TRAIN FOR SUCCESS INC.
DIAGNOSIS AND TREATMENT OF FIBROMYALGIA 3 Hr

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PURPOSE

The purpose of this course is to educate and reinforce the knowledge of nurses; ARNP, CNS, RN, LPN, CNA /HHA, Occupational Therapists (OT/OTA) and other professionals who are working in the health care environment, as well as other students/ individuals regarding Fibromyalgia, the risk factors for fibromyalgia, how fibromyalgia is diagnosed, some of the complications of fibromyalgia, the treatment/ management with medications, exercise/ therapy, effective self-management strategies and interventions for educating the affected individuals / patients and community resources that are available and contact information.

OBJECTIVES/ GOALS:

After successful completion of this course, the participants will be able to:

1. Define Fibromyalgia and detail the symptoms often experienced by patients
2. Describe the risk factors for fibromyalgia
3. Discuss how fibromyalgia is diagnosed
4. Discuss complications of fibromyalgia
5. Describe the treatment /management with medications, therapy, lifestyle changes
6. Discuss interventions and patient teaching regarding self-management Strategies.
7. Describe available community resources for Fibromyalgia.

FIBROMYALGIA

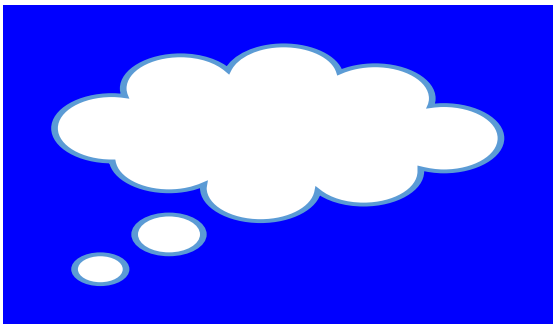
Fibromyalgia is a condition in which an individual or patient experiences long-term pain and tenderness in the muscles, joints, tendons, and other soft tissues. Fibromyalgia causes widespread pain all over the body (musculoskeletal pain), tenderness, sensitivity to touch, fatigue, problems with sleeping, and often results in mental distress / emotional distress. According to the Centers for Disease Control and Prevention (CDC), fibromyalgia affects about 4 million US adults, about 2% of the adult population (CDC 2017).

Individuals with fibromyalgia have tender points, which means that they have specific points on the body that are painful to touch. Some of the common tender spots are often located around the shoulders, elbows, back of the head, sides of the breastbone, hips and knees.

Cause of Fibromyalgia

The cause of fibromyalgia is unknown, but Fibromyalgia can be treated and managed effectively. Fibromyalgia is not a form of arthritis. It does not cause damage or inflammation to the joints, muscles and other tissues.

Due to the chronic pain and fatigue caused by Fibromyalgia, which is similar to arthritis, patients often follow up with a rheumatologist. It is at this time, the rheumatologist detects the disease and therefore rules out rheumatic diseases.



SYMPTOMS OF FIBROMYALGIA

Common symptoms of fibromyalgia include:

- Pain and stiffness throughout the body
- Headaches
- Tiredness
- Fatigue
- Depression
- Anxiety
- Difficulty sleeping
- Problems with thinking
- Problems with memory
- Problems with concentration.

Some patients may report other symptoms such as:

- Pain in the face
- Pain in the jaw (disorders of the jaw such as temporomandibular joint syndrome (TMJ)

  Tingling and/ or numbness in hands and feet
- Digestive problems

Some of the reported digestive problems include:

- Abdominal pain
- Irritable bowel syndrome (IBS)
- Abdominal bloating
- Constipation.

Risk factors for Fibromyalgia

There are both genetic and environmental components that seem to play a role and acts as a trigger in individuals who are predisposed to the condition. According to the Centers for Disease Control and Prevention (CDC), some risk factors include:

Age

Fibromyalgia can affect people of all ages, including children. However, most people are diagnosed during middle age and you are more likely to have fibromyalgia as you get older.

Other diseases

Individuals who have other disorders such as Rheumatoid Arthritis or Lupus are more likely to develop fibromyalgia.

Other possible risk factors

According to the CDC, some of the other factors that are not yet confirmed but have been “weakly” associated with the onset of fibromyalgia include:

- Trauma or stressful events, for example car accidents, post-traumatic stress disorder (PTSD),
- Repeated injuries such as injuries from repetitive stress on the joints for example bending the knee frequently
- Family history
- Viral infections / illness
- Obesity
- Sex - Women are twice as likely to have fibromyalgia than men (CDC 2017). Between 80% and 90% of the individuals affected by fibromyalgia are women, but men and children can also be affected.

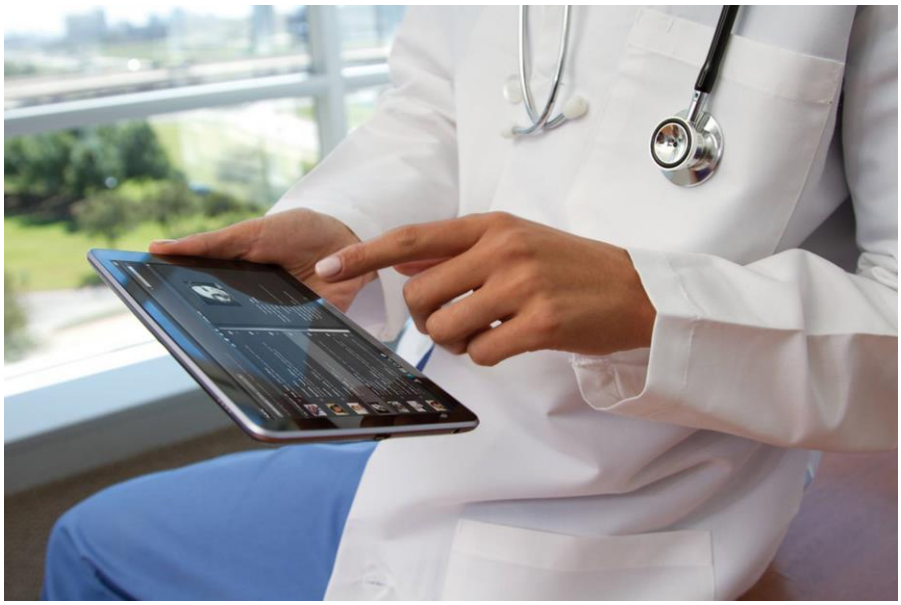
Fibromyalgia Diagnosis

Physicians often diagnose fibromyalgia using the reports of patient's symptoms, patient's history, medical /physical examination, X-rays, and laboratory studies /blood work.

According to the American College of Rheumatology (ACR), individuals with fibromyalgia can have abnormal levels of Substance P in their spinal fluid. The Substance P chemical helps to transmit and intensify the pain signals to and from the brain. Researchers are looking at the role of Substance P and other neurotransmitters, and studying why individuals with fibromyalgia have an increased pain sensitivity and whether there is a gene or genes that is responsible for making the individual more likely to have it (FDA.gov 2014).

PAIN ASSESSMENT

Widespread body pain is the main feature of fibromyalgia, therefore the physician /health care providers will ask the patient to describe the pain. This often helps to distinguish the difference between fibromyalgia and other diseases which have similar symptoms.



PHYSICAL EXAMINATION

The physician will assess the patient for tenderness to pressure or tender points (location on the body tender to touch). The medical examination is conducted, which includes the physical exam which helps to locate tenderness and helps the physician determine or exclude other causes of musculoskeletal pain.

Laboratory Tests

There are no diagnostic tests such as X-rays or the blood tests for Fibromyalgia. However, the physician needs to complete tests to rule out another health problem that can be confused with fibromyalgia.

Laboratory tests can be helpful in diagnosing conditions with symptoms that are similar to fibromyalgia; conditions such as rheumatoid arthritis, thyroid disease, lupus.

Some laboratory tests include:

Complete blood count (CBC)

Complete blood count (CBC) checks for anemia which is a possible cause of fatigue (feeling tired) and weakness.

A Complete blood count includes the following:

Evaluation of white blood cells (WBC)

The white blood cells are the cells that play a role in the body's defense system when there is an infection, or cancer and also plays a role in inflammation and allergies. The WBC count is a count of the total amount / total number of white blood cells in a patient’s blood sample.

White blood cell differential is sometimes included or ordered as part of the panel of tests. White blood cell differential counts and identifies the number of the various types of WBC present in the sample of blood.

There are 5 types which include:

Neutrophils,

lymphocytes,

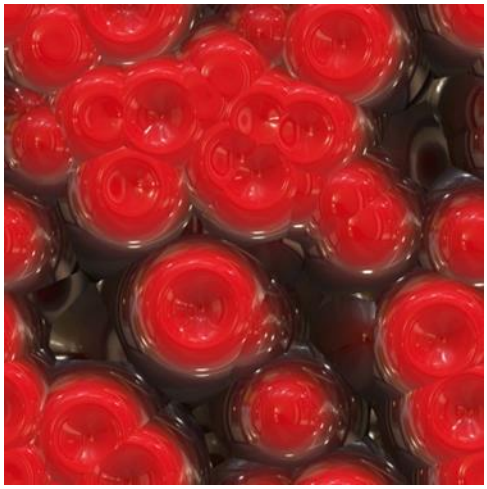
Monocytes,

Eosinophils, and

Basophils.

Evaluation of Red blood cell (RBC)

The Red blood cells (RBC) are the cells that transport the oxygen throughout the body. RBC count is a count of the actual amount /number of red blood cells in a patient's blood sample.



Hemoglobin

Hemoglobin - abbreviated Hb or Hgb, is the iron-containing oxygen-transport metalloprotein in the red blood cells (RBC). Hgb / Hb measures the total amount of the oxygen-carrying protein in the blood, this reflects the number or amount of red blood cells (RBC) in the blood.

Hemoglobin is the iron-containing protein found in all red blood cells that enables RBC to bind to oxygen in the lungs and carry it to tissues and organs throughout the body.

Hemoglobin test is used to check for anemia or polycythemia and is usually ordered with a hematocrit (HCT) or as part of a complete blood count (CBC). When Hemoglobin and Hematocrit are ordered together it is referred to as H and H (Hemoglobin and Hematocrit).

Anemia

Anemia means the amount of hemoglobin in a patient's blood drops below normal level. Decrease in the hemoglobin is often associated with a reduction in the number of red blood cells and the hematocrit.

Polycythemia

Polycythemia refers to high levels of red blood cells, hemoglobin and hematocrit.

Signs and symptoms of anemia include but not limited to:

- Fatigue or Weakness
- Paleness
- Shortness of breath
- Lack of energy
- Fainting

Hematocrit

Hematocrit measures the percentage (%) of the patient's total blood volume that consists of red blood cells (RBC).

The hematocrit is a ratio of the volume of red blood cells (RBC) to the volume of all these components together. The value is expressed as a fraction or percentage. For example, hematocrit value of 30% means that there are 30 milliliters of red blood cells (RBC) in 100 milliliters of blood.

Red blood cell indices

Red blood cell (RBC) indices - part of the complete blood count (CBC), used to help in diagnosing the cause of anemia.

The indices include:

Average red blood cell size (MCV),

Hemoglobin amount per red blood cell (MCH) and

The amount of hemoglobin (Hgb) relative to the size of the cell (hemoglobin concentration) per red blood cell (MCHC).

Red cell distribution width (RDW)

A red cell distribution width (RDW) test - a measurement of the range in the volume and size of the red blood cells (RBC). Normal, mature red blood cells are disc-shaped, biconcave, anuclear cells measuring approximately 7-8 μm in diameter.

Reticulocyte count

The complete blood count (CBC) may also include a reticulocyte count. Reticulocyte test is used to determine the amount and/or the percentage of reticulocytes in the blood to assist in evaluating conditions that affect red blood cells (RBCs), for example anemia and /or bone marrow disorders. Reticulocytes are newly produced or immature red blood cells.

Platelets

Platelets are also called thrombocytes (blood clot cell), are components of blood that functions to stop bleeding by clumping as well as clotting blood vessel injuries; along with the coagulation factors.

The platelet count is the number/ amount of platelets in a patient's blood sample.

Mean platelet volume (MPV)

Mean platelet volume (MPV) may be ordered with a complete blood count (CBC). Mean platelet volume (MPV) is the calculation of the average size of platelets.

Platelet distribution width (PDW)

Platelet distribution width (PDW) may also be ordered with a Complete blood count (CBC). Platelet distribution width indicates how uniform platelets are in size.

Comprehensive Metabolic Panel (CMP)

Comprehensive metabolic panel (CMP) checks various electrolytes, kidney and liver functions. The CMP labs includes:

Glucose

Calcium

Proteins:

Total Protein

Albumin

Electrolytes

Potassium

Sodium

Chloride

CO2 /carbon dioxide and bicarbonate (bicarbonate or total CO2 test is often ordered with sodium, chloride, and potassium as part of the electrolyte panel).

Kidney Tests:

Creatinine

Blood Urea Nitrogen (BUN)

Liver Tests:

Bilirubin

Alanine Amino Transferase (ALT)

Alkaline phosphatase (ALP)

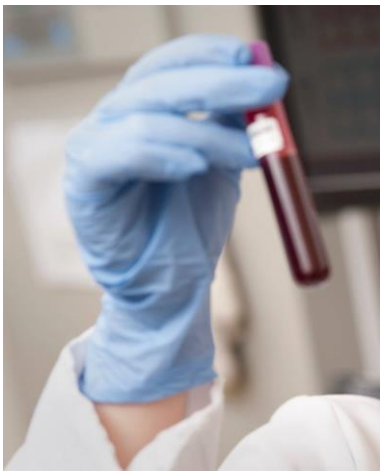
Aspartate Amino Transferase (AST)

Anti-nuclear antibody

(ANA)

Anti-nuclear antibodies (ANA) - a group of autoantibodies produced by a patient's immune system when it does not distinguish between self and foreign (nonself).

Anti-nuclear antibody (ANA) is completed to rule out any autoimmune disorders, for example lupus or Sjogren syndrome.



Thyroid Stimulating Hormone

(TSH)

Thyroid Stimulating Hormone (TSH) and other thyroid tests may be completed because hypothyroidism can cause symptoms that are similar to fibromyalgia.

Creatine kinase

(CK)

Creatine kinase (CK) is completed to rule out other disease that can cause pain and / or muscle weakness. Creatine kinase is an enzyme that is found in the brain, heart and skeletal muscle. When there is muscle damage, elevated or increased amounts of Creatine kinase are released into the blood. A Creatine kinase blood test may be used to detect myositis which is

inflammation of the muscles. The test may also be used to detect muscle damage due to myopathies or muscle disorders.

The American College of Rheumatology (ACR)

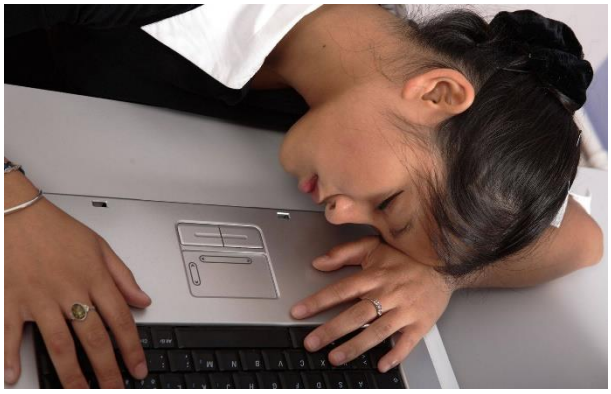
Along with assessing the patients, documenting the medical history, and ruling out disorders / diseases that may help to distinguish the difference between fibromyalgia and other diseases, the American College of Rheumatology (ACR) criteria evaluate pain location and the severity of the pain and the patient's symptoms.

According to the American College of Rheumatology (ACR) criteria, an individual would be considered to have fibromyalgia if that individual met the following:

Has been experiencing pain and symptoms over the past week, which is based on the total of the following:

- The number of painful areas/ sites out of nineteen parts of the body,
- As well as, the level of severity of the following symptoms:
    - Fatigue
    - Waking and feeling unrefreshed
    - Cognitive problems (problems with memory or thought)
- As well as, the number /amount of other general physical symptoms
- The symptoms have been occurring /present at a similar severity level for at least three months.

- The individual does not have another disorder that would explain the pain (ACR 2010).



Complications of fibromyalgia

As mentioned earlier, Fibromyalgia can cause pain, lower quality of life and disability.

Depression

Reports of higher rates of depression (major); adults who have fibromyalgia are more than three times more likely to have major depression than adults who do not have fibromyalgia. Therefore, screening and treatment for depression is very important (CDC.gov 2017).

Frequent hospitalizations

Within the United States, some adults with fibromyalgia experience frequent hospitalizations. It is reported that women with fibromyalgia have low quality-of-life and may have 40% less physical function as well as 67% less mental health (CDC.gov 2017).

Death rates from suicide and injuries

It is reported that death rates from suicide and injuries are higher among patients with fibromyalgia, but overall mortality among adults who have fibromyalgia is similar to the general population (CDC.gov 2017).

Other Rheumatic conditions

According to the CDC, people with Fibromyalgia have higher rates of other rheumatic conditions. Fibromyalgia often occurs at the same time with other types of arthritis for example, rheumatoid arthritis, osteoarthritis, ankylosing spondylitis and systemic lupus erythematosus (CDC.gov 2017).

TREATMENT

There is no cure for fibromyalgia at this time. Research is in progress and there are treatments that are available to manage the condition.

Fibromyalgia can be treated and managed effectively by providing various medications and educating the patients regarding self-management methods or strategies.

Treatment often focuses on symptom relief and making lifestyle changes. Counseling and support groups may also assist the individuals cope with the challenges that they face.

Combination of treatments

Physician often treat fibromyalgia with a combination of treatments such as:

- Aerobic exercise.
- Muscle strengthening exercise.
- Medications (prescription medications and over-the-counter pain analgesia or pain relievers).
- Patient education/ instructions or classes.
- Implementing methods for good sleep habits, which will improve the patient's quality of sleep.
- Incorporating stress management techniques for example massage, meditation, and yoga.
- For patients who are experiencing depression, cognitive behavioral therapy (CBT) may be initiated to treat underlying depression.

The individuals with Fibromyalgia can also learn to manage their fibromyalgia with self-management strategies, which are proven to reduce disability and pain.

The Healthcare Team

For effective management, the individuals with the condition should be treated by a Physician or a group of healthcare professionals/ healthcare team who specialize in fibromyalgia.

The healthcare team may consist of a physician, an occupational or physical therapist, and a rheumatologist, if the individuals has Fibromyalgia as well as other chronic conditions.

PHYSICAL ACTIVITY

EXERCISE

It is recommended that an exercise program should be initiated for the individuals who can tolerate it. The exercise regimen should be gentle; nothing vigorous as overexertion can result in painful flare ups and worsening of symptoms.

Completing regular aerobic exercise and stretching can help to improve sleep, maintain muscle conditioning, and help to reduce stiffness and pain.

There are classes that are available at community centers, the YMCA or the individuals can simply take a walk in the park.

Moderate activity

It is recommended that adults be moderately physically active for a period of 150 minutes per week (CDC.gov 2017). Activities such as swimming, walking, or riding a bike for 30 minutes a day for 5 days a week. The 30 minutes may be broken down into 3 separate 10-minute sessions throughout the day.

Participating in regular physical activity can also help to decrease the risk of developing some of the other chronic diseases for example diabetes or heart disease.

Lifestyle changes

Some factors that may also help to reduce the symptoms of Fibromyalgia include

- Lifestyle changes;
- limiting alcohol intake,
- limiting or avoiding caffeine consumption and
- stress reduction.

MEDICATIONS

Individuals with fibromyalgia are often treated with:

- Pain medications,
- Muscle relaxants,
- Sleep medications and
- Antidepressants.

The U.S. Food and Drug Administration (FDA)

FDA approved medications for the treatment of fibromyalgia;

In June 2007, Lyrica (Pregabalin) became the first FDA-approved medication for treating fibromyalgia.

In June 2008, Cymbalta (Duloxetine hydrochloride) became an approved medication.

In January 2009, Savella (milnacipran HCI) became an approved medication.

Antidepressant medications can also be helpful for some patients.

Some medications such as:

Cyclobenzaprine (Flexeril) and Amitriptyline (Elavil) may also be helpful.

Flexeril (cyclobenzaprine) is a muscle relaxant and Elavil (amitriptyline) is a tricyclic antidepressant that is used in the treatment of depression.

Treatment with Savella, Lyrica, and Cymbalta may cause a reduction in pain and improve function in some patients with fibromyalgia. It is reported that individuals with Fibromyalgia often experiences pain differently from others and the mechanism by which these medications produce their effects is not known.

Data suggest that these medications affect the release of neurotransmitters in the brain (FDA.gov 2014)

Neurotransmitters are the chemicals messengers that transmit signals from one neuron to another.

Lyrica

Lyrica was previously approved to treat seizures, pain from damaged nerves that can affect patients with diabetes; a condition referred to as diabetic peripheral neuropathy and in individuals who developed pain after having the rash from shingles.

Some side effects of Lyrica include:

Dizziness,

sleepiness,

Blurry vision,

trouble concentrating,

Dry mouth,

swelling of the hands and feet,

Weight gain.

Cymbalta

Cymbalta was previously approved for the treatment of anxiety, depression, and diabetic peripheral neuropathy. Some individuals with fibromyalgia also experience depression.

Cymbalta's side effects include, but not limited to:

- Decreased appetite,
- Dry mouth,
- Nausea,
- Constipation,
- Sleepiness and
- increased sweating.

Cymbalta may also increase the risk of suicidal thinking and behaviors in individuals who take the medication for depression, like some of the other antidepressants.

Savella

Savella is a selective serotonin and norepinephrine reuptake inhibitor (SNRI). Savella is not used to treat depression in the United States, but acts like medications that are used to treat depression as well as other psychiatric/ mental disorders.

Some of the side effects include:

- Vomiting,
- Nausea,
- Dry mouth,
- Constipation,
- Excessive sweating,
- Dizziness,
- Palpitations,
- Tachycardia (increased heart rate),
- Hypertension (high blood pressure) and
- Insomnia.

Opioid narcotic medications

It is recommended that opioid narcotic medications should be avoided and not be used for treating fibromyalgia. Research evidence has shown that these medications are not of help to most individuals with fibromyalgia and makes the pain persist or will result in greater pain sensitivity.

Tramadol

Tramadol (Ultram) is a medication that is used to treat moderate to moderately severe pain. It works like morphine. Tramadol (Ultram) may be used to treat individuals with fibromyalgia who are experiencing pain, but it is only recommended for short-term use.

Over-the-counter medications such as acetaminophen (Tylenol) or nonsteroidal anti-inflammatory drugs (NSAIDs) such as ibuprofen (Advil, Motrin) or naproxen (Aleve, Anaprox) are not effective for fibromyalgia pain. However, these medications may be helpful to treat fibromyalgia pain triggers.

Sleep Problems

For dealing with sleeping difficulties, some of the medications that are used to treat pain also improve sleep. Medications such as:

- Cyclobenzaprine (Flexeril),
- Amitriptyline (Elavil),
- Gabapentin (Neurontin),
- Pregabalin (Lyrica).

It is not recommended that individuals with fibromyalgia take sleeping medications like zolpidem (Ambien) or benzodiazepine.

Improve quality of life

Self-management education Classes

Self-management education classes are available to help people with fibromyalgia, arthritis or other conditions. These educational classes teach the individuals how to live well, be more confident in how to control the symptoms, and helps them understand how fibromyalgia affects their lives.

Chronic Disease Self-Management Program (CDSMP)

According to the CDC, the Chronic Disease Self-Management Program (CDSMP) is an effective self-management education program for individuals with chronic health problems (CDC.Gov 2017). The CDSMP program addresses diabetes, arthritis, lung and heart disease, and teaches skills that are useful for managing various chronic diseases.

The Chronic Disease Self-Management Program (CDSMP) workshops are held in community settings. The program focuses on topic such as:

- Effectively communicating with family, health professionals, friends,

- Techniques to deal with problems that are associated with chronic disease,
- How to evaluate new treatments,
- Appropriate use of medications,
- Appropriate exercise and
- Proper nutrition.

RESULTS FROM CDSMP

Evidence has shown that participants who took the Chronic Disease Self-Management Program (CDSMP) has shown -

Great improvements in exercise,

Ability to do social interactions,

Improvement in ability to do household activities;

Demonstrate less fear, depression, and frustration,

less worry about their health,

Reduction in symptoms such as pain, and

Increased confidence in their ability to manage their condition.

Support from Therapy

American Occupational Therapy Association (AOTA)

CLICK ON LINK – Managing Chronic Pain (AOTA RESOURCE)

COMMUNITY RESOURCES

Complementary Treatments

Disability & Work Issues

Legal Issues

Elderly Issues

Medication Assistance

Mental Health & Counseling

TAKE THE EXAM

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