

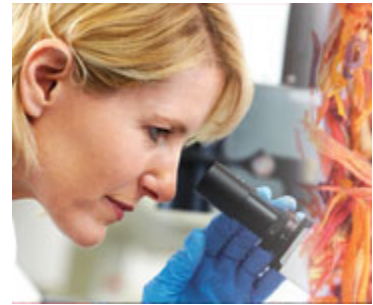
Life Extension Magazine July 2013

Report

A Safer Alternative for Managing Depression

By Michael Downey

More Americans suffer from depression today than ever before. Reports from the Centers for Disease Control reveal that **1 in 10** US adults say they are suffering from depression,¹ and by 2020, depression is expected to be the world's second-leading cause of disability.²



But within this tragedy is another.

In the words of one 2013 study, this problem continues to escalate “after more than half a century of modern psychopharmacology, with billions of dollars spent on antidepressants annually world-wide.”³ Over the last 25 years, the use of antidepressant medication in the US has gone up **400%**,⁴ and **11%** of Americans aged 12 years and over now take antidepressant medication.⁴

The tragedy? About **90%** of these patients experience at least one of the numerous serious side effects⁵⁻¹⁰—which can include anxiety, constipation, thoughts of suicide, insomnia, and weight gain.⁶⁻¹⁰ Also, a just-published study was the second report to find an association between the use of antidepressants during pregnancy and the risk of autism for the child.¹¹ And one extremely common adverse effect afflicts as many as **73%** of individuals who take antidepressants: sexual dysfunction.¹⁰

In fact, while antidepressants often lose their efficacy over the course of treatment,¹² their sexual side effects can continue long after—*even years after*—drug use is discontinued!¹

So in an attempt to avoid adverse reactions, many individuals are seeking alternatives to pharmaceutical medications.¹³

In this article, we unveil compelling new findings demonstrating that saffron (*Crocus sativus*) is equally as effective as certain current medication options in treating depression—but without the unwanted effects.^{14,15}

We'll also examine new evidence indicating that—when added to an existing regimen of antidepressants—saffron works as a powerful adjunct therapy to block their adverse sexual effects!¹⁶

You will also learn how saffron successfully—and safely—treats other conditions for which antidepressants are often prescribed, such as anxiety and obsessive-compulsive disorder.

Saffron Powerfully Targets Mood

Saffron was historically used for depression in Persian traditional medicine,¹⁷ but there was no evidence-based documentation back then.¹⁴ This early use led to modern-day research into saffron's impact on mood.

Starting in 2001, research found that saffron extract produced a distinct antidepressant benefit.¹⁸ But this testing was



conducted on mice.

Scientists needed to confirm this benefit in a more scientifically conclusive way—in a double-blind, randomized, human trial that compared saffron benefits to placebo.

A team conducted a 6-week, double-blind, placebo-controlled, single-center, and randomized trial on 40 adult outpatients who—when assessed in a structured clinical interview—were diagnosed as suffering from major depression according to the Diagnostic and Statistical Manual of Mental Disorders, 4th edition. They were randomly divided into two groups. One group was given a **30-milligram** capsule of saffron **twice daily** and the other group was given a twice-daily

placebo.¹⁷

At 6 weeks, the saffron subjects showed significantly better outcomes on the Hamilton depression rating scale than placebo, indicating “**the efficacy of *Crocus sativus* [saffron] in the treatment of mild to moderate depression.**”¹⁷

Also, there were no significant differences in observed adverse reactions. The author of the published study suggested further human trials.¹⁷

Scientists then set out to weigh the efficacy of saffron extract against common antidepressant drug medications.

Saffron ‘Equally Effective’ Against Depression As Antidepressants!

First, researchers directly compared the efficacy of saffron stigma extract to that of the antidepressant Tofranil[®] (imipramine) against significant degrees of depression.

In a double-blind, single-center trial, scientists randomly divided 30 depressed patients into two groups. They gave **30 milligram** capsules of saffron **3 times daily** to one group. The other group received **100 milligrams** of Tofranil[®] **3 times daily**. All subjects met the Diagnostic and Statistical Manual of Mental Disorders, 4th edition, criteria for major depression.¹⁴

Just 6 weeks later, the saffron dose was declared to be equally as beneficial as Tofranil[®] in the treatment of mild to moderate depression. However, only the Tofranil[®] group suffered anticholinergic symptoms, such as dry mouth. (An anticholinergic agent blocks the neurotransmitter acetylcholine in the nervous system.) Also, the participants taking Tofranil[®] experienced significant unwanted sedation. The study author concluded that saffron has “therapeutic benefit in the treatment of mild to moderate depression.”¹⁴

Next, scientists compared the potency of saffron extract to the antidepressant Prozac[®] (fluoxetine).

Forty adult outpatients who met the Diagnostic and Statistical Manual of Mental Disorders, 4th edition, criteria for depression were randomly assigned to receive either **twice-daily 30-milligram** capsules of saffron stigma or **twice-daily** capsules of **20 milligrams** of Prozac[®].¹⁵

At the close of the 6-week, double-blind, randomized trial, saffron was found to be as effective as Prozac[®] in the treatment of mild to moderate depression. There were no significant differences in unwanted reactions.¹⁵

These studies clearly establish that saffron is a potent alternative to commonly prescribed antidepressants for treating depression—without the adverse effects.

Treating Other Emotional-Cognitive Disorders—Without the Side Effects!

Despite their name, antidepressants are used to treat more than depression. They are prescribed for a broad range of other emotional and cognitive conditions, such as obsessive-compulsive disorder, anxiety, and Alzheimer's disease.¹⁹⁻²²

Some scientists reasoned that—if saffron treats depression as effectively as antidepressant drugs—it may provide a safer treatment for these other conditions as well.

Several avenues of research were developed.

WHAT YOU NEED TO KNOW

Balance Brain Chemistry with Saffron

- Depression is a mushrooming health problem, now afflicting **1 in 10** American adults.
- Drug antidepressants are now regularly taken by **11%** of Americans, **90%** of whom suffer at least one of the numerous adverse effects that range from convulsions to abnormal bleeding to sexual dysfunction.
- Accumulating studies demonstrate that saffron (*Crocus sativus*) treats depression equally well but without these risky side effects.
- Other research reveals that saffron also successfully treats other conditions for which antidepressant medications are used, including anxiety, Alzheimer's, and obsessive-compulsive disorder.
- Surprising new evidence now shows that, when saffron is added to the regimen of male and female patients already taking antidepressants, it reverses the sexual side effects associated with these drugs!



Alzheimer's Disease

A 2013 report predicts America will have “tsunami of Alzheimer's” within the next 40 years as the number of Americans living with the disease triples to nearly 15 million.²³

Doctors commonly prescribe antidepressants for these patients, notably Zoloft® (sertraline)¹⁹—despite the fact that the published data strongly suggest that these medications are not efficacious for Alzheimer's disease and frequently produce adverse reactions.²⁴

To determine whether saffron would provide an alternative treatment, scientists set up a double-blind, randomized, and placebo-controlled trial. Each day, parallel groups of Alzheimer's patients were given either capsules of **15 milligrams** of saffron twice daily or placebo capsules twice a day. Standard assessment scales were used to monitor cognitive and clinical profiles.²⁵

After 16 weeks, saffron produced significantly better cognitive function scores than placebo, prompting the study author to write that:

“Saffron is both safe and effective in mild to moderate [Alzheimer's disease].”²⁵

When further tested in a 22-week, multi-center, randomized, double-blind trial against the Alzheimer's medication Aricept® (donepezil), saffron proved to be equally effective. However, many people in the Aricept® group experienced vomiting as a possible side effect of the medication.²⁶

Anxiety

Anxiety conditions can be crippling, and the proportion of Americans who will have serious anxiety symptoms during some period of their life is about **29%**.²⁷

Selective serotonin reuptake inhibitors (SSRIs) are often recommended for the treatment of generalized anxiety disorders,²⁰ and for social anxiety.²¹ But of course, they come with an array of negative reactions ranging from nausea to sexual dysfunction.⁶⁻⁹

Fortunately, animal studies have revealed a powerful—and safer—alternative.

Evidence demonstrates that treatment with active saffron constituents known as crocins induces anxiolytic-like (anxiety-reducing) benefits without adverse reactions.²⁸

Also, the saffron compound *safranal* demonstrates anxiolytic benefits and increased total sleep time—but without any negative impact on motor coordination.²⁹

Obsessive-Compulsive Disorder

Obsessive-compulsive disorder (OCD) can be so severe that it becomes disabling—those afflicted by this condition may spend virtually all of their time on their obsessions and compulsions.³⁰

Most commonly, antidepressants are tried first, in an attempt to control the time-consuming and stressful symptoms.²² With obsessive-compulsive disorder, it's not unusual to have to try several medications of differing dosages before finding one that exerts any degree of symptomatic control.²² Ultimately, different drugs may need to be combined,²² which of course, can result in multiple levels of negative symptoms that significantly offset the positive benefits.

The evidence suggests that there is a functional interaction between the crocins found in saffron and the serotonergic (serotonin-neurotransmitter) system,³¹ which led scientists to study the effect of saffron on obsessive-compulsive disorder.

In an animal model of this condition, crocin compounds from saffron were found to substantially reduce obsessive-compulsive disorder symptoms without significant adverse effects.³¹

Hyperphagia and Uncontrolled Eating

Obesity is now an epidemic. Meanwhile, neurotransmitter imbalances, particularly low levels of serotonin, have been shown to increase vulnerability to food cravings, overeating and obesity.³² The condition known as *reactional hyperphagia*, sometimes called *reactional polyphagia*, involves uncontrolled snacking and eating.³³ Stress and dysregulated brain reward pathways have been strongly implicated.³⁴⁻³⁷

Unfortunately, appetite-suppressing medications have been documented to cause numerous and deadly effects—including heart valve damage, birth defects, liver injury, and increased blood pressure.³⁸

Scientists hypothesized that a patented extract of saffron may reduce snacking and enhance satiety through its beneficial impact on the brain and mood. They launched a randomized, double-blind, placebo-controlled clinical trial with 60 mildly overweight, female volunteers, at least half of whom had been assessed as suffering from this type of compulsive between-meal snacking behavior. Subjects were randomly given either daily doses of **176.5 mg** of patented saffron extract or a placebo. All subjects were instructed to maintain their normal dietary habits, and all between-meal snacking was



recorded.³⁷

Over 8 weeks, the number of snacking events for the placebo group decreased by **28%**. In the saffron group, between-meal snacks decreased by **55%** and they reported a reduced feeling of the “need” to snack!³⁷

After 8 weeks and without any dieting, the saffron group had lost an average of **2 pounds** and reported increased energy and alertness.³⁷ These small weight loss results show how it takes more than reduced snacking to achieve meaningful weight loss.

Scientists concluded that saffron offers more than just an effective, side-effect-free alternative to prescription antidepressants in the treatment of depression —saffron also safely treats other conditions for which antidepressants are used: Alzheimer’s disease, anxiety, obsessive-compulsive disorder, and uncontrolled eating (reactional hyperphagia).^{19-22,25,29,37}

But what about individuals whose doctors are reluctant to discontinue their regular prescription after finally managing, often years later, to stabilize the specific symptoms of their particular condition with just the right dosage of the right antidepressant—are they stuck with their current negative sexual effects?

Sexual Dysfunction Plagues Over Half of Antidepressant Users

Although antidepressants are associated with a wide array of negative reactions,⁶⁻¹⁰ adverse sexual effects—which can include loss of sexual drive, failure to reach orgasm and erectile dysfunction—are among the most common.^{9,10} While men are affected more often, women report more serious sexual side effects.¹⁰

These unwanted sexual symptoms are considered to be commonly underestimated.¹⁰ Still, research pegs the incidence of sexual dysfunction with selective serotonin reuptake inhibitors (SSRIs) and Effexor[®] (venlafaxine) to be between **58** and **73%**!¹⁰ And these sexual symptoms can persist long after the medication has been discontinued—for months, years, or indefinitely!⁹

About **40%** of people taking antidepressants report a low tolerance for their negative sexual effects,¹⁰ which can lead to non-compliance and relapse.³⁹ This situation has prompted scientists to call on clinicians to “consider the impact of pharmacotherapy on patients’ sexual functioning.”³⁹

Unfortunately, when depressed and even suicidal individuals have struggled for years with different antidepressants before finally attaining stable relief with a specific dosage of a specific drug—doctors are reluctant to change their regimen “simply” to avoid the sexual symptoms. (The same goes for the sexual complaints of those who have finally achieved success with antidepressants for other, non-depression conditions such as anxiety,⁴⁰ eating disorders,^{41,42} and obsessive-compulsive disorder.⁴¹)

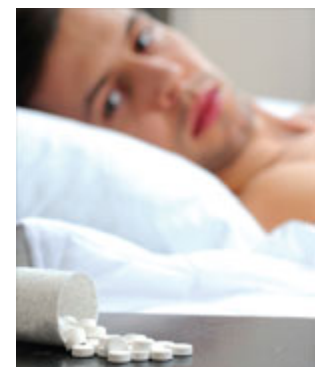
Instead, doctors often prescribe additional medications aimed at offsetting the sexual dysfunction caused by the antidepressants.⁴³⁻⁴⁷ But these added drugs bring their own adverse reactions⁴⁸ —and some even reverse the positive mood benefit of the original antidepressant!⁴⁵

Scientists knew that, in addition to its antidepressant potency, saffron had shown aphrodisiac and other positive effects on sexual function in both animal and human studies.^{16,49-51}

So what would happen, they wondered, if saffron were simply added to the antidepressant regimen of patients who suffered from serious sexual effects—but without dropping their current side-effect-producing antidepressants?

The results were startling.

Saffron Blocks the Sexual Side Effects of Antidepressants!



In late 2012, researchers tested the impact of saffron on the adverse sexual effects experienced by men who otherwise derived some benefit from, and continued to take, their prescribed antidepressant.¹⁶

A randomized, double-blind trial enlisted 36 married men with major depressive disorder whose symptoms had been successfully stabilized on Prozac[®]—but who had complaints of sexual impairment. They were randomly assigned to add to their usual dosages of Prozac[®] **2 daily** doses of either **15 milligrams** of saffron or a placebo. Sexual function was assessed using a standard index.¹⁶

After just 4 weeks, the men in the Prozac[®]-plus-saffron group had experienced significantly greater improvement in erectile function and intercourse satisfaction than the Prozac[®]-plus-placebo group. The team determined that saffron is a “tolerable and efficacious treatment” for male sexual dysfunction induced by Prozac[®].¹⁶

Next, scientists set out to determine if saffron could similarly offset the unwanted sexual effects experienced by women whose depression was being successfully controlled by, and who continued to take, their antidepressant.⁴⁹

In 2013, a team enlisted 38 women, all of whom had major depression that had been stabilized on Prozac[®]—but who continued to suffer from various types of sexual dysfunction induced by this antidepressant. In a double-blind study, half of the women were randomly assigned a supplement of **30 milligrams daily** of saffron extract and the rest were assigned a placebo. All participants also continued to take their usual dosage of Prozac[®], and assessments were made using the Female Sexual Function Index (FSFI).⁴⁹

After 4 weeks—despite still taking the same antidepressant that had induced the unwanted sexual symptoms in the first place—women in the saffron group experienced significant improvement in total sexual function (FSFI), arousal, lubrication, and pain.⁴⁹

Clearly, saffron offers a potent, adjunct therapy for treating the sexual side effects caused by taking antidepressants.

REPORTED SIDE EFFECTS OF ANTIDEPRESSANT DRUGS

There have been 119 published studies from twelve countries, as well as 99 drug regulatory agency warnings from ten countries plus the European Union, together indicating that antidepressants can cause the following adverse effects:^{6-10,70}



- Abnormal bleeding or bruising
- Abnormal thoughts
- Agitation
- Fainting
- Hallucinations
- Headaches
- Paranoia
- Priapism
- Premature births

- Aggression
- Akathisia (severe restlessness)
- Anxiety
- Birth defects
- Black tongue
- Blurred vision or vision changes
- Coma
- Confusion
- Constipation
- Convulsions
- Crushing chest pain
- Death
- Decreased memory or concentration
- Delirium
- Delusional thinking
- Depression
- Diabetes
- Diarrhea
- Difficulty breathing or swallowing
- Dizziness or faintness
- Dry mouth
- Emotional numbing
- Extreme restlessness
- Heart rate decreases
- Heart attacks
- Homicidal ideation or action
- Hostility
- Hyperactivity
- Hypomania
- Impaired driving
- Insomnia
- Lethargy
- Liver problems
- Low white blood cell count
- Mania or manic reactions
- Memory lapses
- Mood swings
- Muscle spasms
- Nausea
- Nervousness
- Neuroleptic malignant syndrome
- Night sweats
- Nightmares
- Numbness in extremities
- Panic attacks
- Psychotic episodes
- Restlessness
- Risk of breast cancer
- Risk of falls
- Sedation
- Self-harm
- Seizures
- Serotonin syndrome
- Severe headache
- Severe muscle stiffness
- Sexual dysfunction
- Shakiness
- Shuffling walk
- Slow or difficult speech
- Spontaneous abortion
- Stroke
- Suicidal thoughts or behavior
- Tremors
- Violent behavior
- Weight gain
- Withdrawal symptoms
- Yellowing of skin or eyes

Additional Saffron Benefits



Evidence also suggests that saffron may play a role in treating other diseases.

Cancer is a growing health concern worldwide, causing more than **7.5 million** deaths each year,⁵² and botanical extracts have been one of the main sources for development of chemopreventive agents.⁵³

Recent scientific evidence, both in vitro and in vivo, has suggested that saffron extract and its main active constituents can help inhibit carcinogenesis and tumor genesis.⁵⁴⁻⁵⁷ Rodent studies further demonstrate that saffron can reduce the serious negative effects of the anticancer drug **Platinol®**

(cisplatin).^{58,59} These anticancer findings have prompted extensive current research on saffron and its components, including safranal and crocin, as promising preventive agents against cancer.

The mechanism for saffron's anticancer potential is not known but may be related to its demonstrated free-radical-scavenging activity.⁶⁰⁻⁶² In human studies, **50 milligrams** of saffron dissolved in **100 ml** of milk and consumed **twice a day** produced a significant decrease in lipoprotein oxidation susceptibility in individuals with coronary artery disease (CAD), further indicating the potential of saffron as an antioxidant.⁶³

In animal research, crocin analogs isolated from saffron significantly increased blood flow in the retina and choroid (the layer between the retina and the outer sclera) and facilitated recovery of retinal function.⁶⁴ This suggested that saffron might help combat certain eye conditions. Subsequently, several studies have confirmed that saffron demonstrates the ability to protect

the retina from damage thereby acting to potentially slow the progress of the serious eye conditions such as macular degeneration and retinitis pigmentosa.⁶⁵⁻⁶⁷

Perhaps suggestive of other fertile areas for future investigations, traditional and folk medicine have long used saffron for numerous medical benefits, including as a remedy for pain (an analgesic), poor digestion, high blood pressure, high cholesterol, respiratory diseases, and as an aphrodisiac agent.^{68,69}

Summary

Depression now afflicts **1 in 10** American adults,¹ a number projected to explode.²

Part of this tragedy is the fact that **11%** of Americans now use antidepressants.⁴ About **90%**⁵ of these patients experience at least one of the numerous adverse effects⁶ of these drugs, which can include suicidal thoughts, anxiety, abnormal bleeding, and sexual dysfunction.⁶⁻¹⁰

In fact, although the effectiveness of antidepressants can diminish over the course of treatment,¹¹ their sexual side effects can continue months, or even years, after these drugs have been discontinued!⁹

In light of these serious complications, scientists and patients have been seeking safer alternative therapies.¹⁷ Mounting research reveals that saffron (*Crocus sativus*) treats depression equally effectively—but without the unwanted effects.

Studies also show that saffron is just as effective against other conditions for which antidepressant drugs are commonly prescribed, such as obsessive-compulsive disorder, anxiety, and Alzheimer's disease.

Remarkably, newly published evidence demonstrates that saffron also works as adjunct therapy to **reverse** the sexual side effects so frequently experienced by men and women taking antidepressants!

If you have any questions on the scientific content of this article, please call a **Life Extension**[®] Health Advisor at 1-866-864-3027.

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