

Cycloserine

Cycloserine (or D-Cycloserine) is an antibiotic that has been used in medicine for over 50 years.

Since 2000, a series of over 12 controlled trials have found that cycloserine can enhance the benefits of exposure-based psychotherapies. In these therapies, people gradually take on (or “expose” themselves) to situations that bring up anxiety. Examples include obsessional fears in OCD, phobias (including social phobia), panic attacks, and fears related to post-traumatic stress.

Exposure therapy changes the brain in ways that can lead to a sustained recovery from anxiety. It works best when exposure exercises are taken on daily. Cycloserine enhances learning mechanisms in the brain and can double the rate of response to exposure therapy. Cycloserine does not enhance other kinds of learning (such as memorization) and does not make people smarter.

Cycloserine was also found to improve depression when added to antidepressants (at a high dose of 1000mg/day). It has effects on the N-methyl-D-aspartate glutamatergic system (NMDA) which is implicated in the cause of depression.

How to take for exposure therapy

When using it for exposure therapy, it should be taken as you are finishing the exposure exercise; do not take it if not engaging in active exposure (otherwise a tolerance can develop). It works better in low doses of 50-125mg, as higher doses go to different receptors (you may need to cut the pill in half to get 125mg).

How to take for depression

Higher doses are used for depression (it goes to different receptors at the higher dose). It can be taken all at once and the target dose is 1,000mg daily.

Getting it at the pharmacy

Cycloserine is no longer used regularly as an antibiotic, so it is difficult to get at the pharmacy. It is manufactured by a non-profit research arm of Purdue University called the Chao Center:

The Chao Center
3070 Kent Avenue
West Lafayette, IN 47906-1075
PHONE (765) 464-8414 or 1-877-930-2426
FAX (765)464-8408
info@thechaocenter.com

Cycloserine Blister Pack × 30 (NDC 13845-1202-2), Oral Capsule 250mg



Side Effects

Cycloserine is generally well tolerated; it has no weight gain and rarely causes fatigue, tremor or headaches.

There have been rare reports of congestive heart failure on high doses of it (1,000-1,500mg/day).

It may have risks in people with seizures or heart disease (there have been rare reports of seizures and congestive heart failure).

—*Chris Aiken, MD, updated 6/5/2015*