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**Continuing Education  
Material:**

**CHRONIC FATIGUE  
SYNDROME  
(CFS)**

**ABP LLC**

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## ABP CONTINUING EDUCATION MATERIAL

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### CHRONIC FATIGUE SYNDROME (CFS)

#### OBJECTIVES

1. Define Chronic Fatigue Syndrome.
2. Discuss the causes and symptoms of CFS.
3. Discuss diagnosis and treatment of CFS.

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This continuing education material, CHRONIC FATIGUE SYNDROME, will earn the participant 1.5 contact hours. If you have any questions regarding this information or would like further information on other continuing education opportunities, please contact:

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## **What is chronic fatigue syndrome (CFS) and what are its symptoms?**

CFS is a disease is a debilitating and complex illness that is very challenging to diagnose and to treat. It is characterized by extreme fatigue lasting at least 6 months that results in substantial reduction – at least 50%- in occupational, personal, social and/or educational activities. The fatigue does not improve with rest and may be worsened by physical or mental activities. People with CFS experience fatigue that lasts a long time.

In addition to persistent fatigue, CFS has eight possible primary signs and symptoms to include: problems with short term memory and concentration, recurrent sore throat, painful and mildly enlarged lymph nodes in your neck or armpits, unexplained muscle soreness, pain that moves from one joint to another without swelling or redness, headache of a new type, pattern or severity, sleep disturbance, and extreme exhaustion lasting more than 24 hours after physical or mental exercise. According to the International Chronic Fatigue Syndrome Study Group (CDC), a person meets the diagnostic criteria of CFS when unexplained persistent fatigue occurs for six months or more along with at least four of the above symptoms. Other symptoms can include: abdominal pain, allergies, bloating, chest pain, chronic cough, diarrhea, irregular heartbeat, nausea, depression, irritability, anxiety disorders, SOB and visual disturbances. The clinical course and symptom severity varies considerably among the patient population. There can be frequent patterns of relapse and remission. In most cases duration lasts 3 – 9 years. Symptoms tend to improve over time but a return to full health is rare.

## **Why is CFS a public health concern?**

- At least one million Americans have CFS. This is greater than the number of American that has multiple sclerosis, lupus, lung cancer or ovarian cancer.
- Less than 20% of Americans with CFS have been diagnosed. There is need for increased CFS awareness among those experiencing symptoms of the illness and among healthcare providers.
- CFS can be debilitating. All CFS patients are functionally impaired. CDC studies show that CFS can be as debilitating as those with MS, lupus, RA, heart disease, COPD and end stage renal disease.
- CFS has a severe economic impact. The annual economic impact of CFS in the US is estimated to be \$9.1 billion in lost productivity, not including medical costs or disability payments. The average family affected by CFS loses \$20,000 a year in wages and earnings.

## **Who is at risk for CFS?**

- CFS occurs two to four times more frequently in women than in men.
- the illness occurs most often in people aged 40-59.
- CFS is less common in children than in adults.
- CFS occurs in all ethnic groups and races.
- CFS tends to be more prevalent in people with lower educational levels and occupational status.
- CFS is sometimes seen in members of the same family, but there is no evidence that it is contagious. There may be a familial predisposition or a genetic link.

## **What causes CFS?**

CFS is one of the most mysterious of all chronic illnesses with no clear cause. Several possible causes have been proposed including: depression, iron deficiency anemia, hypoglycemia, history

of allergies, a virus infection such as Epstein-Barr, dysfunction in the immune system, changes in the levels of hormones produced in the hypothalamus, pituitary or adrenal glands, and chronic low blood pressure. The cause of CFS may be an inflammation of the pathways of the nervous system as a response to an autoimmune process but there is nothing measurable in the blood to aid in diagnosis. CFS may also occur when a viral illness is complicated by a dysfunctional immune system. In many cases no serious underlying infection or disease is proved to specifically cause CFS. Lack of medical knowledge and understanding of CFS has made determining and describing the characteristics of condition difficult.

### **How do you screen and diagnosis CFS?**

A diagnosis of CFS is based on exclusion of any other disease or condition that may be causing the fatigue and related symptoms. There is no diagnostic or laboratory procedure to confirm the presence of chronic fatigue syndrome. Before considering a diagnosis of CFS some of the conditions that must be ruled out include: adrenal insufficiency, malignancy, AIDS, liver or kidney disease, depression, psychosomatic illness such as schizophrenia, Lyme disease, fibromyalgia, HCV, thyroid disorder, sleep apnea, anorexia, bulimia, using medicines that may cause fatigue, substance abuse that could be causing fatigue and severe obesity – BMI of 45 or greater. After other diseases or disorders are excluded, then the doctor determines if a patient's symptoms meet the CFS specific criteria.

Possible complications of CFS include: depression, side effects related to medication treatments, side effects associated with lack of activity, social isolation caused by fatigue, lifestyle restrictions and missing work. Kinesiophobia, a fear-induced avoidance behavior, often manifests in patients with CFS. The phobia, which is an irrational fear of physical movement and activity, usually begins when a patient's symptoms worsen after previously well-tolerated levels of exercise. This digression dissuades patients from exercise and promotes a mindset that they are disabled. As a result, the patient continues to avoid exercise and a vicious cycle ensues.

The majority of CFS patients experience some form of sleep dysfunction. Common sleep complaints include difficulty falling asleep, hypersomnia, frequent awakening, intense and vivid dreaming, restless legs and nocturnal myoclonus. Patients need to establish a regular bedtime routine; avoid napping during the day and include a wind-down period. The bed should only be used for sleep and sex. Control noise, light and temperature. Patients should avoid caffeine, alcohol and tobacco. Medications may help patients who cannot achieve sleep.

### **How is CFS treated?**

Treatment programs are based on the individual patient's overall medical condition and symptoms. The aim is to relieve the signs and symptoms by using a combination of treatments.

- **Moderating daily activity.**

Avoid excessive physical and psychological stress, but too much rest can make one weaker and worsen long-term symptoms. The goal should be to maintain a moderate level of daily activity and gently increasing stamina over time.

- **Graded exercise therapy (GET)** to build up fitness levels by gradually increasing activity levels. Teach CFS patients that all exercise needs to be followed by a rest period at a 1:3 ratio, resting 3 minutes for each minute of exercise. Advise deconditioned patients to limit themselves to the basic activities of daily living until they have stabilized. Several daily sessions of brief, low-impact activity can then be added, such as a few minutes of stretching, strength exercises or light walking or cycling.

- **Strength and Conditioning** can reduce pain, improve strength and flexibility, and Enhance stamina and function in CFS patients. Begin with simple stretching and strengthening by using only body weight for resistance. Then add wall pushups, modified chair dips and toe raises. As strength improves add resistance with exercise bands or light weights. Swimming or use of a recumbent bike are good options for those patients that do not tolerate an upright position.
- **Cognitive behavior therapy (CBT)** in which a mental health professional helps the patient to identify negative beliefs and behaviors that might be delaying recovery and to replace them with healthy, positive ones. The patient must believe in the benefits of CBT and be an active participant to receive the potential benefits. To emphasize the positive philosophy of the therapy, it is useful to develop an individualized treatment plan. Persons using CBT need to take personal responsibility for change. Relaxation and meditation training and memory aids such as organizers, schedulers and written resource manuals, can be helpful in addressing cognitive problems. Some patients games may benefit from mind stimulation activities such as puzzles, word and card games.
- **Energy management programs – pacing and envelope theory-** may be useful for CFS patients. Activity pacing involves moderating activity to minimize the push-crash cycle. Patients are advised to do specific activities, such as household tasks, in small, manageable chunks with rest breaks. Once patients are stabilized, then activity is increased in small increments. The envelope theory instructs patients to view their available energy as if it was a bank account. If they overexert, it is like being overdrawn at the bank and they have to pay it back the next day by resting more the next day. Patients learn how much energy they can expend without having to pay back by resting the next day.
- Treatment of depression with tricyclic antidepressants and selective serotonin reuptake inhibitors. Antidepressants also help improve sleep and relieve pain.
- Treatment of existing pain and fever can be accomplished by using acetaminophen and nonsteroidal anti-inflammatory drugs such as aspirin and ibuprofen.
- Treatment of allergy-like symptoms with antihistamines such as Allegra and Zyrtec and decongestants such as Sudafed.
- Treatment of low blood pressure (hypotension).
- Treatment for problems of the nervous system such as dizziness and extreme skin tenderness can be achieved by using Klonopin, Lorazepam or Xanax.

Numerous **alternative techniques** have been used to manage the symptoms of CFS including: massage, acupuncture, chiropractic therapy, cranial-sacral manipulation, hypnosis and therapeutic touch. There has been a lot of research aimed at finding new treatments for CFS. There have been studies involving the following medications: Ritalin or Concerta which appears to boost and balance levels of brain chemicals called neurotransmitters; d-ribose which is an essential energy source for cells; corticosteroids, immune globulins and interferon (participants in these studies have experienced severe side effects), antiviral drugs such as acyclovir and cholinesterase inhibitors such as galantamine which improve the effectiveness of acetylcholine believed to be important for memory, thought and judgment. Patients should always check with their doctor before adding any remedies to a nutritional regimen. Many products have not been tested in controlled trials and can have some serious side effects especially when combined with

prescription medication. Patients should be advised to avoid herbal remedies like comfrey, ephedra, kava, germander, chaparral, bitter orange, licorice root, yuhimbe and other supplements that are potentially dangerous. Dietary and herbal products that have been promoted to improve CFS symptoms include: astragalus, borage seed oil, bromelain, comfrey, Echinacea, garlic, ginkgo biloba, ginseng, primrose oil, guercetin, St John's wart and shiitake mushroom extract. Patients should make sure to consult with their physician before taking any of these remedies.

### **How can one cope with CFS?**

There is no known way to prevent the illness from occurring because its cause remains unknown. It is important to be aware of the signs and symptoms and know when to consult with a physician to help manage the symptoms when they occur. The experience of CFS varies from person to person. CFS does respond to rehabilitation. Patients stand a better chance of maintaining a healthy body perception and improving symptoms if they realize the goals and limitations of rehabilitation. The following self-care steps can help you maintain good general health:

- Reduce stress by developing a plan to avoid or limit overexertion and emotional stress. Allow yourself time to relax each day. People who quit work or drop all activity tend to do worse than those who remain active.
- Get enough sleep. Try to go to bed and get up at the same time each day and limit daytime napping. Memory and the ability to concentrate can be improved when one is well rested.
- Exercise regularly but start slow and build up gradually. Exercises such as walking, swimming, biking or water aerobics may improve symptoms. A physical therapist can help to develop a home exercise program with stretching activities such as yoga and tai chi and muscle -relaxation exercises. Exercise helps both the mind and the body.
- Pace you and keep activity on an even level.
- Maintain a healthy lifestyle by eating a balanced diet, drinking plenty of fluids, and limiting caffeine intake. Stop smoking!
- Find a hobby that is enjoyable and fulfilling.
- Keep a daily diary to identify times when you have the most energy. Plan your activities for these times.
- Give yourself permission to recognize and express your feelings, such as sadness, anger and frustration. You may need to grieve for the energy you have lost.
- Ask for support from family and friends as well as your doctor. Look for local support groups or counseling in your community. Coping with chronic health problems requires strong emotional support.
- If your memory and concentration are affected by CFS, keep lists and make notes to remind yourself of important things. Also allow more time for activities that take concentration.

### **RESOURCES**

1. National CFIDS Foundation, Inc., 103 Aletha Rd., Needham, MA 02492. 781-449-3535; <http://www.ncf-net.org>
2. CDC National Center for Infectious Diseases; <http://www.cdc.gov/ncidod/>
3. Chronic Fatigue and Immune Dysfunction Syndrome Association of America; <http://www.cfids.org>
4. National Chronic Fatigue Syndrome and Fibromyalgia Association; <http://www.ncfsfa.org>

## **CHRONIC FATIGUE SYNDROME – Self-Assessment Quiz**

Please answer all answers on the Continuing Education Registration Form.  
Mail the form back to ABP LLC to be graded so that you can receive your P.A.C.E. certificate.

1. Which of the following is NOT a symptom of CFS?
  - a. Extreme fatigue lasting more than 6 months
  - b. Recurrent sore throat
  - c. Swollen and red joints
  - d. Unexplained muscle soreness
  
2. About what percent of Americans with CFS have actually been diagnosed?
  - a. 10 %
  - b. 12%
  - c. 15%
  - d. 20%
  
3. CFS occurs more frequently in men than women.
  - a. True
  - b. False
  
4. Almost all CFS patients experience some form of:
  - a. Thyroid problem
  - b. Schizophrenia
  - c. Sleep dysfunction
  - d. Urinary dysfunction
  
5. Teaching CFS patients to rest for 3 minutes after each 1 minute of exercise is an example of:
  - a. Moderating daily activity
  - b. Graded exercise therapy
  - c. Cognitive behavior therapy
  - d. Energy management
  
6. Helping CFS patients identify negative beliefs and behaviors that might delay recovery and replace them with healthy positive ones is an example of:
  - a. Moderating daily activity
  - b. Graded exercise therapy
  - c. Cognitive behavior therapy
  - d. Energy management
  
7. Activity pacing and the envelope theory are examples of:
  - a. Moderating daily activity
  - b. Graded exercise therapy
  - c. Cognitive behavior therapy
  - d. Energy management
  
8. A medication that appears to boost and balance levels of brain chemicals is:
  - a. Tricyclic antidepressant
  - b. Klonopin
  - c. Ritalin
  - d. Xanax
  
9. Dietary and herbal products that have been promoted as a way to improve CFS symptoms include all of the following EXCEPT:
  - a. Licorice root
  - b. Echinacea
  - c. Primrose oil
  - d. St. John's wart

10. Which of the following is NOT a good way to cope with CFS?

- a. Get plenty of sleep.
- b. Do stretching exercises like yoga and tai chi.
- c. Continue to smoke.
- d. Gradually building up a home exercise program.