Impact of Diet on Mental, Physical and Emotional Health

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Learning Objectives
By the end of this seminar, participants will be able to:
• Verbalize principles of healthy eating
• Identify the impact of inflammation on mental and physical health
• Understand the relationship between food, inflammation, and mental health
• Discuss the importance of micronutrients and macronutrients that affect mental, physical, and emotional health
• Recognize the importance of the gastrointestinal microbiome and make dietary changes to improve gastrointestinal health
• Facilitate dietary changes to decrease inflammation and directly improve mental and physical health

Mental Health
In 2020, there were an estimated 52.9 million adults aged 18 or older in the United States with AMI (Any Mental Illness). This number represented 21.8% of all U.S. adults.

Any mental illness (AMI) is defined as a mental, behavioral, or emotional disorder. AMI can vary in impact, ranging from no impairment to mild, moderate, and even severe impairment.
Emotional well-being has been defined as an overall positive state of one’s emotions, life satisfactions, sense of meaning and purpose, and ability to pursue self-defined goals. Emotional well-being has been shown to be associated with reduced risk of death from all causes by almost 20 percent among healthy people, while having a sense of purpose in life reduces the risk of heart attack and stroke by 17 percent.


Inflammation

Inflammation is an important part of our immune response and is beneficial for protecting us from acute stress and illness. The inflammatory response can be turned on and off – it becomes a problem when it is left on. Chronic inflammation maybe a contributing factor to many disease states like coronary artery disease, diabetes, cancer, and Alzheimer’s disease.

Some symptoms of chronic inflammation include depression, fatigue, weight gain, insomnia and gastrointestinal complaints.

Poor diet, poor lifestyle choices and prolonged stress can all increase inflammation – keeping it turned on. Healthy diet and lifestyle choices can decrease inflammation – turning it off.

Inflammation: A unifying theory of disease? - Harvard Health Understanding Inflammation: Causes, Symptoms, Diagnosis, Treatment, M (healthline.com)

Acute inflammation

Usually occurs for a short duration. Symptoms appear quickly. This type restores your body to its state before injury or illness.

Chronic inflammation

Is a slower and generally less severe form of inflammation. It typically lasts longer. It has been linked to autoimmune disorders and even prolonged stress.

Poor diet, poor lifestyle choices and stress can all increase inflammation – keeping it turned on. Healthy diet and lifestyle choices can decrease inflammation – turning it off.
Decreasing inflammation will help to improve mental, physical and emotional health.

How to decrease inflammation

**Do**
- Eat plenty of fruits, vegetables, whole grains, lean protein and heart healthy fat
- Exercise
- Sleep
- Relax
- Aid body in removing toxins
- Omega 3 > Omega 6

**Do Not**
- Stress
- Smoke or other exposure to toxins and irritants
- Leave chronic disease untreated
- Consume excessive amounts of sugar, refined carbohydrates, alcohol, processed meats and trans fats*
- May increase inflammation in those with underlying autoimmune disease

Healthy Diet

A healthy diet emphasizes whole foods like fruits, vegetables, nuts, seeds, whole grains, lean proteins and healthy oils. A healthy diet is not a perfect diet; there is no perfect diet. It is an eating style that you can maintain, it should be enjoyable, sustainable, and flexible – and include a wide range of whole and processed foods. Healthy diets also need to be practical and consider the limited amount of time, culinary expertise and budget that many people face.
Micronutrients: Vitamins and Minerals

- Help control fluid balance and blood pressure
- Precursors for Neurotransmitters
- Antioxidants
- Hormonal regulation
- Enzymes
- Central nervous system

Micronutrients that have been linked with depression: iron, folate, B6, B12, B1, B9, phosphorus, zinc and magnesium

Micronutrients

Phosphorus Magnesium Zinc Iron Selenium

Phosphorus

- Important in energy metabolism.
- Found in
  - Dairy
  - Nuts
  - Seeds
  - Whole grains
  - Legumes
  - Meat – like pork and chicken
Magnesium

- Magnesium is important for muscle and nerve function.
- Found in:
  - Beans
  - Nuts
  - Leafy greens
  - Whole grains

Zinc

- Zinc helps with healing and tissue repair.
- Found in:
  - Oysters
  - Beans
  - Nuts
  - Oats
  - Hemp seeds
  - Dairy
  - Meat

Iron

- Iron helps blood carry oxygen.
- Found in:
  - Meat
  - Fortified foods
  - Leafy greens
  - Lentils
  - Sesame seeds
  - Soybeans
Selenium

- Selenium is important in DNA synthesis and thyroid hormone production.
- Found in:
  - Brazil nuts
  - Organ meats
  - Beans
  - Rice
  - Yellowfin tuna

Micronutrients

Vitamins

- Vitamin D important in hormone production, absorption of calcium and immune system function.
- Found in:
  - Fatty fish
  - Egg yolks
  - Liver
  - Sunshine

Vitamin D
B Vitamins

- B vitamins are important in energy production, red blood cell production, central nervous system function, detoxification and production of neurotransmitters.
- Found in animal foods, fortified foods, legumes, whole grains, nutritional yeast and fortified foods
- B12 – fish, poultry, meat, eggs, dairy
- B9/folate – leafy greens, nuts, beans, fruit, grains, meat and poultry
- B6 – poultry, fish, Potatoes and some fruit
- B1/thiamine – fish, pork, legumes, milk, eggs, nuts, seeds, whole grains – highest in flax seeds, salmon and navy beans

Macronutrients

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<th>Carbohydrate</th>
<th>Protein</th>
<th>Fat</th>
<th>Water</th>
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### Microbiome

#### Why is it important?
- 4-10 times more bacteria than human cells
- Aids in digestion
- Imbalance as been linked with chronic disease
- Also linked with food cravings
- Hormones and neurotransmitters
- Bacteria translocation

#### How do we support it?
- Fiber: prebiotic foods
  - Plant foods: fruits, vegetables, beans, nuts, grains
- 30 different plant species a week
- Onions and garlic: inulin
- Probiotic foods: fermented foods
- Limit sugar intake
- No artificial sweeteners
- Limited traditional antibiotics
- May be affected by diet in as little as 3 days

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### Opportunity for adequacy and variety
- Stabilize mood
- Prevent poor food choices
- Improve digestion

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### EAT!
- Variety:
  - 10-12 servings of fruit and vegetables a day
  - 30 different plant species
  - 9 essential amino acids
  - 2 essential fatty acids

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### Variety
- Fruits
- Grains
- Dairy
- Vegetables
- Protein

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**Hangry**

- Hypoglycemia
- Irritability
- Headaches
- Inability to concentrate

**Better Digestion**

**Better Choices**

- Eat regularly throughout the day
- Have protein, carbohydrate and fat
- 5-10 servings of fruits and vegetables a day
- Incorporate heart healthy fat
- Drink water
- Do not drink your calories
- Be active every day
- Enjoy your food
Include

Whole grains
Beans, nuts and seeds
Fruit
Vegetables
Heart Healthy fats

How

Wash and cut produce when you buy it!
Try a meal preparation delivery service
Prepare your meals the day before or at the start of the week
Have an emergency back-up
Use a calorie tracking app – enter everything the right before after a week or two you will have weekly menus
Make it easy for yourself – buy prewashed and precut produce or frozen produce
Be proactive when it comes to hunger
80/20 rule

Sample Menu

Breakfast
Steel Cut oats with walnuts, cherries and pomegranate seeds

Snack
Edamame beans steamed

Lunch
Lentil stew with marinated veggies

Snack
Greek yogurt with berries

Dinner
Roasted salmon with beets, greens and farro

Snack
Dark chocolate and almonds
Remember

Sleep
Exercise
Relax
See your health care team
Take medication as prescribed
Do something for others
Be kind

Thank You!

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