higher when these components of treatment were incorporated with acamprosate than when medication alone was the treatment. And, of course, it takes a motivated individual to achieve lasting abstinence.

Dosing Information

Treatment with acamprosate should not begin until the individual achieves abstinence. The recommended starting dosage of acamprosate is 666 mg (two 333-mg tablets) taken three times a day. Acamprosate may be taken without regard to meals, but taking it with food may reduce the side effects of nausea

and gastrointestinal irritation, and the mealtime schedule can be a helpful reminder to take the medication. There is generally no need to increase the dose. A lower dosage, a 333-mg tablet three times a day, may be effective for some individuals. Patients with moderate kidney impairment should *not* take more than 333 mg three times a day, and those with severe kidney impairment should not take acamprosate.

Common Side Effects

Diarrhea is the most frequent side effect associated with acamprosate. Other, less frequent side effects reported with acamprosate include nausea, constipation, gas, abdominal pain, dizziness, insomnia, nervousness, and depression. These side effects generally subside as patients develop tolerance to the medication. It is unlikely that any of these side effects are related to alcohol withdrawal symptoms. Acamprosate taken at the recommended doses has not been shown to produce any evidence of withdrawal symptoms.

Adverse Reactions and Precautions

Like other centrally acting medications, acamprosate may impair thinking and coordination, especially early in the course of therapy. The effects of acamprosate may become more pronounced if acamprosate is taken with other centrally acting medications. Patients should be cautioned about the hazards of driving and operating machinery when taking acamprosate.

Patients should inform their practitioner if they relapse and resume drinking. Patients should not stop taking acamprosate without consulting their practitioner. Acamprosate does not produce an adverse reaction with alcohol as does disulfiram (Antabuse).

In clinical trials, acamprosate-treated patients had statistically higher rates of suicidal thinking and suicide attempts than did the individuals in the placebo group (who received sugar pills). Many of these cases were related to alcohol relapse. Depression is frequently associated with alcohol dependence, and suicidality is higher in individuals with untreated depression. During the early phase of therapy, patients should be monitored closely for clinical signs of depression, especially suicidal thinking and behavior.

Risk During Pregnancy and Breast-Feeding

Studies have not been conducted in pregnant women to determine acamprosate's safety in pregnancy. In animal studies, acamprosate was found to cause malformations in the fetuses of test animals. The effects of acamprosate on the developing human fetus are unknown. Acamprosate should be used during pregnancy only if the benefits outweigh the potential risk to the fetus and alternate therapies have failed. Women of childbearing age should be cautioned of the potential hazards to the fetus if they become pregnant while taking this drug.

Nursing mothers should not take acamprosate because small amounts may pass into breast milk and be ingested by the baby. If stopping the drug is not an alternative, breast-feeding should not be started or should be discontinued.

Potential Drug Interactions

There are no significant drug interactions known with acamprosate. Acamprosate is excreted primarily by the kidneys and does not undergo metabolism in the liver. Acamprosate does not affect the breakdown of alcohol, as disulfiram does, so the disulfiram-alcohol reaction does not occur. Acamprosate is not an opiate (narcotic) antagonist and will not produce opioid withdrawal symptoms; naltrexone will. Acamprosate does not interact with antianxiety medications (e.g., benzodiazepines such as Valium) or any sleep medications.

Overdose

In the few reported cases of acute overdose with acamprosate, diarrhea was the only associated symptom. However, it should not be assumed that acamprosate overdose is always benign. The severity of toxicity depends on the amount ingested, the age and weight of the person, and whether the person also ingested other medications. The effect of acamprosate overdose in children is unknown.

Any suspected overdose should be treated as an emergency. The person should be taken to the emergency department for observation and treatment. The prescription bottle of medication (and any other medication suspected in the overdose) should be brought along as well because the information on the prescription label can be helpful to the treating practitioner in determining the number of pills ingested.

The American Association of Poison Control Centers (www.aapcc.org) can also be contacted via their helpline at 1-800-222-1222, and they can provide the location of the local poison center.

Treatment Summary

- **Warning:** Always let your practitioner or a family member know if you have suicidal thoughts. Notify your practitioner whenever your depressive symptoms worsen or whenever you feel unable to control suicidal urges or thoughts.
- Acamprosate is usually taken three times a day, or as directed by your practitioner. If you miss a dose, take it as soon as possible. If it is close to the next scheduled dose, skip the missed dose and continue on your regular dosing schedule. Do not take double doses.
- If relapse occurs, do not get discouraged; discuss your drinking with your practitioner, counselor, or therapist. Continue taking acamprosate as directed, and consult your practitioner as soon as possible.
- Acamprosate may be taken with or without food. Taking it with food may reduce the side effects of nausea and gastrointestinal irritation.
- Acamprosate may impair thinking and coordination, especially early in the course of therapy. The effects of acamprosate may become more pronounced if acamprosate is taken with other centrally acting medications, such as alcohol. Use caution when driving, operating machinery, or performing tasks that require alertness.
- Store the medication in its originally labeled, light-resistant container, away from heat and moisture. Heat and moisture may precipitate breakdown of your medication, and the medication may lose its therapeutic effects.
- Keep your medication out of the reach of children.
- The following Web sites can provide you and your family members with additional information:
  - Alcoholics Anonymous: www.aa.org
  - National Institute on Alcohol Abuse and Alcoholism: www.niaaa.nih.gov
  - National Organization on Fetal Alcohol Syndrome: www.nofas.org
  - National Council on Alcoholism and Drug Dependence (NCADD): https://ncadd.org
    List of NCADD Affiliates: https://ncadd.org/about-ncadd/our-affiliates
  - Substance Abuse and Mental Health Services Administration (SAMHSA): www.samhsa.gov

If you have any questions about your medication, consult your medical practitioner or pharmacist.

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