Nutritional Considerations of Fibromyalgia

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Characteristics

- Form of nonarticular rheumatism.
- Affects an estimated 2% to 8% of the adult population.
- Two to five times as common as rheumatoid arthritis.
- More frequently in women than men.
- Affects all ages.
Diagnosis

• At least 11 of 18 tender points must be present in designated areas.

• Pressure applied to assess tender points must not exceed 4 kg/cm².
Common Signs and Symptoms
Sleep Disturbances

Affect more than 80% of patients with FMS.

Disturbances:
- Delay in sleep onset
- Poor maintenance of sleep
- Nonrefreshing sleep
- Sleep associated myoclonus
- Restless legs syndrome
Fatigue

- Present in more than 80% of patients with FMS.
- Affects mental and physical endurance.
- Hypothyroidism and inflammation must be R/O.
Cognitive, Memory and Psychological Disturbances

• Short-term memory impairment.

• Inability to concentrate or multitask.

• Sensory and cognitive overload.

• Reactive depression

• Anxiety
Complications

- Dizziness
- Syncope
- Vertigo
- Dry eye and mouth (30%)

Bladder symptoms
- Pain
- Urgency
- Incontinence

Bowel Symptoms
- Pain
- Colicky
- IBS (30-40%)
- Post-prandial bloating
Metabolic & Endocrine Disturbances

- Weight gain
- Hypothyroidism
- Increased activity of corticotropin-releasing hormone
- Growth hormone secretion-low (~30%)
Neurologic Symptoms

• Musculoskeletal hypertonicity and shortening;
  – Numbness
  – Tingling
  – Swelling

• Hyperreflexia
Laboratory & Radiology

- CBC
- ESR
- Chemistry
- Thyroid function tests
- Creatine phosphokinase
- X-ray
- MRI
Common Disorders that Mimic FMS
Hormone Disturbances

- Menstrual disorders
- Hypothyroidism
- Hyperparathyroidism
- Growth hormone deficiency
- Diabetes mellitus
- Adrenal insufficiency
- Pregnancy
- Menopause
Infections

- Bacterial
- Viral
- Fungal
- Parasitic

*** Lyme disease and Hepatitis C
Autoimmune Disorders

- Rheumatoid arthritis
- Spondyloarthropathies
- SLE
- IBD
- Polymyalgia rheumatica
- Palindronic rheumatism
Neurologic Diseases

- Multiple sclerosis
- Mysathenia gravis
- Arnold-Chiari malformation
Miscellaneous

- Malignancy
- Substance abuse
- Primary psychiatric disorders
- Malnutrition
- Allergies
Treatment
Nonpharmacologic

- Physical training (limited)
- Cognitive behavior therapy
- Massage (light)
- Manipulation
- Electromagnetic acupuncture
- Biofeedback
- Nutrition
The diagram illustrates the metabolic pathway of pyruvate in the mitochondrial matrix. Pyruvate dehydrogenase converts pyruvate into acetyl-CoA, which then enters the Kreb's cycle. The reaction involves the conversion of pyruvate to acetyl-CoA, where pyruvate releases a carbon dioxide (CO₂) and is converted to an Acetyl group. This Acetyl group then covalently binds to Coenzyme A (CoA), forming acetyl-CoA. The process is facilitated by the enzyme pyruvate dehydrogenase and is accompanied by the production of NADH and hydrogen ions (H⁺). NADH is essential for the Kreb's cycle, where it acts as a coenzyme, and the hydrogen ions (H⁺) are crucial for the proton gradient that drives ATP synthesis.
Nutritional Considerations for Myalgia / Fibromyalgia

- Hypoglycemia
- Caffeine
- Alcohol
- Thiamin
- Magnesium
- CoQ10
- L – Carnitine
- Vitamin C
- Vitamin B12
- Vitamin D
- Biotin
- Selenium
- L-Tryptophan
- Zinc
Medications

- Local corticosteroid injections
- Lidocaine
- Antispasmodics
- Proton pump inhibitors
- Muscle relaxants
- NSAIDS
- Anti-depressants
- Anti-anxiety
- Anti-seizure
- Growth hormone
Commonly asked questions

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