

# Food



# and Mood

# mood

- ◆ **Mood** is a relatively long lasting, affective or emotional state.
- ◆ Moods differ from simple emotions in that they are less specific, less intense, and less likely to be triggered by a particular stimulus or event.
- ◆ Moods generally have either a positive or negative valence. In other words, people typically speak of being in a *good* mood or a *bad* mood.

# mood

- ◆ Unlike acute, emotional feelings like fear and surprise, moods often last for hours or days.
- ◆ Long term disturbances of mood such as depression and bipolar disorder are considered mood disorders.

# Food play an important role in our...

- **Mood**
- **Brain function**
- **Nervous system**
- **Mental health**
- **Energy**





# Food and Mood

How food plays an important role in our mood and motivation

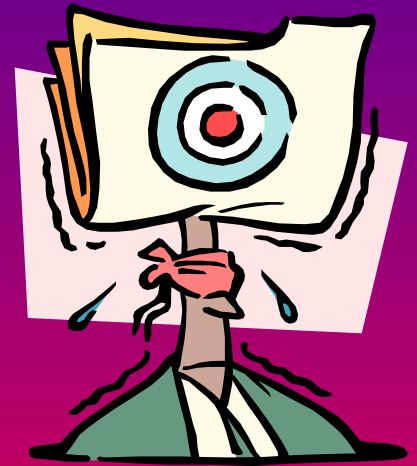


# Questions to ask yourself!

**How sharp is your mind?**

**How balanced is your mood?**

**How consistent is your energy?**



Britain's biggest health survey involving 22,000 people showed....

**76%** of people are often **tired**

58% suffer from mood swings

**52%** feel apathetic & **unmotivated**

50% suffer from anxiety

47% have difficulty sleeping

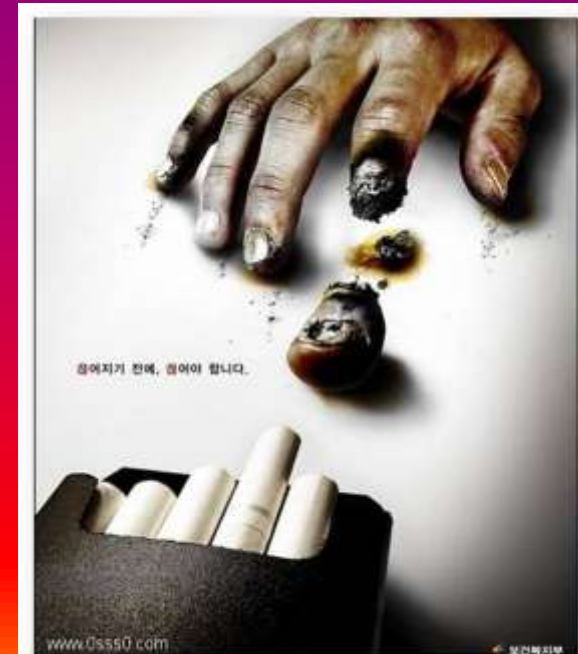
**43%** have poor **memories** or difficulty concentrating

**42%** suffer from **depression**

# Do we wonder why?

**We choose caffeine, sugar or cigarettes and...**

- drink 1.5 billion caffeinated drinks!
- eat 6 million kilo's of sugar & 2 million kilo's of chocolate!
- smoke 1.5 billion cigarettes





And if things get really bad?

We pop....

- 532 million tranquillisers
- 463 million sleeping pills
- 823 million anti-depressants



EVERY YEAR!

# Food and mood: chemicals that make “feeling blue”



**Serotonin** – which influences your mood

**Adrenalin/Noradrenalin** from dopamine, influences  
motivation

**These neurotransmitters are directly influenced by nutrition**

# The importance of eating a good breakfast

## *Demotivating - Refined*

Sugary fortified cereals

White toast / Jam

Pastries

Tea / Coffee

Sweetened yogurt

Fried breakfast



## *Motivating - Complex*

Natural Yogurt

Fresh Fruit

Fresh pressed  
juices

- Vegetable or Fruit

Boiled or poached eggs

Grilled breakfast



# Blood sugars

If any imbalance to the glucose supply to the brain, we can experience....

Irritability

Insomnia

Poor concentration

Excessive thirst

Blurred vision

Dizziness

Excessive sweating

Forgetfulness

Depression

Digestive disturbances



## Balancing blood sugar levels – the benefits

- **Breakfast – kick start our day**
- **Healthy snacking in between meals**
- **Keeps energy levels balanced throughout the day**
- **Helps prevent diseases such as diabetes**



# A motivating lunch vs. a demotivating lunch

## *Demotivating*

White bread

Little filling in sandwich

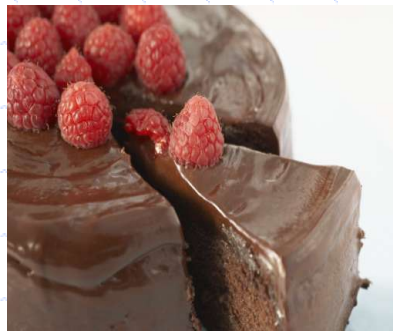
Sausage roll

Cake

Crisps

Chocolate bars

Fizzy drink



## *Motivating*

Brown bread

Lots of salad in sandwich

Extra salad

Fruit

Nuts and seeds

Cereal

Juice

water





# Drinking – why it is so important

- $\frac{3}{4}$  of the human brain is water
- drinking water can help energise when feeling lethargic
- water aids the elimination of toxins from the body
- water can stop cravings



**You may be eating when you should be drinking!**

# Drinking – why it is so important

- The less you drink the less you want to drink
- Drink water 30 mins before or after eating
- Alcohol, sugar, caffeine, salt deplete the body of water
- Fruit and veggie juices can boost the immune system



# Caffeine

**Caffeine blunts the mind!**

addictive

worsens mental performance

creates higher levels of anxiety and depression

highest consumers had the greatest incidence of stress-related problems, as well as lower academic performance



# Caffeine

## Impact on the body – exhaustion in a cup!

- increases the **release** of the neurotransmitters, dopamine and adrenalin
- the more caffeine you consume the more the body and brain become **insensitive** to its own natural stimulants – dopamine and adrenalin
- you need more **stimulants** to feel normal
- net result: **adrenal exhaustion** – the chemicals of motivation and communication are lost.

# The Caffeine Buzzometer

*Product*

*Caffeine content*

|  |                  |
|--|------------------|
| <b>Coca cola 350ml</b>                     | <b>46-80mg</b>   |
| <b>Diet Coke 350ml</b>                     | <b>46mg</b>      |
| <b>Red Bull</b>                            | <b>80mg</b>      |
| <b>Hot cocoa 150ml</b>                     | <b>10mg</b>      |
| <b>Coffee, instant 150ml</b>               | <b>40-105mg</b>  |
| <b>Coffee, espresso, cappuccino, latte</b> | <b>30-50mg</b>   |
| <b>Coffee, filter 150ml</b>                | <b>110-150mg</b> |
| <b>Coffee, Starbucks (large)</b>           | <b>500mg</b>     |
| <b>Decaffeinated coffee 150ml</b>          | <b>0.3mg</b>     |
| <b>Chocolate cake (1 slice)</b>            | <b>20-30mg</b>   |
| <b>Bittersweet chocolate 28g</b>           | <b>5-35mg</b>    |
| <b>Tea 150ml</b>                           | <b>20-100mg</b>  |
| <b>Green Tea 150ml</b>                     | <b>20-30mg</b>   |

# Antioxidants

**Antioxidants**      Vitamins    A, C, E.  
                         Minerals    Selenium, Zinc



Probable antioxidant deficiency diseases

Alzheimer's disease

Cancer

Cardiovascular disease

Cataracts

Diabetes

Hypertension

Infertility

Macular (eye lens) degeneration

Measles

**Mental illness**

Tooth disease

Respiratory tract infections

Rheumatoid arthritis



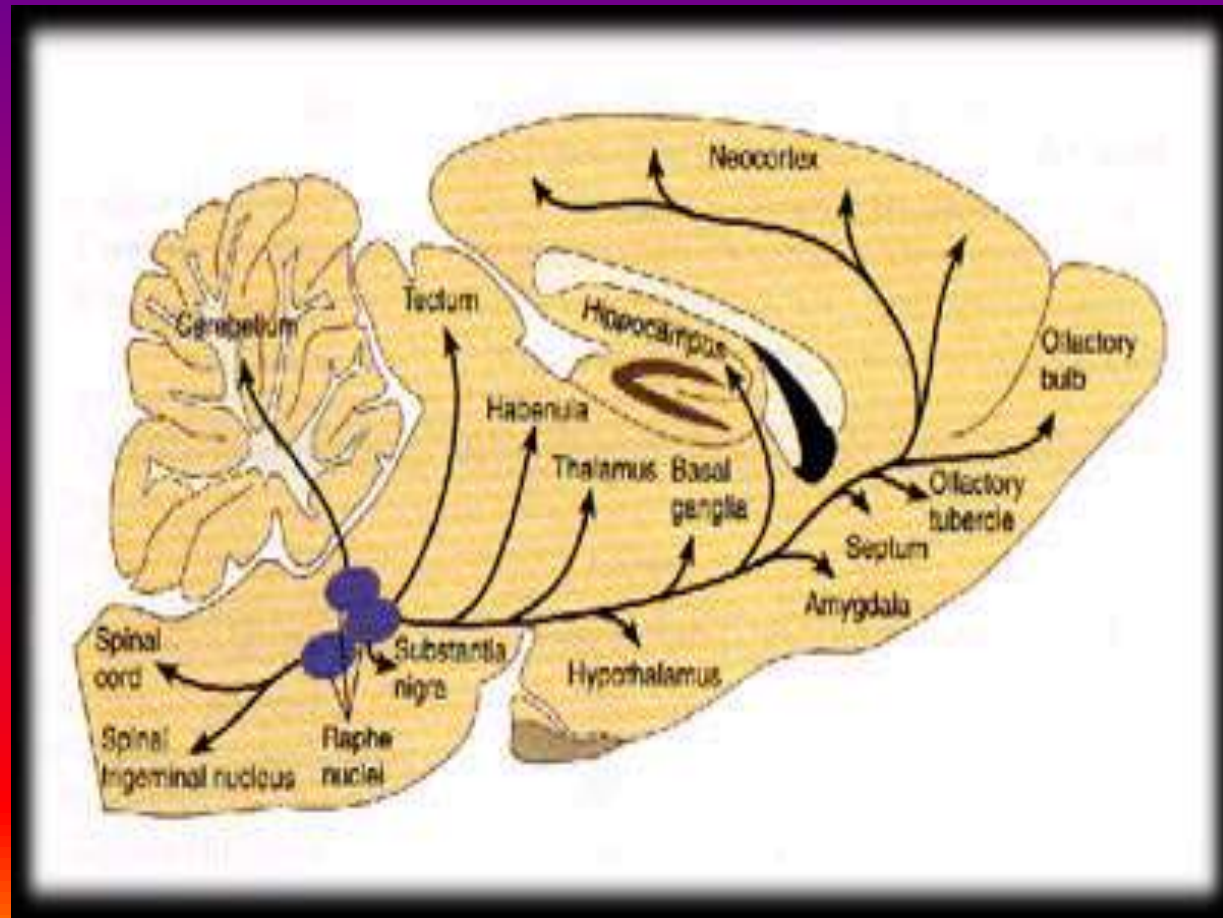
# Vitamins and minerals

- boosts your immune system
- maximises performance and motivation
- improves mood
- balances hormone regulation
- helps the body to function effectively
- helps the body to reduce stress
- supplements slumps in diet
- increases energy levels
- can help prevent mental illness



# Fats that heal vs. the fats that kill

Mood enhancers and motivators.  
our brain is 60% FAT



# The fats that kill

## The Bad Fats

saturated fat

hydrogenated fat

trans fatty acids

## Fats can cause disease

heart attacks

thrombosis

embolisms

strokes

cancer



## The good fats - Omega 3/6/9

- optimises intelligence
- helps insulin work
- maintains water balance
- very much part of the equation for happiness
- stimulates the brain to increase serotonin levels



Helps prevent

depression / dyslexia / attention deficit disorder /  
fatigue / memory problems / alzheimer's /  
schizophrenia



# Polyunsaturated fatty acids

The main PUFAs in the brain are:

- ❖ docosahexaenoic acid (DHA) derived from the omega 3 fatty acid, alpha-linolenic acid
- ❖ arachidonic acid (AA) and docosatetraenoic acid both derived from the omega 6 fatty acid, linoleic acid





# Omega-3

- ◆ Omega-3 fatty acid is derived from fish oil
- ◆ There is evidence that those with a diet rich in fish have a lower incidence of cardiovascular disease
- ◆ Studies suggest that in countries where there is a high consumption of fish there are lower rates of depression (Sanchez-Villegas et al, 2006; Muskiet & Kemperman, 2006)





# Omega-3 treatment of depression

- ◆ N=22 depressed patients
- ◆ All failed to respond to antidepressant treatment
- ◆ 4 weeks of omega-3 (E-EPA) or placebo
- ◆ Highly significant benefits of the addition of the omega-3 fatty acid compared with placebo were found by week three of treatment.



# Omega-3 treatment study



- ◆ N=70 antidepressant non-responding patients
- ◆ The patients were randomised to receive either placebo or E-EPA in doses of 1, 2 or 4 grams per day for 12 weeks in addition to their antidepressant.
- ◆ The 1 gram per day group showed a significantly better outcome than the placebo group. Peet et al, 2002

# poor memory

- ◆ In the April 2007 *Journal of Neuroscience* published that: A group of mice were genetically modified to develop accumulation of **amyloid and tau** proteins in the brain as in people with poor memory.
- ◆ After 3 months of feeding, all the DHA supplemented groups were noted to have a lower accumulation of beta amyloid and tau protein. Some research suggests that these abnormal proteins may contribute to the development of memory loss in later years.

## Poor learning & focus

- ◆ In April 2007, a study was published regarding  $n-3$  supplementation in children with learning and behavioral problems in *Journal of the Developmental and Behavioral Pediatrics*
- ◆ 132 children, 7 to 12 years old, with poor learning, participated in a randomized. For the first **15** weeks of this study, the children were given PUFAs ( $n-3$  and  $n-6$ , **3 g/day**).
- ◆ After **15** weeks, all groups crossed over to the polyunsaturated fatty acids (PUFA) plus vitamins and mineral supplement. Parents were asked to rate their children's condition after fifteen and thirty weeks. After thirty weeks, parental ratings of behavior improved significantly in nine out of fourteen scales.
- ◆ The lead author of the study, Dr. Sinn, indicated the present study is the largest PUFA trial to date with children falling in the poor learning and focus range. The results support those of other studies that have found improvement in poor developmental health with essential fatty acid supplementation



# 10 point plan for optimum health

1. **BREAKFAST** - never skip this most important meal of day!
2. **SNACKS** - have good quality snacks to eat between meals
3. **LUNCH** - organise lunch ahead of time and balance protein against good quality complex carbohydrates
4. **FRUIT AND VEG** - eat as many fresh fruit and vegetables as possible – have 5 a day!
5. **DRINK** - plenty of water, juices or non caffeinated drinks during the day, stay hydrated!



# 10 point plan for optimum health

6. **SUGAR** - Avoid sugary products or keep them to a minimum
7. **CAFFIENE** - Keep to a minimum - no more than 2 cups a day  
– it's addictive!
8. **OMEGA 3,6,9** - Increase your intake of fish rich in omega 3 essential fatty acids – including salmon, mackerel, herrings,  
Or take a good quality supplement!
9. **VITAMINS and MINERALS** - Nourish your brain by eating a healthy diet of fresh fruit, vegetables, whole-grains, beans, lentils, nuts and seeds
10. **SUPPLEMENT** - your diet with vitamins & minerals in times of increased pressure and help boost your immune system





keep eating!

stay motivated!

be happy!

**'LET YOUR FOOD BE YOUR MEDICINE'**

HIPPOCRATES