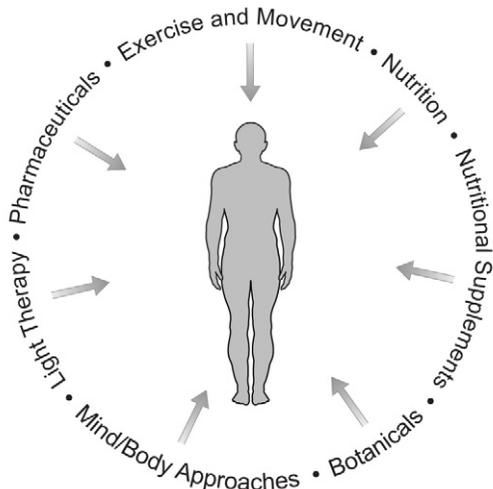


Non-Pharmaceutical Approaches for Depression Towards Vitality

For those patients who cannot tolerate or choose not to utilize prescription medications for depression, consider the following positive influences.

Therapeutic Influences for Depression



A number of approaches can help foster well-being in those with depression.

1. Exercise and Movement

Over 1000 clinical trials have studied the relationship between exercise and depression.¹ It has been found to be as effective as prescription medications without the side effects.² Exercise likely works through many different pathways and has a positive influence on numerous aspects of health. Both aerobic and anaerobic exercise have shown benefit in depression.^{3,4}

Clinical Pearls

- Encourage starting slow and gradually increasing as able.
- Encourage group exercise programs to enhance a sense of community and social support (participation in an exercise program is more beneficial than the fitness level achieved).⁵
- Use a perceived exertion scale to encourage exercise goals. On a scale of 1-20, with 20 being exercising to the point of exhaustion, direct the patient to shoot for a level of 14. At this stage, one should be able to talk but not sing. Encourage exercise for 25-40 minutes 3-4 times a week and work up to a “14” each time.
- Encourage maintenance of an exercise program to prevent relapse. Regular exercise is superior to medications at maintaining therapeutic benefit.⁶

2. Nutrition

Food choices can influence mood and behavior, particularly when it comes to caffeine and simple sugars. Increased intake of sugar has been found to be associated with a higher incidence of depression.⁷ And when people are stressed, they are more likely to crave carbohydrates, leading to weight gain.⁸

Caffeine intake has also been associated with a higher incidence of depression, possibly due to an attempt at self-treatment.⁹ Too much caffeine can artificially over-stimulate the autonomic nervous system leading to fatigue and an irregular sleep/wake cycle.



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Clinical Pearls

- Encourage a balanced diet rich in fruits, vegetables, whole grains and omega 3 essential fatty acids found in cold-water fish, nuts and flax seed. (See [Anti-Inflammatory Diet handout](#))
- Limit ingestion of simple sugars (sweets and foods prepared with white flour such as pastries, white bread, & bagels)
- Avoid more than two 8 oz. caffeinated beverages a day.

3. Nutritional Supplements

Omega-3 fatty acids

Polyunsaturated fatty acids enhance cell membrane fluidity and help cell walls remain liquid at cold temperatures. This is why cold-water fish are a good food source of these fats. If deep Atlantic salmon were composed mainly of saturated fat, the fish would be as stiff as boards due to the fat's solidification at cold temperatures. This fluidity enhances communication across synaptic membranes and allows more efficient uptake and binding of neurotransmitters.¹⁰

Omega-3 fatty acids can enhance the benefits of medications in the treatment of depression.¹¹ There is research suggesting that products with a higher ratio of EPA to DHA have a more mood elevating effect.¹²

Clinical Pearls

- The most commonly used dose in studies is a total of 3 gms of fish oil daily.
- Have the patient freeze the fish oil capsules and take at night. This helps reduce the disturbing side effect of belching a fishy taste.
- Fish oil capsules can spoil. If there is a lot of belching a foul fishy taste, consider changing products or buying fresh fish oil.
- Most fish oil supplements have a 3:2 ratio of EPA to DHA essential fatty acids. Research suggests that products with a higher ratio of EPA to DHA may have more mood elevating effects. Companies that produce brands that have a 7:1 ratio of EPA to DHA include: Omegabrite (omegabrite.com), NOW (*Super EPA*) and Nordicznaturals (*EPA Xtra*)

B Vitamins

The B vitamins are essential for the body's ability to produce serotonin. Depleted levels are more common in those with poor nutrition, elderly with atrophic gastritis and alcoholics. Certain medications can lead to a deficiency of these vitamins including proton pump inhibitors (acid is needed for their absorption) and birth control pills.¹³

Depression is the most common presenting symptom of folate deficiency (a B vitamin). Adding folate to Serotonin Reuptake Inhibitors (SSRIs) has been found in a Cochrane review to enhance response to therapy.¹⁴

Clinical Pearls

- Include a B-100 complex vitamin (This has approximately 100 mg or ug of the B-vitamins).
- Consider adding 1 mg of folic acid to a prescription anti-depressant for non-responders to therapy.



Non-Pharmaceutical Approaches for Depression Towards Vitality

S-adenosyl-L-methionine (SAME)

SAME plays an essential role in more than 100 biochemical reactions. It promotes methylation (donation of methyl groups) that contributes to the synthesis and activation of serotonin, norepinephrine and dopamine. SAME synthesis is closely linked to vitamin B₁₂ and folate metabolism and deficiencies of these vitamins results in decreased SAME concentrations in the central nervous system which can negatively influence mood.¹⁵

Although many of the original positive studies were done with intravenous therapy, there have been some promising studies showing benefit with oral SAME. One RCT found SAME to be as effective as Imipramine with fewer side effects.¹⁶

Clinical Pearls

- The dose is 400–1600 mg a day. Most studies utilized 1600 mg. This is generally divided into BID dosing.
- Start at a low dose (200 mg BID) and titrate up each week to 800 mg BID or until you see clinical benefit.
- Use products that are packaged in blister packs to prevent oxidation, which causes degradation and inactivation of SAME. (Nature's Made is one brand that packages in blister packs).
- SAME can have stimulating side effects such as anxiety, insomnia and euphoria. Don't prescribe before bedtime due to risk of insomnia. SAME should be avoided in patients with bipolar disease as it may cause hypomania or mania.

Hydroxytryptophan (5-HTP)



L-tryptophan is converted to 5-HTP, which can then be converted to serotonin. 5-HTP readily crosses the blood brain barrier and increases serotonin levels.¹⁷ Taking 5-HTP orally seems to significantly improve symptoms of depression (Shaw, 2002), including patients with treatment-resistant depression.¹⁸ There is evidence that 5-HTP might be comparable to the conventional antidepressants Fluvoxamine (*Luvox*) and Imipramine (*Tofranil*).¹⁹

This supplement was initially taken off the market due to an association with eosinophilia myalgia syndrome (EMS), which was found to be related to an isolated contaminant from one manufacturing company. The safety of this supplement is still under question and it should not be used as first line treatment of depression.

Clinical Pearls

- Although preliminary data looks promising, the uncertainty regarding potential side effects and long-term safety encourages using other options for the treatment of depression before considering 5-HTP.
- The dose is 150-300 mg daily.

4. Botanicals

St. John's Wort (SJW)

There has been adequate research showing that SJW is beneficial for mild to moderate depression including a Cochrane review.²⁰ Another well-done trial also found this plant to be as effective as Peroxetine (*Paxil*).²¹ Similar to other medications for depression, it has not been found to be beneficial for severe depression.



Non-Pharmaceutical Approaches for Depression Towards Vitality

Clinical Pearls

- Most clinical trials have used St. John's wort extract standardized to 0.3% hypericin content. Doses most commonly used are 300 mg three times daily with titration up to 1200 mg a day if needed. You can dose at 450 mg twice daily to enhance compliance.
- Be cautious using this botanical with other medications that are cleared through the cytochrome P-450 liver detoxification system. SJW revs this up and can lower serum levels of drugs cleared by these enzymes. Be cautious in those on multiple medications, birth control pills, anti-retrovirals and antibiotics.
- SJW can cause photodermatitis. Avoid prolonged sun exposure and encourage generous use of sun-block when using.

5. Mind-Body Influences

Depression can be treated with a medication, supplement or botanical, but this does not result in a healing process where the individual learns how to prevent its recurrence. The following introspective processes can treat or help ameliorate depression while giving the individual skills to help prevent recurrences.

Psychotherapy

Counseling by experienced therapists has been found to be as effective as medication therapy for major depression but slower to take effect.²²

Therapists use many different methods of psychotherapy. Two short-term types that have been especially helpful for depression include cognitive therapy (or cognitive behavior therapy) and interpersonal therapy.²³

Cognitive therapy helps individuals hear their negative or distorted thoughts and replace them with positive or more accurate ones to create a sense of increased control and positive expectation. This helps individuals see things through more realistic eyes.

Interpersonal therapy focuses on the relationships in a person's life and communication patterns with others. It helps a person learn how current relationships might cause or maintain symptoms. The goal is to rapidly reduce symptoms. Frequently, more satisfying relationships result from therapy.

Psychotherapy also honors the healing effects that occur through human relationships. The ability of clinicians to develop rapport and trust may trump the benefits seen with medications. In a study of psychiatrists' effects on depression, it was found that "good" therapists (those able to foster relationships of trust) were more effective at treating depression with placebo than "poor" therapists were with the active drug (Imiprimine).²⁴

Clinical Pearls

- Counseling can be as effective as prescription medication. It may take longer to work.
- When locating a therapist, patients may want to ask what approach is used and request an explanation of that approach. Encourage them to choose a type of therapy that feels right for them. Two to consider are cognitive therapy and interpersonal therapy.
- Encourage them to work with a counselor whom they feel good about.

Positive psychology

Positive Psychology is a relatively new field of psychology whose goal is to improve life for people by strengthening what is positive, in contrast to traditional psychology which focuses on relieving negative conditions in a person's life. It focuses on "the empirical measurement and intentional cultivation of well-being, character strengths, and meaning in life."²⁵ Patients may benefit from working with psychotherapists, life coaches, and medical professionals who are using new approaches resulting from research in this area.

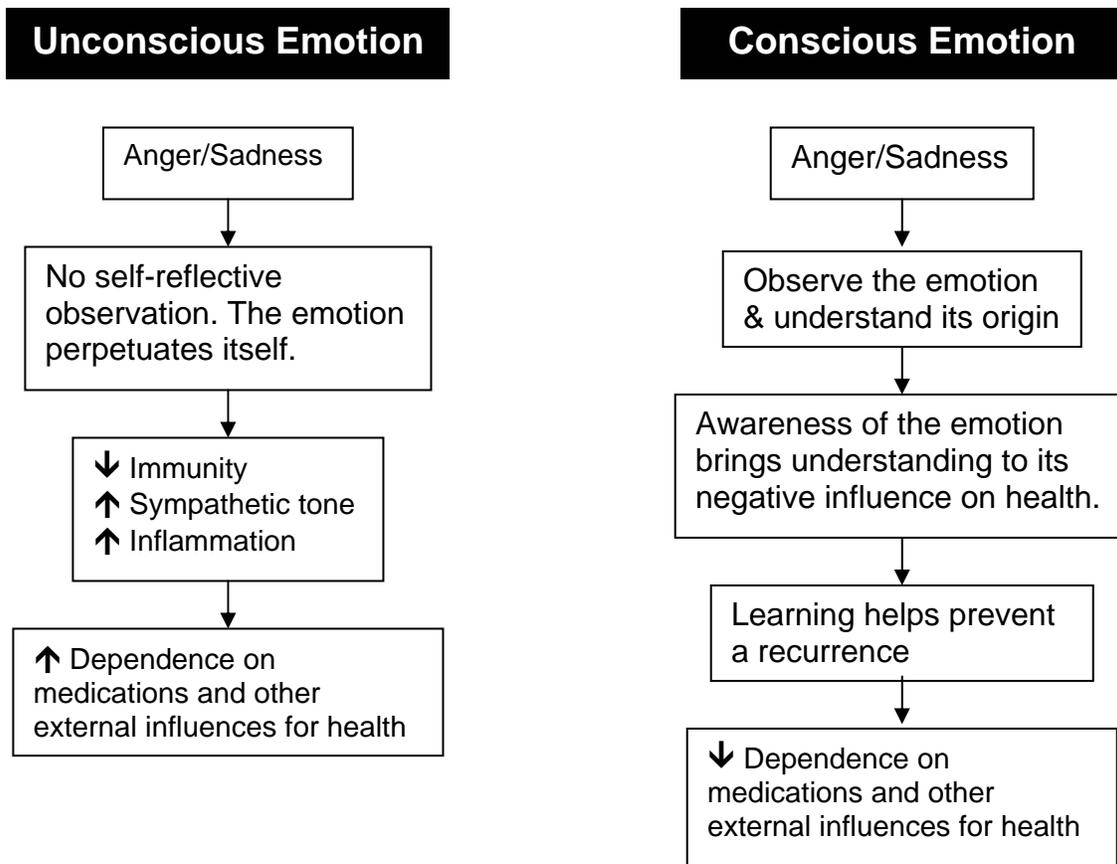


Non-Pharmaceutical Approaches for Depression Towards Vitality

Learning from emotions

For some causes of depression, a person can learn from the emotion. In the Buddhist tradition, depression may be considered as suffering. The experience of suffering is seen as a great teacher because once the individual realizes why he/she is suffering, he/she learns why it is present and how to abandon its cause. It may bring the emotion into consciousness that can lead to an understanding of why it is

there and what is needed to overcome it. This process of recognizing suffering, understanding why it is present and abandoning its cause is a self-reflective process that can result in more happiness. This self-reflective process encourages the development of insight that allows the individual to learn from her/his symptoms and prevent a recurrence.





Non-Pharmaceutical Approaches for Depression Towards Vitality

Clinical Pearls

Tools to help bring Awareness to Emotions

- F.I.T. Protocol²⁶
This is a self-administered protocol that the individual can practice each time he/she feels a negative emotion. Exploring the following questions mentally can help someone better understand the emotion.
 - Feelings: What feelings are you experiencing?
 - Images: What images come to mind with this emotion?
 - Talk: What self-talk occurs with this emotion?
- Journaling
 - See handout on Using Journaling to Aid Health
- Forgiveness
 - See Handout on Healing Through Forgiveness
- Psychotherapy/Counseling
(See above)
- Mindfulness-Based Stress Reduction Programs
 - The Center for Mindfulness in Medicine, Health Care, and Society at the University of Massachusetts Medical School keeps a list of MBSR programs across the country. It can be accessed at the following website: www.umassmed.edu/cfm/mbsr/ .
 - Patients can also call clinics and hospitals in their area for possible classes.

Positive affirmations

Through conscious choice, individuals can practice techniques that replace negative emotions with positive ones.

Clinical Pearls

Two Eastern techniques that have been found to be helpful include:

- Loving Kindness Meditation – This meditation practice has been around for over 2,500 years and should first be directed towards oneself and then towards an individual or process that is causing stress, anger or difficulties.
 - See handout on Loving Kindness Meditation
- Tonglen is a Tibetan word that means “sending and taking.” This practice involves breathing in a negative emotion image or process and changing it within oneself to a positive one. The individual can imagine that he/she is the liver and his/her job is to detoxify a negative emotion. The negative emotion is breathed in and transformed to a positive emotion, which is then breathed out.
 - Resources for Tonglen include: Tonglen taught by Pema Chodron, a Buddhist teacher. <http://www.shambhala.org/teachers/pema/tonglen1.php>
 - Three practices of Tonglen from a spiritual care hospice web site: <http://www.spcare.org/practices/tonglen-practices.html>



Non-Pharmaceutical Approaches for Depression Towards Vitality

6. Light Therapy

Exposure to ultraviolet light is important in helping the body produce hormones that support health. Light exposure (UV-B) stimulates the production of neurotransmitters that help treat and prevent Seasonal Affective Disorder (SAD). Research has shown that light therapy may be helpful for other forms of depression also. A meta-analysis review showed good effect for short-term therapy, but most studies were of short duration and of limited quality.²⁷

Using a light box for at least 20 minutes twice daily may be very helpful. There are a number of different resources for light boxes. Dependable web sites that offer light boxes include: www.lighttherapyproducts.com, www.lightforhealth.com, or www.alaskanorthernlights.com.

Clinical Pearls

- The dose is 2,500-10,000 lux of light for 20-60 minutes, 2-3 times a day. Start at 20 minutes twice a day (morning and early afternoon).
- Morning therapy is most effective.
- The lightbox should be within three feet and the individual should not look directly into the light.
- Encourage exercise outdoors on a sunny day.

7. Aromatherapy

Essential oils have been found to be most beneficial for dementia but limited research shows some promise for depression.²⁸ Good quality evidence is lacking. Although some oils such as camphor can have hepatotoxic side effects, those listed below are generally safe and likely offer little potential harm when used as inhalation therapy three times daily.

Clinical Pearls

- Those essential oils found to be most beneficial for depression include lavender, citrus, rose and chamomile.
- Citrus was found to be beneficial for depression in men in one small study.²⁹
- Lavender has better evidence supporting its efficacy for insomnia, which often accompanies depression.³⁰

An accompanying handout for patients is also available.

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Date created: March 12, 2007