

Natroceutics®

SAFFRON

SUPPORT HEALTHY MOOD REGULATION
AND SLEEP QUALITY



NATROCEUTICS SAFFRON BIOACTIVE EXCLUSIVELY USES AFFRON® WHICH IS REGARDED AS THE WORLD’S LEADING SAFFRON EXTRACT (*Crocus sativus*). IT IS USED BY CLINICIANS AROUND THE WORLD TO MANAGE AND SUPPORT THE MENTAL HEALTH OF THEIR PATIENTS SAFELY AND EFFECTIVELY.

- affron® saffron extract is standardised to contain clinically proven 3,5% Lepticrosalides® by HPLC.
- Lepticrosalides® are a patented totum of bioactive compounds (crocin and safranal) that have been shown in 8 clinical studies to act synergistically and are responsible for the effectiveness of saffron against low mood, anxiety and trouble sleeping.
- Can be used on its own or as an adjuvant to other forms of treatment. Examples for use in conjunction include TCAs, SSRIs, SNRIs, MAOIs etc. *
- Non-addictive/non-habit forming, no withdrawal experienced, non-sedating, generally well tolerated.
- Safe to use in adolescents, adults and the elderly.
- Begins working rapidly with significant results expected within 30 days based on the clinical evidence.
- Organically produced, chemical-free, water extracted, Spanish saffron.
- Quality, cGMP standards from harvest to extraction to final product.

affron® is supported by scientific and clinical studies and is able to support

- Inflammatory Response
- Neurotransmitter Balance
- Oxidative Stress
- Neuronal Plasticity



REGULATES THE INFLAMMATORY RESPONSE

- ↓ Inflammatory markers (IL-1β, TNFα) ¹⁻²
- ↓ Cortisol release ¹⁻²
- ↑ Anti-inflammatory markers (IL-10) ¹⁻²
- ↑ Increases selective serotonin and dopamine reuptake inhibitor response ¹⁻²



REGULATES THE NEUROTRANSMITTER BALANCE

- ↓ Re-uptake of major neurotransmitters ³⁻⁴
- ↓ Enzymatic breakdown of neurotransmitters and maintains correct levels of acetylcholine ³⁻⁴
- ↑ GABAergic response to induce sleep ¹⁻²



DECREASES OXIDATIVE STRESS

- ↓ ROS (Reactive Oxygen Species) ⁵
- ↑ Activity of oxidative enzymes GPx, GSR, catalase and SOD ⁵
- ↑ Cognitive improvement ⁵



INCREASE NEURONAL PLASTICITY

- ↑ BDNF expression (the molecule involved in neuronal plasticity and connectivity processes) ⁶
- ↑ Cognitive capacity ⁶
- ↑ Recovery of Mood ⁶

1. Zhang, C. et al. "Neuroprotective effects of safranal in a rat model of traumatic injury to the spinal cord by anti-apoptotic, anti-inflammatory and edema-attenuating." Tissue and Cell 47.3 (2015): 291-300.; 2. Baluchnejadmojarad, T. et al. "Safranal, anactive ingredientofsafron, attenuatescognitive deficitsin amyloidβ-inducedratmodelofAlzheimer'sdisease: underlyingmechanisms." Metabolicbrainanddisease34.6 (2019): 1747-1759.; 3. Hosseinzadeh H. Et al. „Anxiolytic and hypnotic effect of Crocus sativus aqueous extract and its constituents, crocin and safranal, in mice". PhytotherRes. (2009) Jun;23(6):768-74; 4. Georgiadou, G et al. "Effects of the active constituents of Crocus Sativus L., crocins, in an animal model of obsessive-compulsive disorder." Neuroscience letters vol. 528,1 (2012): 27-30; 5. Ahmad, Abdullah Shafique, et al. "Neuroprotectionbycrocinin a hemi-parkinsonianratmodel." PharmacologyBiochemistryand Behavior81.4 (2005): 805-813.; 6. Ghasemi, T., et al. "AntidepressanteffectofCrocussativusaqueousextractand itseffectonCREB, BDNF, and VGF transcriptand proteinlevels in rathippocampus." Drugresearch 65.07 (2015): 337-343.; 7. Pitsikas, N. et al. Molecules. 2020 Nov 30;25(23):5647; 8. HosseinzadehH, et al. Phytomedicine. 2007 Apr;14(4):256-62.

Saffron Bioactive is suitable for:

- First time users of a product for mood support and compulsive behaviours who are looking for a natural alternative.
- Those on existing treatment / medication who are not responding or getting the results they want – Saffron Bioactive as adjuvant therapy.
- Those wanting to come off medication and need support. *

* **DISCLAIMER:** THIS SHOULD ONLY BE DONE UNDER THE SUPERVISION OF A RELEVANT HEALTHCARE PROVIDER.

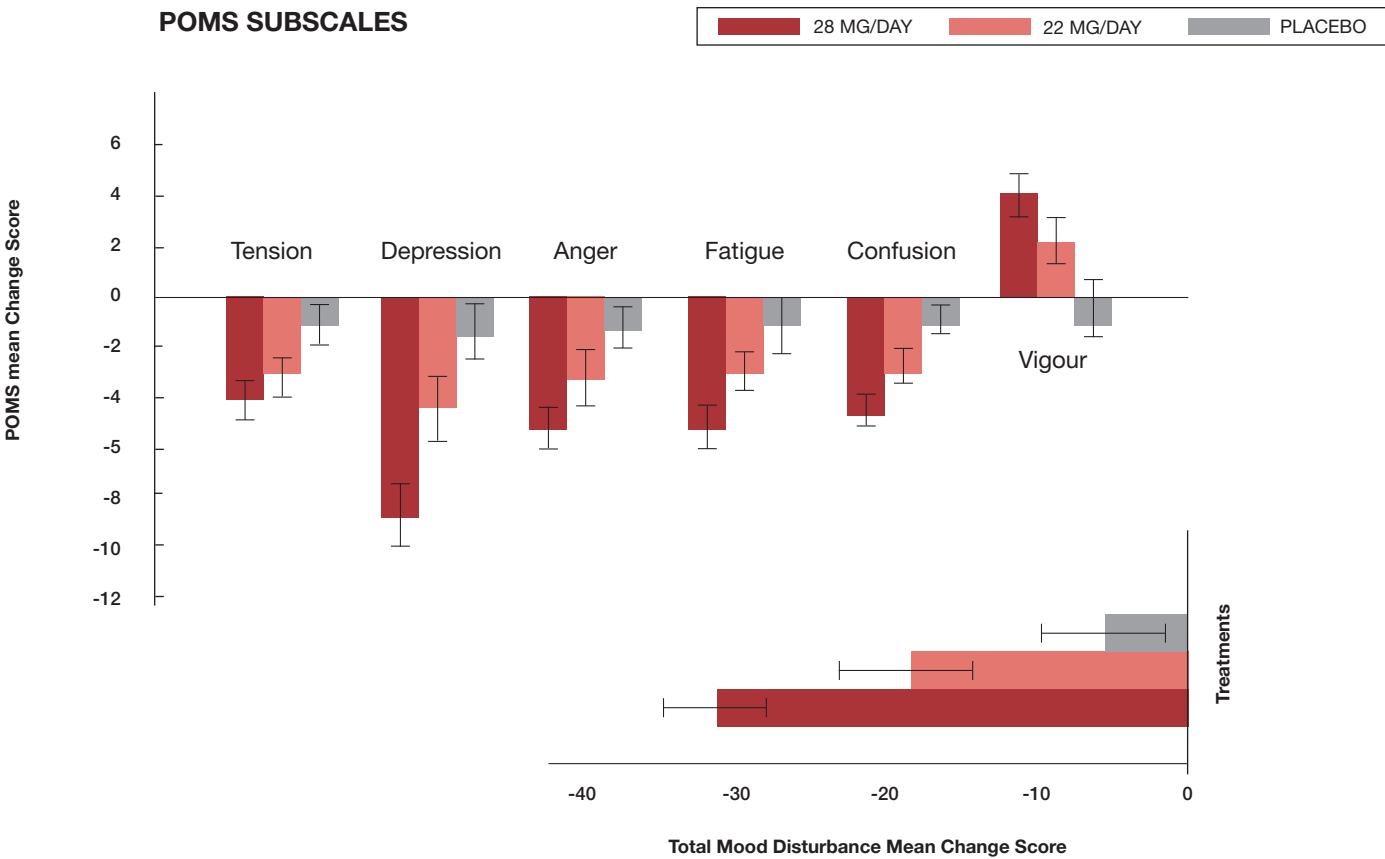
Study

AFFRON® A NOVEL SAFFRON EXTRACT IMPROVES MOOD IN HEALTHY ADULTS

In a double blind, parallel, randomised, placebo-controlled trial, 128 participants self-reporting low mood, but undiagnosed with depression were given affron® at 28 mg/day, 22 mg/day or placebo over 4 weeks. Mood was measured at baseline and at the end of the study using POMS (primary outcome measure) and PANAS questionnaires and the DASS-21 scale.

Results

Investigators found a significant decrease in negative mood and symptoms related to stress and anxiety at a 28 mg/day dose.



affron® increased mood, reduced anxiety and managed stress without side effects, offering a natural alternative to standard treatments

Reference: Kell, G., Rao, A., Beccaria, G., Clayton, P., Inarejos-García, A. M., & Prodanov, M. (2017). affron® a novel saffron extract (*Crocus sativus* L.) improves mood in healthy adults over 4 weeks in a double-blind, parallel, randomized, placebo-controlled clinical trial. *Complementary Therapies in Medicine*, 33(Febuary), 58–64. <https://doi.org/10.1016/j.ctim.2017.06.001>

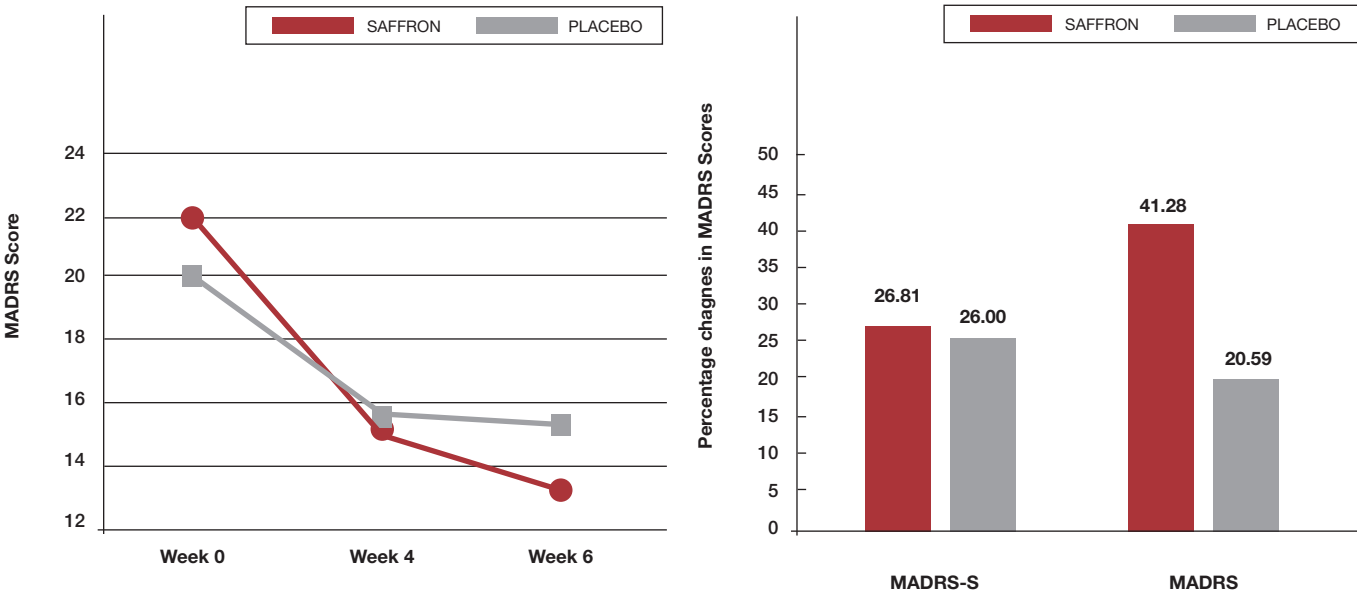
Study

EFFICACY OF AFFRON® AS AN ADD-ON TO ANTIDEPRESSANT MEDICATION FOR THE TREATMENT OF PERSISTENT DEPRESSIVE SYMPTOMS

In a randomised, double-blind, placebo-controlled study, 160 adults with persistent depression, currently taking a pharmaceutical antidepressant were given affron® (14 mg bd) or a placebo over 8 weeks. Primary outcome measures included the clinician-rated Montgomery Asberg Depression Rating Scale (MADRS) and self-rated MADRS (MADRS-S).

Results

Of the 160 participants, 139 provided usable data. Significant results were seen on the MADRS, where depressive symptoms decreased more in adults taking saffron compared to placebo (41% and 21% respectively).



Adjunctive administration of a standardised saffron extract (affron®) for eight weeks was associated with a greater improvement in depressive symptoms as measured by the clinician-rated MADRS.

Reference: Kell, G., Rao, A., Beccaria, G., Clayton, P., Inarejos-García, A. M., & Prodanov, M. (2017). affron® a novel saffron extract (Crocus sativus L.) improves mood in healthy adults over 4 weeks in a double-blind, parallel, randomized, placebo-controlled clinical trial. *Complementary Therapies in Medicine*, 33(February), 58–64. <https://doi.org/10.1016/j.ctim.2017.06.001>

CONSUMER SATISFACTION RATINGS

71% of participants continued taking affron® after the study

73% of participants were satisfied with the affron® consumption

Reference: Lopresti, A. L., Smith, S. J., Hood, S. D., & Drummond, P. D. (2019). Efficacy of a standardised saffron extract (affron®) as an add-on to antidepressant medication for the treatment of persistent depressive symptoms in adults: A randomised, double-blind, placebo-controlled study. *Journal of Psychopharmacology*, 33(11), 1415–1427. <https://doi.org/10.1177/0269881119867703>

Study

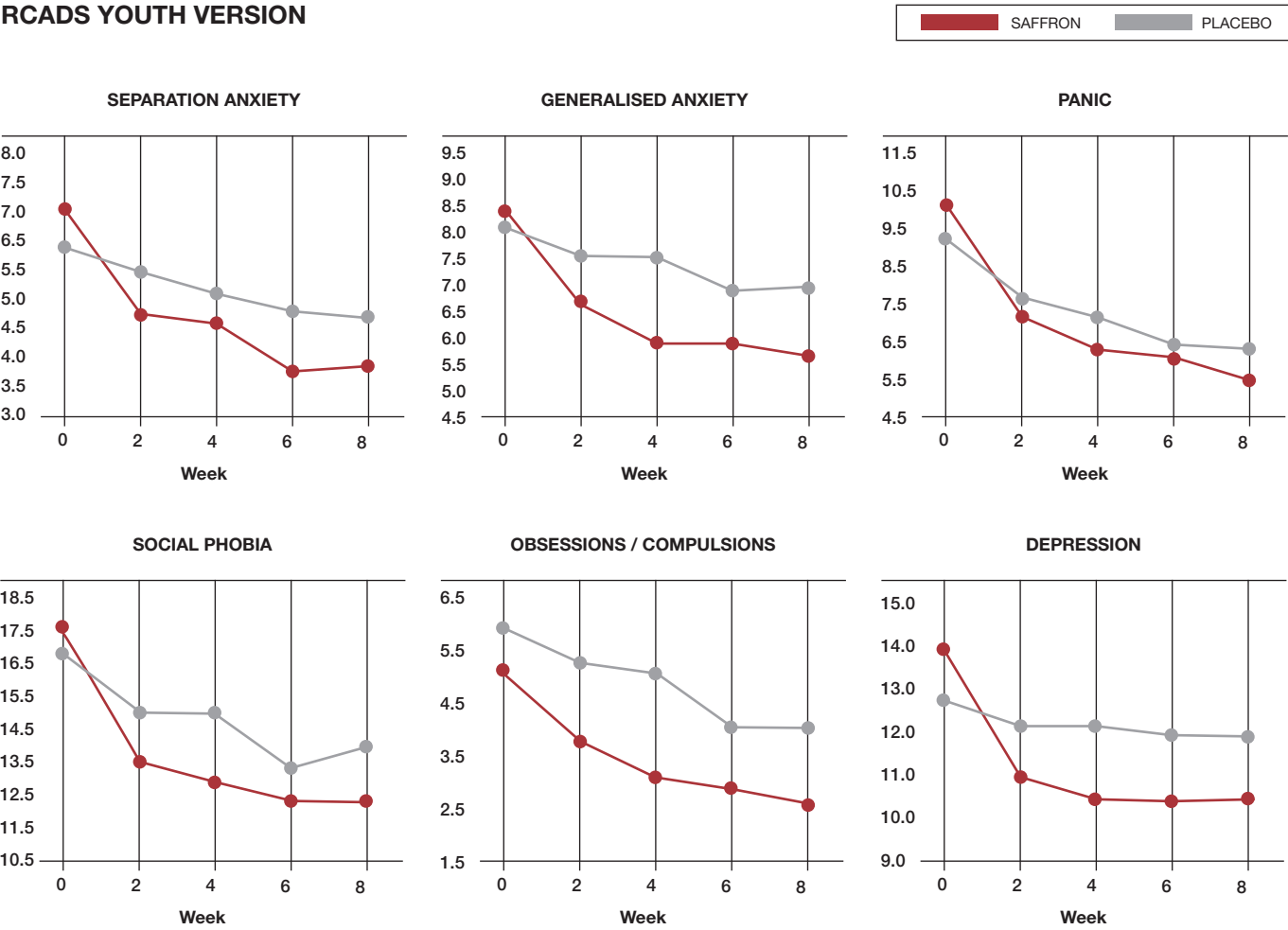
AFFRON® EXTRACT FOR THE TREATMENT OF YOUTH ANXIETY AND DEPRESSIVE SYMPTOMS

In a randomised, double-blind, placebo-controlled trial, 80 youths aged 12-16 with mild-to-moderate anxiety or depressive symptoms were given affron® (14 mg bd) or placebo over 8 weeks. The youth and parent versions of the Revised Child Anxiety and Depression Scale (RCADS) were used to measure outcomes.

Results

Of the 80 participants, 68 completed the study. Based on youth self-reports, affron® was associated with greater improvements in overall internalising symptoms, separation anxiety, social phobia and depression.

RCADS YOUTH VERSION



The administration of a standardised saffron extract (affron®) for 8 weeks improved anxiety and depressive symptoms in youth with mild-to-moderate symptoms, from the perspective of the adolescent.

Reference: Lopresti, A. L., Drummond, P. D., Inarejos-García, A. M., & Prodanov, M. (2018). affron®, a standardised extract from saffron (Crocus sativus L.) for the treatment of youth anxiety and depressive symptoms: A randomised, double-blind, placebo-controlled study. *Journal of Affective Disorders*, 232(December 2017), 349–357. <https://doi.org/10.1016/j.jad.2018.02.070>

Study

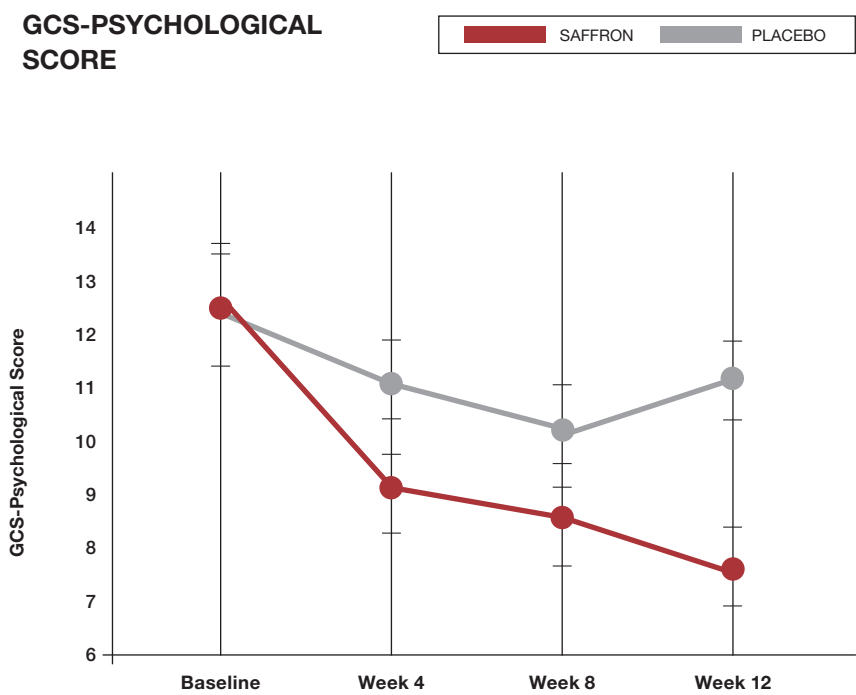
EFFECTS OF SAFFRON EXTRACT (AFFRON®) ON MENOPAUSAL SYMPTOMS IN WOMEN DURING PERIMENOPAUSE

In a randomised, double-blind, placebo-controlled study, 86 perimenopausal women experiencing menopausal complaints received either a placebo or a saffron extract (affron® 14 mg bd) over 12 weeks. Outcomes measured included the Greene Climacteric Scale (GCS) as the primary outcome to assess physical and psychological symptoms.

Results

Based on the results of 82 women, saffron was associated with greater improvements in mood and psychological symptoms compared to placebo. GCS scores revealed a 33% reduction in anxiety and 32% reduction in depression scores from baseline to week 12. No undesirable estrogenic effects were reported.

GCS-PSYCHOLOGICAL SCORE



PSYCHOLOGICAL SYMPTOMS

Heart beating quickly and strongly
Feeling tense or nervous
Difficulty in sleeping
Excitable
Attacks of anxiety, panic
Difficulty in concentration
Feeling tired or lacking in energy
Loss of interest in most things
Feeling unhappy or depressed
Crying spells

The saffron extract, affron®, administered for 12 weeks at a dose of 14 mg twice daily was associated with greater improvements in psychological symptoms in perimenopausal women.

Reference: Lopresti, A. L., & Smith, S. J. (2021). The Effects of a Saffron Extract (affron®) on Menopausal Symptoms in Women during Perimenopause: A Randomised, Double-Blind, Placebo-Controlled Study. Journal of Menopausal Medicine, 27(2), 66. <https://doi.org/10.6118/jmm.21002>

Study

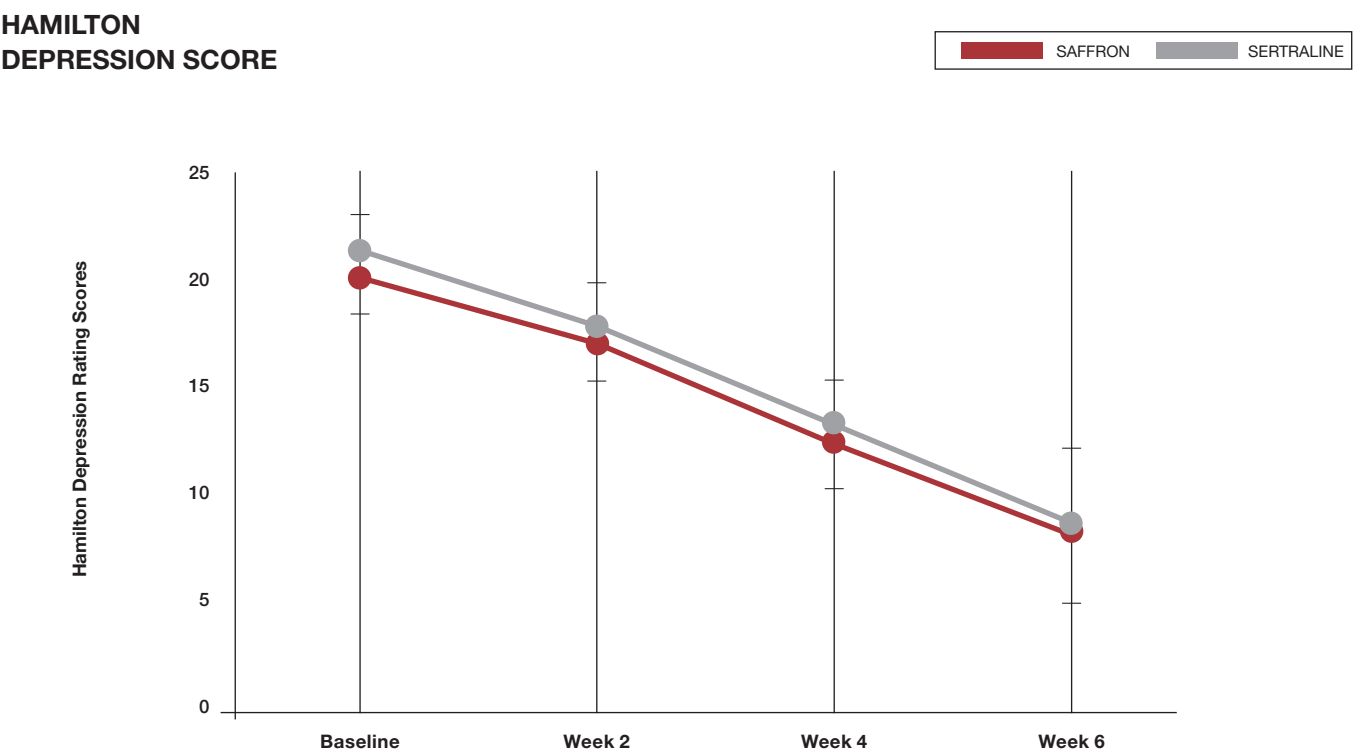
SAFFRON VS. SERTRALINE ON SYMPTOMS OF DEPRESSION AMONG OLDER PEOPLE WITH MAJOR DEPRESSIVE DISORDERS (MDD)

In a double-blind, randomised intervention study, 50 older people with professionally diagnosed MDD (mean age 65 years, 70% male) were randomly assigned either to the Saffron group (60 mg/day) or Sertraline group (100 mg/day) for 6 consecutive weeks. The Hamilton Depression Rating Scale (HDRS) was used to rate participants degree of depression at baseline, 2 weeks, 4 weeks, 6 weeks and end of study.

Results

Symptoms of depression decreased over time with no advantages or disadvantages for the saffron or sertraline groups.

HAMILTON DEPRESSION SCORE



Both saffron and sertraline have the potential to significantly decrease symptoms of depression. The results are clinically relevant, because major depressive disorders in older people is a health concern. Saffron appears to be a powerful antidepressant for older people, who might be more reluctant to use synthetic drugs.

Reference: Lopresti, A. L., Drummond, P. D., Inarejos-García, A. M., & Prodanov, M. (2018). affron®, a standardised extract from saffron (Crocus sativus L.) for the treatment of youth anxiety and depressive symptoms: A randomised, double-blind, placebo-controlled study. Journal of Affective Disorders, 232(December 2017), 349–357. <https://doi.org/10.1016/j.jad.2018.02.070>

Study

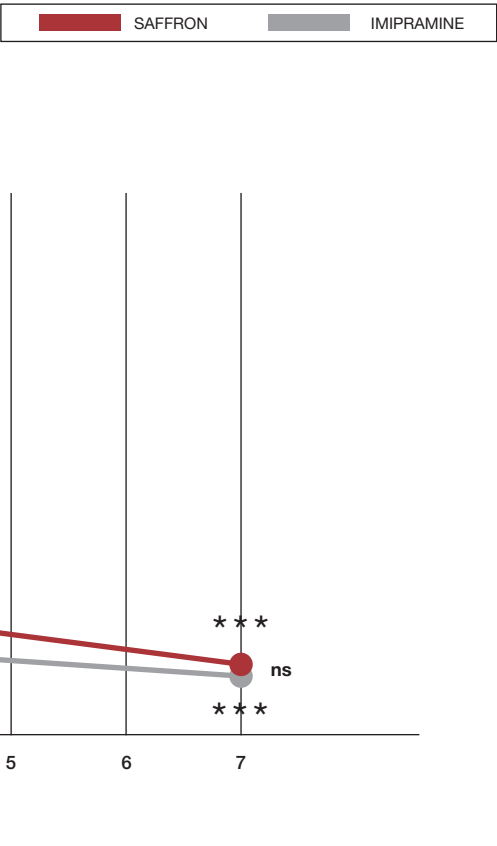
SAFFRON AND IMIPRAMINE IN THE TREATMENT OF MILD TO MODERATE DEPRESSION

In a pilot, randomised, double-blind study, 30 adults meeting the DSM IV’s criteria for major depression, having a baseline Hamilton Depression Rating Scale of at least 18, were randomly assigned to receive either saffron 30 mg/day (Group 1) or imipramine 100 mg/day (Group 2) over the 6-week study.

Results

Saffron at this dose was found to be similarly effective to imipramine in the treatment of mild to moderate depression. In the imipramine group, anticholinergic effects such as dry mouth and sedation were observed more often than was predicted.

HAMILTON DEPRESSION SCORE



The main overall finding from this study is that saffron may be of therapeutic benefit in the treatment of mild to moderate depression.

Reference: Akhondzadeh, S., Fallah-Pour, H., Afkham, K., Jamshidi, A.-H., & Khalighi-Cigaroudi, F. (2004). Comparison of *Crocus sativus* L. and imipramine in the treatment of mild to moderate depression: A pilot double-blind randomized trial [ISRCTN45683816]. *BMC Complementary and Alternative Medicine*, 4(1), 12. <https://doi.org/10.1186/1472-6882-4-12>

Study

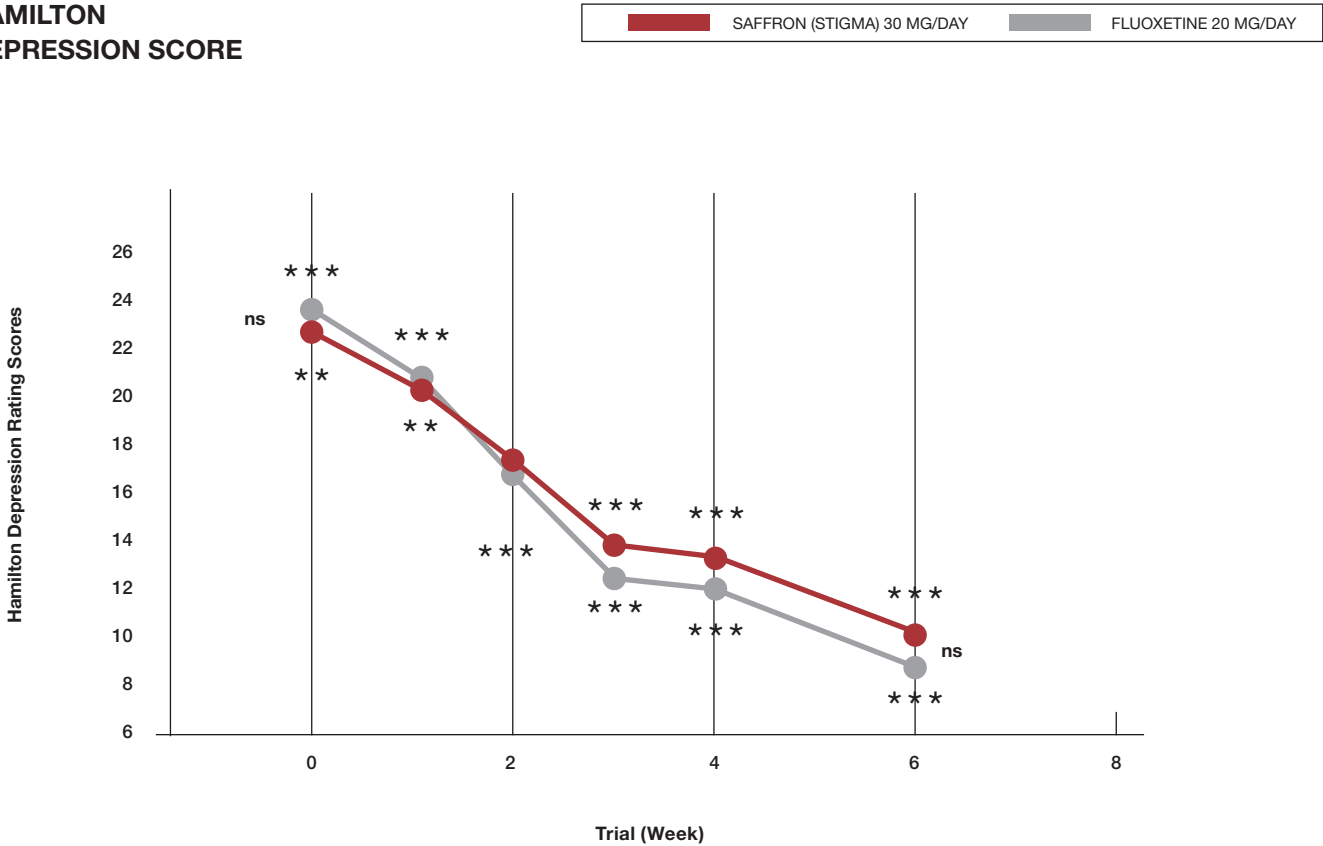
SAFFRON VS FLUOXETINE IN THE TREATMENT OF MILD TO MODERATE DEPRESSION

In a pilot randomised, double-blind study, 40 adult patients meeting the DSM IV’s criteria for mild to moderate depression, were randomly assigned to receive capsules of saffron 30 mg/day (Group 1) and fluoxetine 20 mg/day (Group 2) over a 6-week study. The Hamilton Depression Rating Scale (HDRS) was used to measure outcomes.

Results

Saffron at this dose was found to be effective similar to fluoxetine in the treatment of mild to moderate depression. There were no significant differences in the two groups in terms of observed side effects.

HAMILTON DEPRESSION SCORE



The results of this study indicate the efficacy of *Crocus sativus* (saffron) in the treatment of mild to moderate depression.

Reference: Noorbala, A. A., Akhondzadeh, S., Tahmacebi-Pour, N., & Jamshidi, A. H. (2005). Hydro-alcoholic extract of *Crocus sativus* L. versus fluoxetine in the treatment of mild to moderate depression: A double-blind, randomized pilot trial. *Journal of Ethnopharmacology*, 97(2), 281–284. <https://doi.org/10.1016/j.jep.2004.11.004>

Study

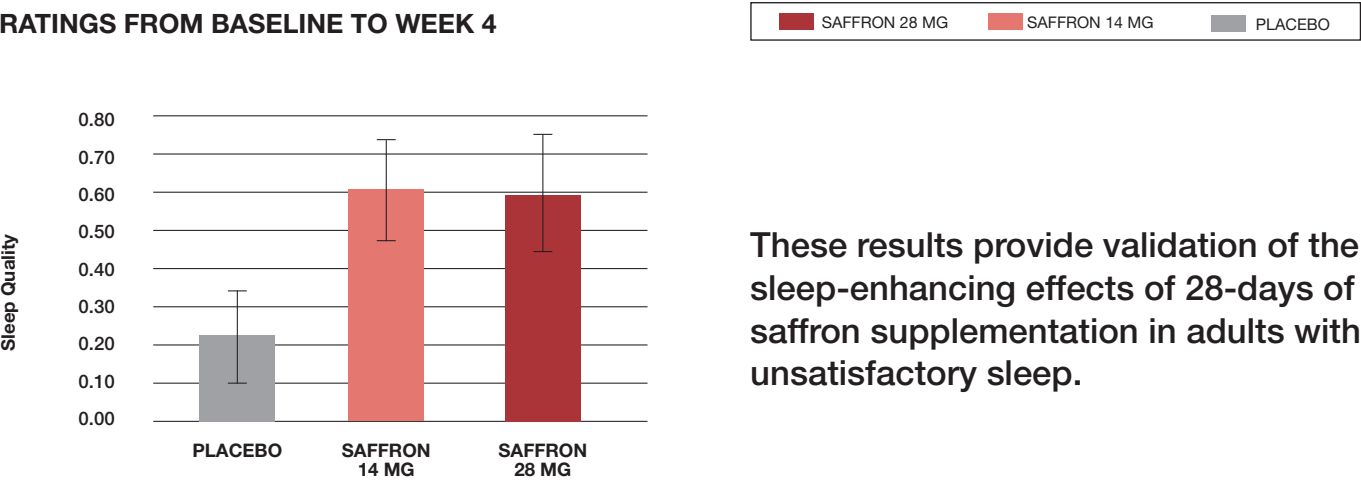
AN INVESTIGATION INTO THE EVENING INTAKE OF AFFRON® SAFFRON EXTRACT ON SLEEP QUALITY, CORTISOL AND MELATONIN CONCENTRATIONS IN ADULTS WITH POOR SLEEP

In a randomised, double-blind, placebo-controlled, multi-dose study, 120 adults with unsatisfactory sleep received either a placebo, 14 mg or 28 mg of standardised affron® 1 hour before bed, over a 28-day period. Sleep quality (primary outcome measure) and evening salivary melatonin and cortisol levels were measured.

Results

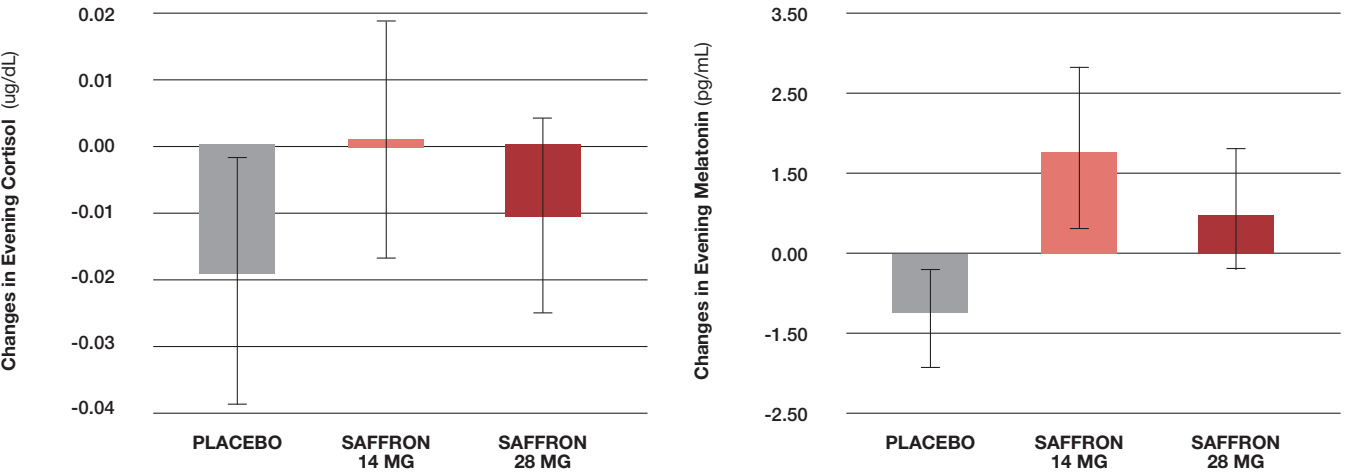
Compared to placebo, saffron was associated with greater improvements in sleep quality ratings as well as with increases in evening melatonin concentrations but did not significantly affect evening cortisol.

CHANGES IN SLEEP QUALITY RATINGS FROM BASELINE TO WEEK 4



These results provide validation of the sleep-enhancing effects of 28-days of saffron supplementation in adults with unsatisfactory sleep.

CHANGES IN SALIVARY HORMONE CONCENTRATIONS



Reference: Lopresti, A. L., Smith, S. J., & Drummond, P. D. (2021). An investigation into an evening intake of a saffron extract (affron®) on sleep quality, cortisol, and melatonin concentrations in adults with poor sleep: a randomised, double-blind, placebo-controlled, multi-dose study. Sleep Medicine, 86, 7–18. <https://doi.org/10.1016/j.sleep.2021.08.001>

Study

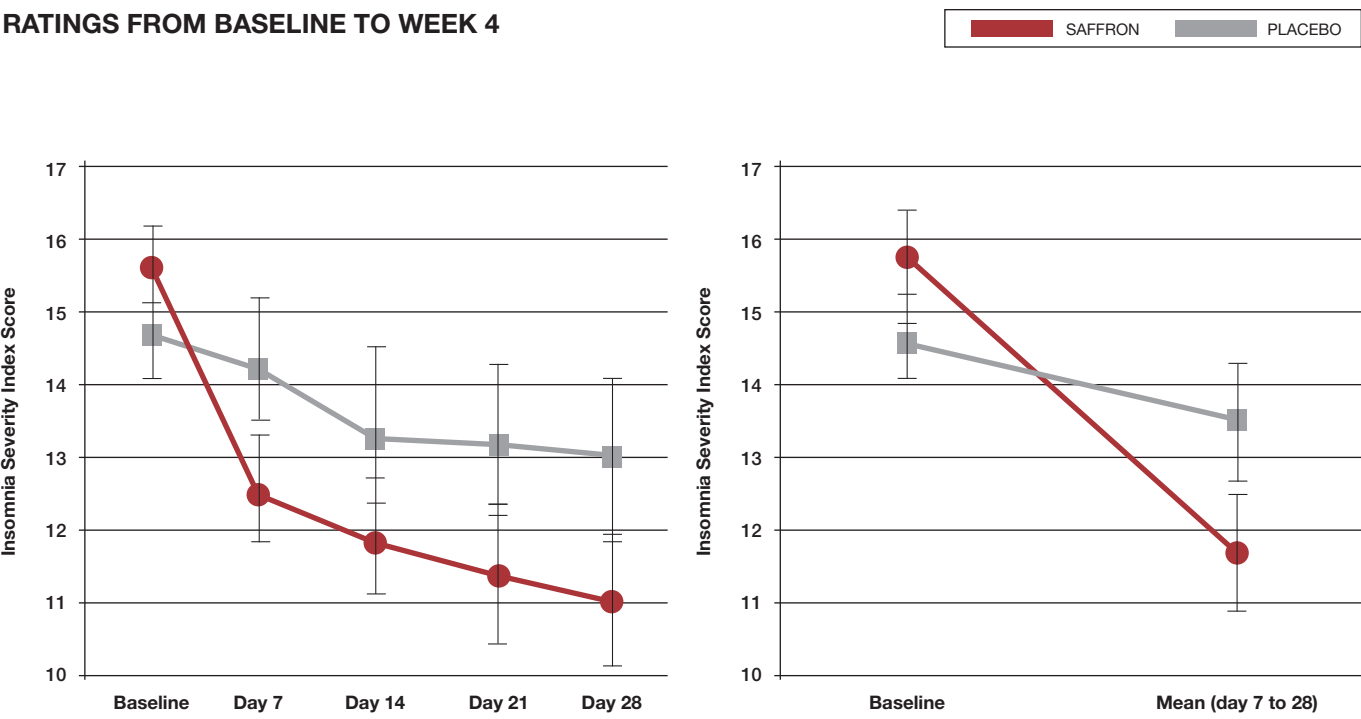
EFFECTS OF SAFFRON ON SLEEP QUALITY IN HEALTHY ADULTS WITH SELF-REPORTED POOR SLEEP

In a randomised, double-blind, placebo-controlled trial, 63 healthy adults aged 18-70 with self-reported sleep problems were recruited and randomised to receive either saffron extract (affron® 14 mg bd) or placebo over a 28-day period. Outcomes measured included the Insomnia Severity Index (ISI) as the primary outcome.

Results

Based on results of 55 participants, saffron was associated with greater improvements in total ISI score than placebo. Saffron intake was well tolerated and no adverse effects were reported.

CHANGES IN SLEEP QUALITY RATINGS FROM BASELINE TO WEEK 4



Saffron intake was associated with improvements in sleep quality in adults with self-reported sleep complaints.

Reference: Lopresti, A. L., Smith, S. J., Metse, A. P., & Drummond, P. D. (2020). Effects of saffron on sleep quality in healthy adults with self-reported poor sleep: a randomized, double-blind, placebo-controlled trial. Journal of Clinical Sleep Medicine : JCSM : Official Publication of the American Academy of Sleep Medicine, 16(6), 937–947. <https://doi.org/10.5664/jcsm.8376>

Natroceutics®

SAFFRON

NATROCEUTICS SAFFRON
MARKET LEADING BIOACTIVE SAFFRON



SUPPLEMENT FACTS

Dosage size is 1 capsule.		Recommended Use:	
Each capsule contains: <i>Crocus sativus</i> L. (saffron) (stigmas, 3:1 extract standardised to contain 3,5 % Lepticrosalides® and providing 90 mg of dried herb equivalent).	30 mg	Adults and children 12 years and over: Take 1 capsule per day or as recommended by your healthcare professional.	
		Indications:	
		May assist or support healthy sleep and mood balance.	

OUR PRODUCTS AND PACKAGING

IT IS OUR INTENTION TO CONTINUALLY STRIVE FOR IMPROVED WAYS OF DELIVERING, OPERATING AND BEING.

- 

Studied and developed by experts in the field of saffron.
- 

Designed to deliver therapeutic efficacy.
- 

Clean and free from agrochemicals, artificial additives and heavy metals.
- 

Fully recyclable packaging and supporting environmental regeneration.
- 

Quality assured through GMP (Good Manufacturing Practice) and batch testing.
- 

Vegan friendly – 100% plant based.