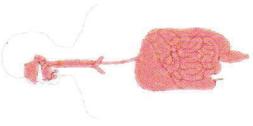


# THE INTIMATE CONNECTION BETWEEN MOOD AND FOOD

What we eat has a major impact on our MIND, MOOD, and BEHAVIOR.

## Intestinal Flora (gut flora)

The gastrointestinal tract and brain work together and are influenced by each other.



Naturally occurring microorganisms in the gut, called flora, have an impact on our mind and body.

Conditions such as depression and autism have been linked to altered gut flora.

Improvements have been shown with:

- ◆ Probiotic Supplements
- ◆ Fermented Foods
- ◆ Gluten-free Diet



## Serotonin (neurotransmitter)

Both anxiety and depression are linked to low levels of serotonin.

90% of serotonin is produced by the cells in the gastrointestinal tract from tryptophan.

We get tryptophan from eating protein. Tryptophan is then converted to serotonin in the brain.

## Foods to Increase Serotonin Levels:

Protein sources of tryptophan:

- ◆ Turkey, Fish, Chicken
- ◆ Nuts, Beans
- ◆ Cheese
- ◆ Eggs



Complex carbohydrates are essential to helping your body process the tryptophan in proteins.

Complex carbohydrates:

- ◆ Vegetables
- ◆ Fruits
- ◆ Whole Grains
- ◆ Legumes



## Healthy Omega 3 Fats:



- ◆ Oily Fish
- ◆ Flaxseed
- ◆ Oils-Canola, Olive, Sunflower Soy
- ◆ Corn
- ◆ Nuts, Seeds
- ◆ Avocados

## Foods to Promote Healthy Intestinal Micro-Flora

- ◆ Fermented dairy products:
  - ◆ Kefir (fermented milk), Yogurt
  - ◆ Fermented cabbage:
    - ◆ Kim chi, Sauerkraut
- ◆ Pickled vegetables:
  - ◆ Turnips, Eggplant, Cucumbers
  - ◆ Onions, Squash, Carrots
  - ◆ Natto and Kombucha

## Healthy Omega 3 Fats:

## Serotonin Boosting Supplements:

- ◆ 5-HTP
- ◆ L-Tryptophan
- ◆ Sam-e
- ◆ GABA

## Important Vitamins:

### Vitamin D3- the sunshine vitamin

Naturally found in these foods:

- ◆ Cod liver oil
- ◆ Sword fish
- ◆ Salmon
- ◆ Tuna
- ◆ Sardines
- ◆ Beef Liver
- ◆ Egg Yolk
- ◆ Swiss cheese

## Herbal Remedies:

- ◆ St. John's Wort
- ◆ Passion Flower
- ◆ Kava
- ◆ Valerian
- ◆ Chamomile
- ◆ Aroma therapy

## Calming Minerals:

- ◆ Zinc
- ◆ Magnesium
- ◆ Calcium

## B Complex- The B vitamins are water soluble vitamins and aren't stored in the body; because they can't be stored.

a continuous supply through diet or supplements is necessary.

B vitamins are found in:

- ◆ Fish
- ◆ Poultry
- ◆ Meat
- ◆ Eggs
- ◆ Dairy products
- ◆ Leafy green vegetables
- ◆ Beans
- ◆ Peas
- ◆ Many cereals and some breads



Also found in these Fortified Products:

- ◆ Milk
- ◆ Margarine
- ◆ Cereals
- ◆ Yogurt



## Avoid the Serotonin Thieves:

- ◆ Caffeinated Sodas
- ◆ Coffee
- ◆ Artificially Sweetened Diet Drinks
- ◆ Sugar
- ◆ High Fructose Corn Syrup



## Results of Pre and Post Test Questionnaire for Food and Mood Lecture

The results of The Intimate Connection Between Food and Mood pre-and post test questionnaire, showed that the audience developed a greater understanding of the relationship between healthy gut bacteria and mood. They also developed a greater understanding of foods that provide probiotics and the relationship of a healthy gut microflora to an enhanced feeling of well-being.

The audience was better able to correlate the intake of probiotic containing foods with enhanced mood through increased serotonin production. The audience was also better able to understand the mechanisms involved in serotonin production, where and how serotonin is produced and the way serotonin travels from the vagus nerve to the brain.

## **“The Intimate Connection Between Food and Mood”**

### **Audience Pre and Post Lecture Questionnaire**

- What are some factors that might influence our moods?
- Do you think that the foods we eat have any impact upon our mood?
- What is the vagus nerve and what neurotransmitter travels the vagus nerve?
- How do the foods we eat affect the microflora of our digestive tracts?
- In what way does the gut bacteria have an effect on mood?