Over-the-Counter Supplements in the Treatment of OCD

It should be noted that all of the following procedures are still currently being researched. While there is evidence to suggest that they could potentially be helpful in reducing OCD symptoms, they are not concretely proven to do so. These should be utilized as a last resort when all of the evidence-based treatment methods for OCD have already been accessed. For more information on evidence-based treatment methods for OCD, please click here.

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The effective treatment of obsessive compulsive disorder (OCD) can be challenging. Standard treatments include exposure-based therapy and prescription medications such as the selective serotonin reuptake inhibitors (SSRIs). These can produce significant relief for many who suffer from OCD, but not all. When standard treatments do not produce enough improvement, or when they are unavailable or are unacceptable due to side effects or some other reason, trying less well-proven treatments may be appropriate. A number of over-the-counter (OTC) nutritional supplements, sometimes called 'nutraceuticals,' have been used for OCD.[i],[ii] In this article we discuss several of these, review the research evidence that supports their use, and try to provide some general guidance for patients and practitioners interested in trying them.

There are several factors that limit our ability to make clear judgments about how well these OTC remedies work. First, because they are much less regulated than prescription medicines, the make-up, amount of active ingredients, and strength of different supplements can vary quite a bit between brands or suppliers, or over time from a single supplier, though certification by the US Pharmacopeial Convention, a non-governmental group, provides some reassurance about the contents of OTC supplements and herbs.[iii] Second, we do not have many strong scientific studies evaluating the benefit from these supplements in OCD; that is partly because of a lack of research funding, and partly because of the difficulty of ensuring that the supply is consistent, which impedes careful study. In some cases there is more evidence for benefit in other disorders, such as depression, than in OCD.

On the other hand, when used in moderation, many of these herbs and supplements are by and large fairly safe, with limited side effects — that is why they are available without a prescription. Therefore, even when the evidence for benefit in OCD is fairly limited, there may be little harm in trying them in particular cases.

Although these chemicals are available OTC, it is always best to use them in consultation with a doctor. Sometimes they are perceived as "natural," and therefore as harmless. However, if they can affect brain chemistry in such a way as to influence OCD, mood, anxiety, or other symptoms, then they can certainly affect the brain and body in other ways, too. They may also interact with prescribed medications that you are taking. It is important to always discuss these supplements with your prescribing doctor, just as you would any other medication. An additional useful source for information on some OTC supplements and herbs is the National Library of Medicine.[iv]

N-acetylcysteine (N-AC)

N-AC is an antioxidant that comes from the amino acid cysteine. It is commonly used to counteract acetaminophen (Tylenol) poisoning and in the treatment of some lung ailments; the brand name typically used in hospitals is Mucomyst®. In the brain, N-AC acts both as an antioxidant and as a chemical that affects the neurotransmitter glutamate. Because glutamate imbalance may contribute to OCD,[v] there has been significant interest in using N-AC as a treatment. The evidence for its usefulness remains fairly thin, however. In 2006, we published an early case report documenting the rapid reduction of OCD symptoms after a high dose of N-AC.[vi] And a recent controlled study from Iran seems to support benefit from N-AC treatment;[vii] however, methodological issues limit this study's usefulness, and more research is clearly needed.

There has also been some interesting evidence that N-AC may be of help in individuals with trichotillomania, pathological skin picking ('excoriation'), and related grooming disorders. A carefully controlled study showed substantial benefit in adults with trichotillomania;[viii] unfortunately, a similar study in children failed to show any similar benefit.[ix] Here, too, more research is needed.

N-AC has a sulfurous smell that can be unpleasant; some recently developed versions minimize this. The optimal dose for OCD has not been established; the studies noted above have used 2.4 – 3.0 grams per day, split into morning and evening doses. Unpublished clinical experience suggests benefit at lower doses in some cases of skin

picking and trichotillomania. Common side effects include a mild rash, mild nausea, constipation, and flatulence, but these are generally not a major difficulty.

Bottom line: *More research is needed, but N-AC may prove helpful at low doses for some people with skin-picking, trichotillomania, and possibly OCD.*

Glycine

Glycine is a naturally occurring amino acid found in dietary protein, and is an essential part of all cells in the body. In the brain, it can effect glutamate's action, though in a different way than N-AC.[5] A case report of long-term treatment[x] and a small placebo-controlled study[xi] suggest that it may be of benefit in OCD.

The doses of glycine used in these investigations have been large — up to 60 grams per day — and many patients have difficulty taking it. Glycine has a chalky taste and can cause nausea. These characteristics limit its use.

Another interesting study looked at sarcosine (also called N-methylglycine), which is derived from glycine. Sarcosine blocks the cellular reuptake of glycine, in much the same way that SSRI antidepressants block the reuptake of serotonin. In an uncontrolled study, sarcosine at doses of up to 2 grams per day was of modest but statistically significant benefit in a group of OCD patients.[xii] New supplements with the same mechanism of action have been developed by several pharmaceutical companies; a clinical trial in patients with OCD is currently underway with one such supplement — bitopertin.[xiii] (See the article, "Title TK," on page TK of this newsletter to learn more about bitopertin and other glutamate targeting pharmaceutical treatments for OCD.)

Bottom line: *While glycine's side effects likely outweigh any benefit, sarcosine at low dosage is a promising, though still unproven, alternative.*

Tryptophan and 5-HTP

Tryptophan (also called 5-hydroxytryptamine, or 5-HT) is also a naturally occurring amino acid, and is a precursor of the neurotransmitter serotonin. In principle, increasing dietary tryptophan might increase serotonin levels in the brain. No careful studies have examined the benefit of tryptophan supplementation in OCD. High doses of dietary tryptophan can have significant side effects, including drowsiness, headache, and nausea. Taking tryptophan together with an SSRI carries the risk of serotonin syndrome, an uncommon condition in which the body produces too much

serotonin. Symptoms can include confusion, agitation, vomiting, and restlessness. This syndrome can become dangerous if severe and requires medical attention. Another serotonin precursor, 5-hydroxytryptophan (5-HTP), has been used in patients with depression and anxiety for similar reasons to tryptophan; it has similar side effects.

Bottom line: *Given the lack of evidence for benefit and the risk of side effects, there is not enough evidence to recommend tryptophan and 5-HTP as treatments for OCD.*

Myo-inositol (MI)

MI is a small molecule that is involved in communication (or "signaling") within neurons and other cells; it interacts with serotonin, glutamate, and other signaling systems in the brain. There have been several studies investigating MI treatment in OCD. A placebo-controlled study of MI alone, without any other medications, suggested that it can be beneficial in OCD.[xiv] In contrast, when MI has been added to SSRI pharmacotherapy there has not been clear benefit.[xv] These studies are small and should not be considered definitive; but they suggest that MI may provide some of the same benefits as SSRIs, but no additional benefit when added on top of established SSRI treatment.

MI doses in these studies were high — 18 grams/day. The most prominent side effects were gastrointestinal symptoms, such as nausea, bloating, flatulence, and diarrhea; however, these were typically mild and tended to diminish with time.

Bottom line: *MI may prove helpful when taken without an SSRI, though more research is needed.*

Borage and milk thistle

Borage is an herb, sometimes called "starflower," that has been used in Europe as a remedy for a variety of gastrointestinal, respiratory, and cardiac conditions. It has been used by some individuals to reduce anxiety; chemicals in the plant may interact with the serotonin transporter, which is also the target of the SSRI antidepressants.[xvi] One study has examined using a borage extract alone as treatment for patients with OCD; benefit was reported after 4–6 weeks both in OCD and in anxiety symptoms.[xvii] Reported side effects included headaches. Check labels and avoid any borage formulations containing "pyrrolizidine alkaloids," which are carcinogenic (potentially cancer-causing).

Milk thistle (MT) is a purple flowering thistle. It has been used traditionally for gastrointestinal and liver ailments, and for cancer. A single study has compared it to fluoxetine (Prozac®) in OCD and reported comparable benefits from the two treatments.[xviii] Side effects in this study were similar to those of Prozac and included sexual dysfunction, nausea, heart palpitations, and insomnia.

Both of these studies were done by a single group in Iran, and methodological issues limit confidence in the ability of their results to be repeated.

Bottom line: *It is best to consider these two alternative treatments — borage and MT — to be unproven for the time being.*

St. John's Wort (SJW)

SJW is a flowering herb that may have antidepressant properties; it is commonly used in Europe, particularly in Germany. A large number of studies — more than exist for any of the other 'alternative' remedies discussed here — have given mixed results, but by and large they indicate that SJW can be of benefit for depression.[xix] The mechanisms underlying this effect remain unclear.

Two studies have examined SJW in OCD. An uncontrolled study of SJW as the sole treatment used found a rapid reduction in OCD symptoms.[xx] However, a subsequent high-quality placebo-controlled study by the same group found no benefit from SJW.[xxi] Side effects of SJW are typically mild when they occur. Reported side effects include erectile difficulties, nausea, headache, insomnia, and diarrhea. However, SJW can interact with other medications. It can lower the level of certain drugs in the body, including anticoagulants and birth control pills. It may also interact with SSRIs, making side effects more likely when the two are used together. It is therefore particularly important to discuss the use of SJW with your doctor.

Bottom line: *While more studies would be helpful, it seems that St. John's Wort is not effective against OCD, though it may be of benefit for comorbid depressive symptoms. As with all of the nutraceuticals discussed here, be sure to discuss SJW with your doctor before using.*

Eicosapentaenoic acid (EPA)

EPA is an omega-3 fatty acid. Fish are a common dietary source of EPA; it can also be taken in the form of fish oil and omega-3 supplements. EPA has been investigated in several psychiatric conditions. As in the case of St. John's Wort, the largest number

of studies has investigated EPA's potential benefit in depression; some studies have suggested benefit, though overall the results have been mixed.[xxii],[xxiii] The relevant mechanisms of action of EPA, and of omega-3 fatty acids more generally, are unclear; they may effect neuronal signaling or inflammation.

To date, a single study has examined EPA in OCD. Two grams of EPA or a placebo were added to stable SSRI pharmacotherapy. EPA and placebo groups improved similarly in this study, indicating no specific benefit from EPA treatment.[xxiv] However, this single study was quite small (11 patients); more research is needed to reach strong conclusions. Side effects of EPA are generally mild and can include heartburn, nausea, and diarrhea.

Bottom line: *There is no evidence of specific benefit from EPA in OCD. There is some evidence of benefit in major depressive disorder, and its use may be appropriate in individuals with both conditions.*

Kava

Kava is a green, leafy member of the pepper family that is native to the South Pacific, where it has been used to treat anxiety and insomnia. A number of careful studies have investigated the use of kava in generalized anxiety disorder and similar conditions, and there is significant evidence for benefit.[xxv] The mechanisms of this effect are unclear; specific alkaloids in the kava plant may interact with neuronal calcium channels, receptors for the neurotransmitter GABA, and the reuptake transporter for the neurotransmitter noradrenaline, all of which are targets for many of the current psychiatric medications.

There have been no studies examining the benefits of kava in OCD. Its ability to moderate anxiety in other conditions suggests that it may be helpful in some cases. However, side effects are of concern.[25] There have been multiple reports of potentially severe liver toxicity in kava users. It can also cause movement abnormalities, skin discoloration, and drowsiness.

Bottom line: *While short-term use may be beneficial, potential side effects mean that longer-term and high-dose usage is probably to be avoided, unless done carefully with the input of a physician and with periodic monitoring of liver function.*

Conclusion

Information to guide the use of over-the-counter remedies to treat OCD remains sparse; we do not have sufficient evidence to provide specific guidance or to estimate the likelihood of response, as we do with the SSRI antidepressants and CBT. There have been more studies in other disorders; in particular, SJW and EPA appear to be of benefit in major depression and kava in the treatment of anxiety (although with caveats due to the potential side effects).

However, with the few exceptions discussed above, these compounds are generally quite well tolerated, and many patients find them more acceptable than prescription medications. They also tend to be relatively affordable. This being the case, it may often be reasonable to use one of them, alone or together with more standard treatment, in particular cases. This is always best done in consultation with a psychiatrist, and it is important to keep your medical doctors informed as to what OTC remedies or supplements you may be using, so that they can be mindful of potential interactions between different prescribed or non-prescribed compounds.

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