

ANOREXIA NERVOSA (AN)



Neurotransmitters

```
graph TD; A[Neurotransmitters] --> B[SEROTONIN]; A --> C[DOPAMINE]
```

SEROTONIN

Disturbances in levels of the neurotransmitter serotonin appear to be a characteristic of individuals with eating disorders. Bailer et al compared serotonin activity in women recovering from restricting-type anorexia and binge-eating/purging type with healthy controls.

DOPAMINE

Recent studies suggest a role for *dopamine* in AN. Kaye et al. Used a PET SCAN to compare dopamine activity in the brains of 10 women recovering from AN and 12 healthy women. In the AN women they found overactivity in dopamine receptors in a part of the brain known as the basal ganglia, where dopamine plays a part in the interpretation of harm and pleasure. Increased dopamine activity in this area appears to alter the way people interpret rewards. Individuals with AN find it difficult to associate good feelings with the things that most people find pleasurable.

NEURODEVELOPMENT

PREGNANCY AND BIRTH COMPLICATIONS

Lingberg and Hjern found a significant association between premature birth and development of AN. Birth complications may lead to brain damage caused by hypoxia, impairing the neurodevelopment of the child.

SEASON OF BIRTH

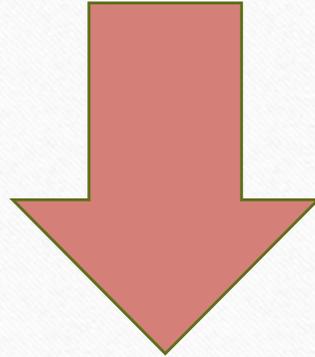
Research also suggests that individuals with AN are more likely to have been born during the spring months. Explanations for this intriguing association include intrauterine infections during pregnancy and temperature at time of conception.

The reproductive suppression hypothesis

- Surgery suggest that adolescent girls who desire to control their weight, it represent an evolutionary adaption in which ancestral girls delayed the probability of poor reproductive success.

The ability to delay reproduction is adaptive because it enables a female to avoid giving birth at a time when conditions are not conducive to her offspring's survival.





This model is based on the observation that, in a number of species, puberty is delayed or reproduction suppressed in females when they are subjected to stress or in poor physical conditions.

The adapted to flee' hypothesis

The AFHH propose that the typical AN symptoms of food restriction, hyperactivity and denial of starvation, reflect the operation of adaptive mechanisms that once caused migration in response to local famine conditions.

Normally, when a person begins to lose weight, physiological mechanisms conserve energy and increase desire for [food](#).

Food restriction is a common feature of many species when feeding competes with other activities such as migration or breeding. During the Middle Ages, the phenomenon of «holly anorexia» was widespread among pious women. The hyperactivity typically found in anorexics may be a form of migratory restlessness as many species increase activity in times of food shortage ad prior to migration.

In the EEA those starving forages who deceived themselves about their phsical condition would have been more cofident about moving on to a more favoueble environment, and so would have been more likely to survive.

Psychiatric Conditions



An unlikely consequence of research in this area has been its implication for insurance payouts for psychiatric conditions. In the US, for example, treatment for AN is restricted under many insurance plans because it is not considered to be «biologically based». However, research such as that considered on this spread creates a case for insurance companies to consider AN in the same way as other psychiatric conditions that are considered to be biologically based.

Treatment Implications

Biological explanations of AN offer the promise of a range of treatment possibilities, including drug therapies to normalise neurotransmitter levels and even gene-replacement therapy. Bulik suggest that if we could use an individual's genetic profile to indicate level of risk, it would be possible to develop specially tailored prevention programmes for those most susceptible to developing AN. An additional advantage of treatments linked to biological explanations is that people realise they are dealing with a dysfunctional biology rather than a dysfunctional family. Perhaps the most important implication of this is that it reduces the guilt generated by the view that it is parents who cause the development of eating disorders in their children.

NEUROTRANSMITTERS



SEROTONIN

The SSRIS are ineffective when used with anorexic patients and become effective to recovering. Malnutrition negates the action of SSRIS fault omages in serotonin function.



DOPAMINE

Adolescent girls with anorexia had higher levels of homovanillic acid than a control group. Levels of dopamine appear to be inversely related to body weight.

BULIMIA NERVOSA:

**The Bulimia Nervosa is an eating disorder characterized by the cycle
binge-expulsion.**

Bussida Kouda | Sara Belletti | Giada Nazzi

ARE YOU SURE

YOU KNOW

EVERYTHING

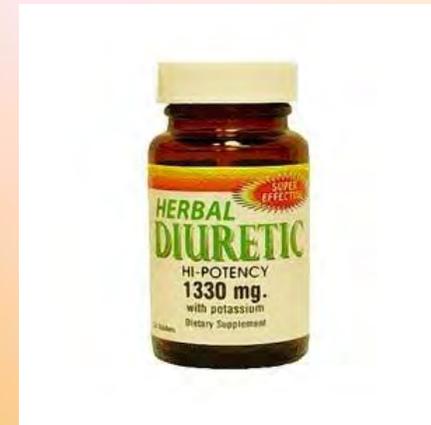
...???

B.N. consists in eating a big quantity of food in a short time



but the feeling of guilty, shame and fear of **gaining weight ...**

... leads to abuse
laxative, diuretics,
over exercise and
inducing vomit.

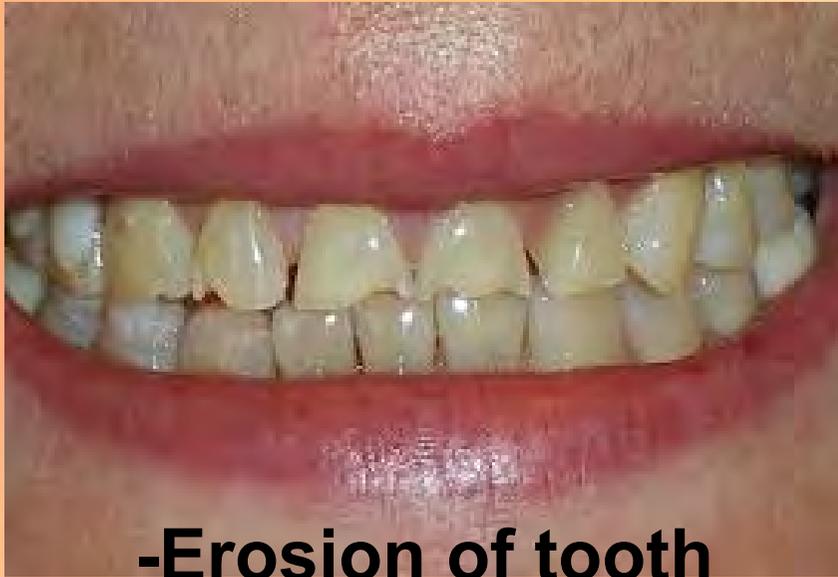


A person suffering from bulimia is **obsessed by the shape and size of her body** caused by low self-esteem.



The cycle binge-expulsion can lead to serious **health problems:**

- Acid in the mouth from vomiting cause teeth and gum disease and erosion of tooth enamel;
- Changes in metabolism can lead to heart problem;
- Dehydration lead to weakness, fainting or kidney problems;
- Inflammation of the esophagus may cause bloody vomit;
- Low blood pressure cause fainting;
- Inducing vomit cause also Russel's sign on the back of the hands.



-Erosion of tooth enamel-



-Fainting-



-Heart disease-



-Russel's signs-

The causes are unclear but they probably come from social influence, for example **bullying**,

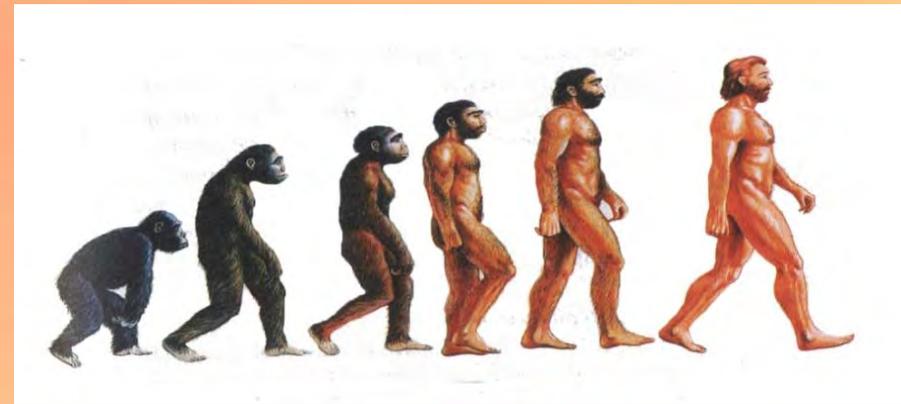
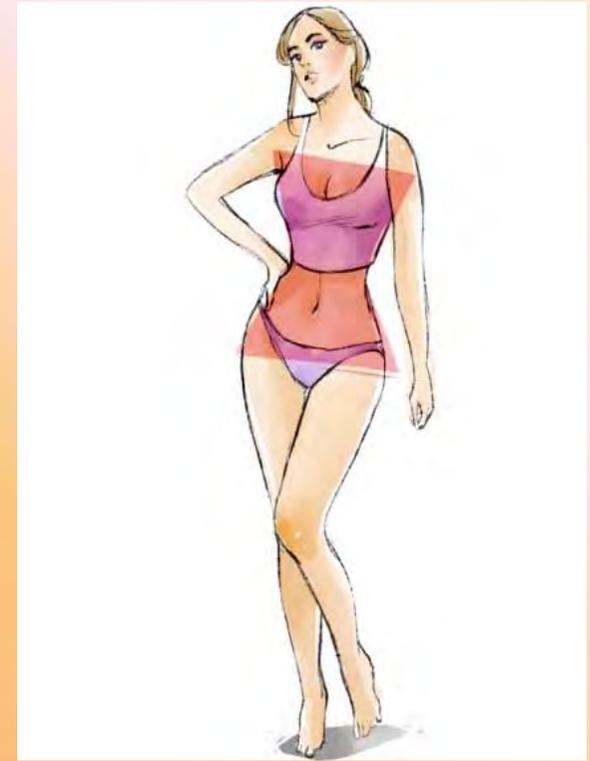


influence of media and the need to be attractive specially for women...

...IN FACT...

EVOLUTIONARY EXPLANATION

The traditional “hour glass” female figure that women want, comes from the sexual selection: our male ancestors preferred women with slim waist because even the slightest thickening was an indication of pregnancy already in progress.

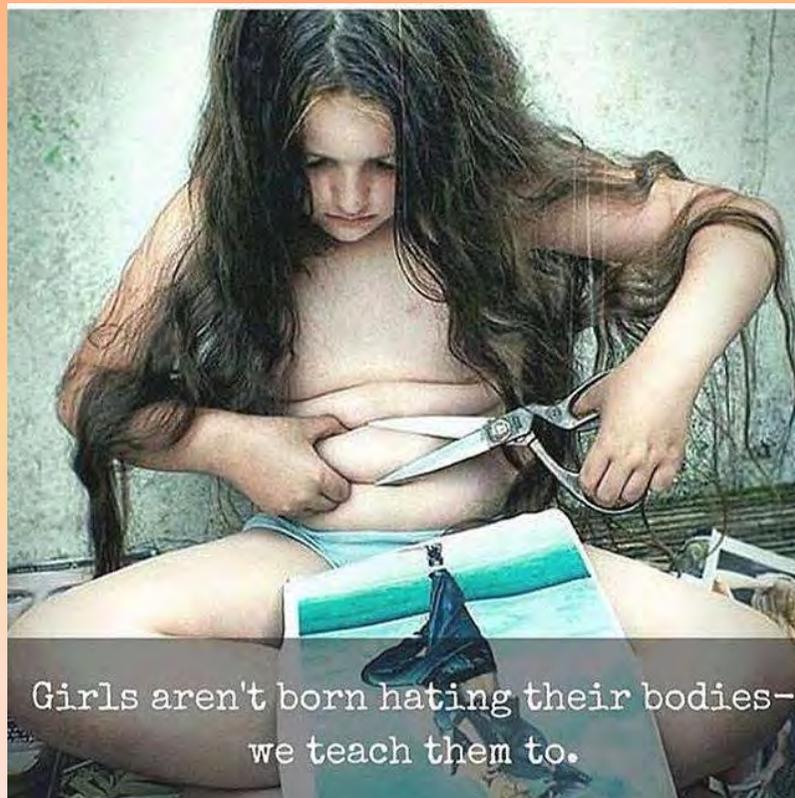


But the function of this adaptation was twofold:
- it ensured that young females differentiated themselves from older females;



- it helped them compete with other young women in marriageable age for the best long-term mates.

This adaptation is designed to work through scanning other females in the environment and setting the desired shape at a level which is thinner than the others.



Girls aren't born hating their bodies—we teach them to.

In early puberty, female set the desired shape as a mental template based on the body shape of surrounding females; they need to have a shape lower than it would have been in the environment, which leads to develop eating disorders.

**BUT THERE IS
SOMETHING
MORE TO KNOW**

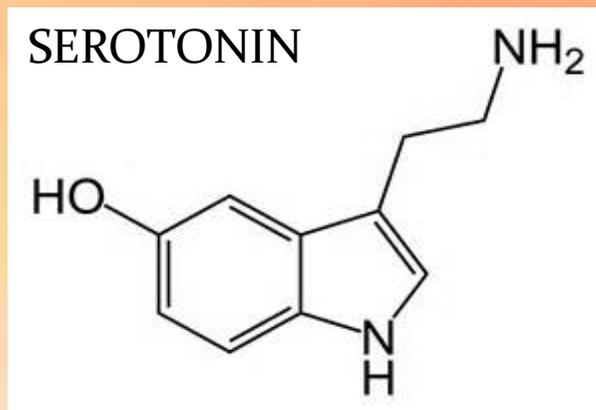
...

NEURAL EXPLANATION

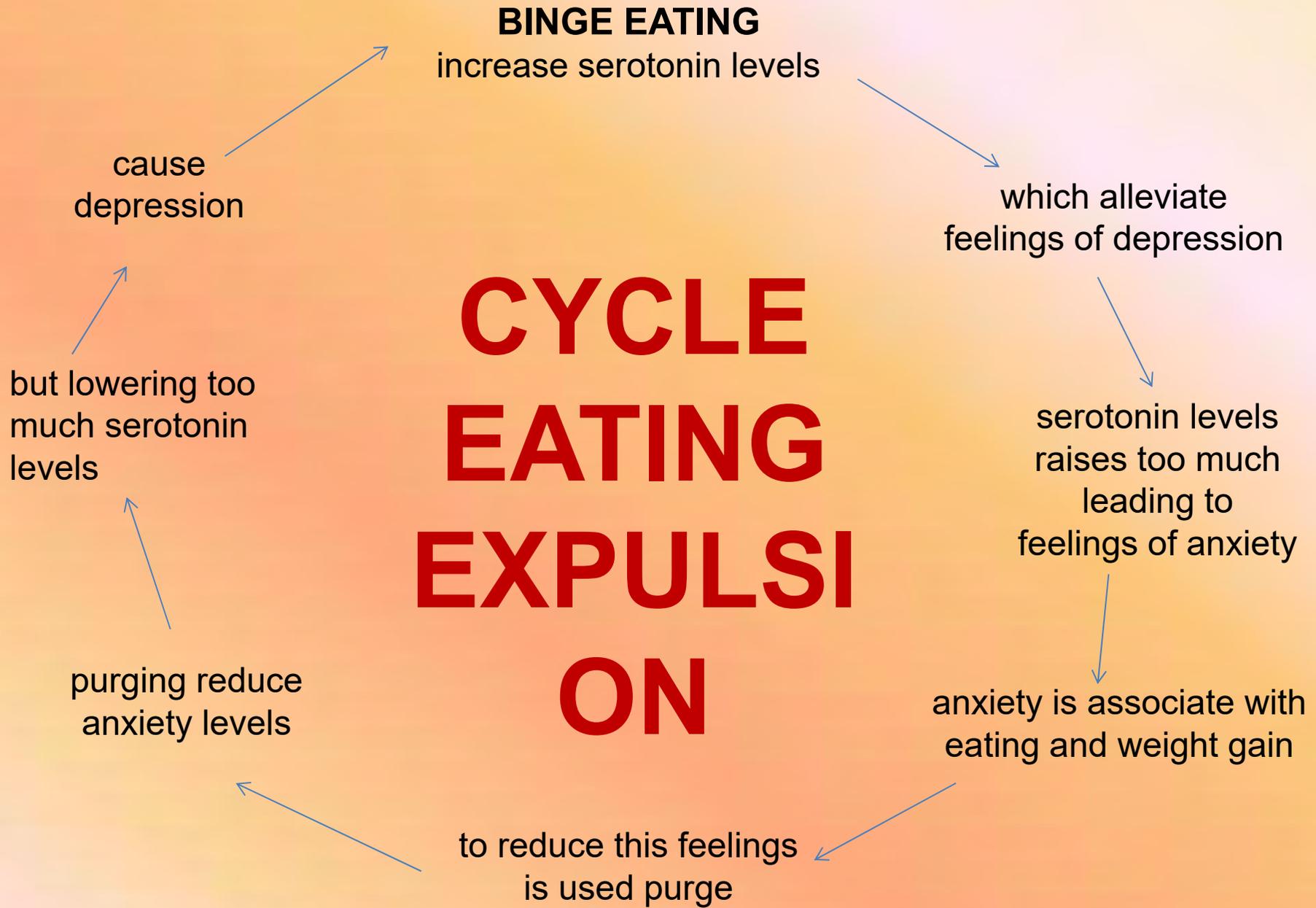
Depression and **bulimia** are both linked to imbalances in the neurotransmitter **serotonin** which control anxiety levels and perceptions of hunger and appetite.



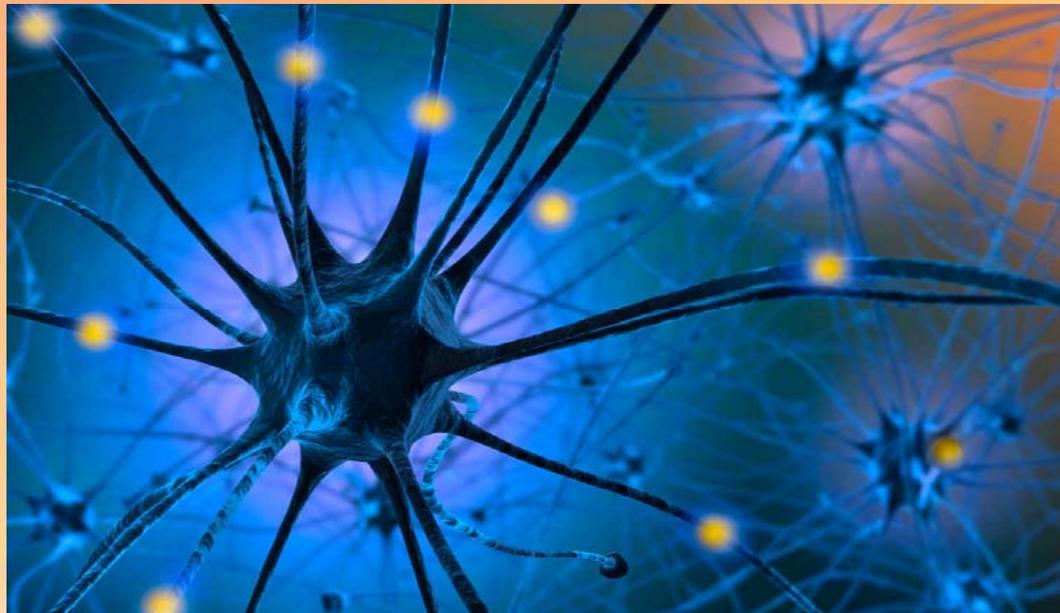
It has been shown by experiments where serotonin levels were compared between recovered bulimics and a group of healthy people: in bulimics, levels were abnormal.



BINGE EATING EXPULSION CYCLE



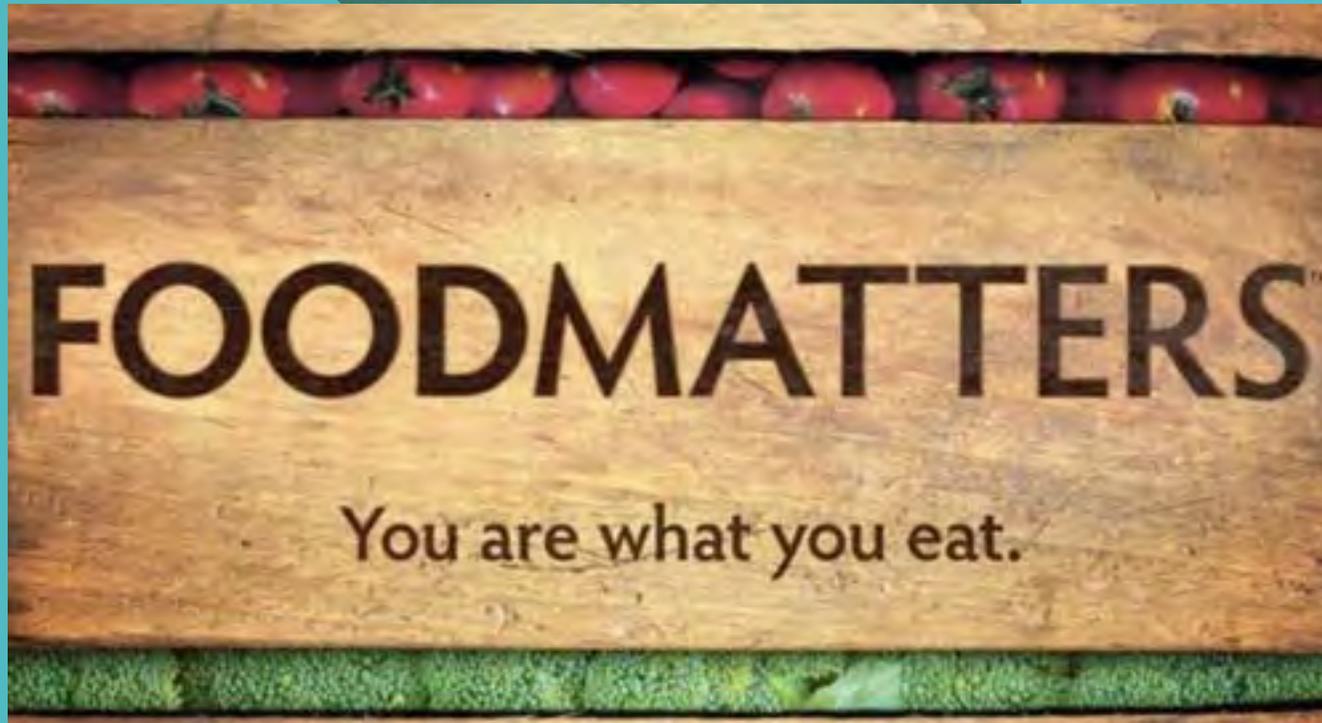
Another important element is the **NO** (nitric oxide), a neurotransmitter involved in the **regulation of food intake, eating behaviour** and in several **action of hormones** responsible in weight control.



ATTITUDES TO FOOD

&

EATING BEHAVIOUR



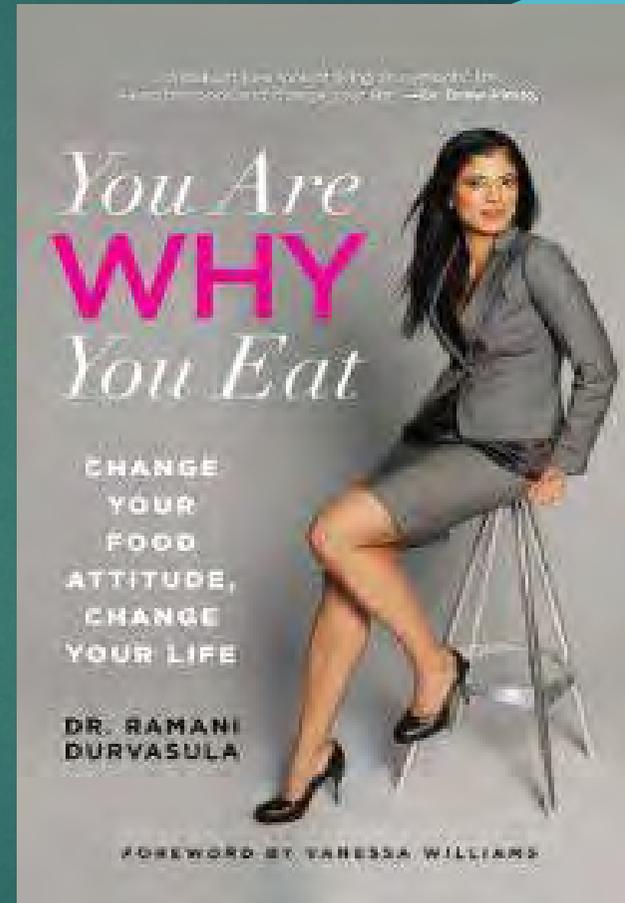
Why we eat?



• • •

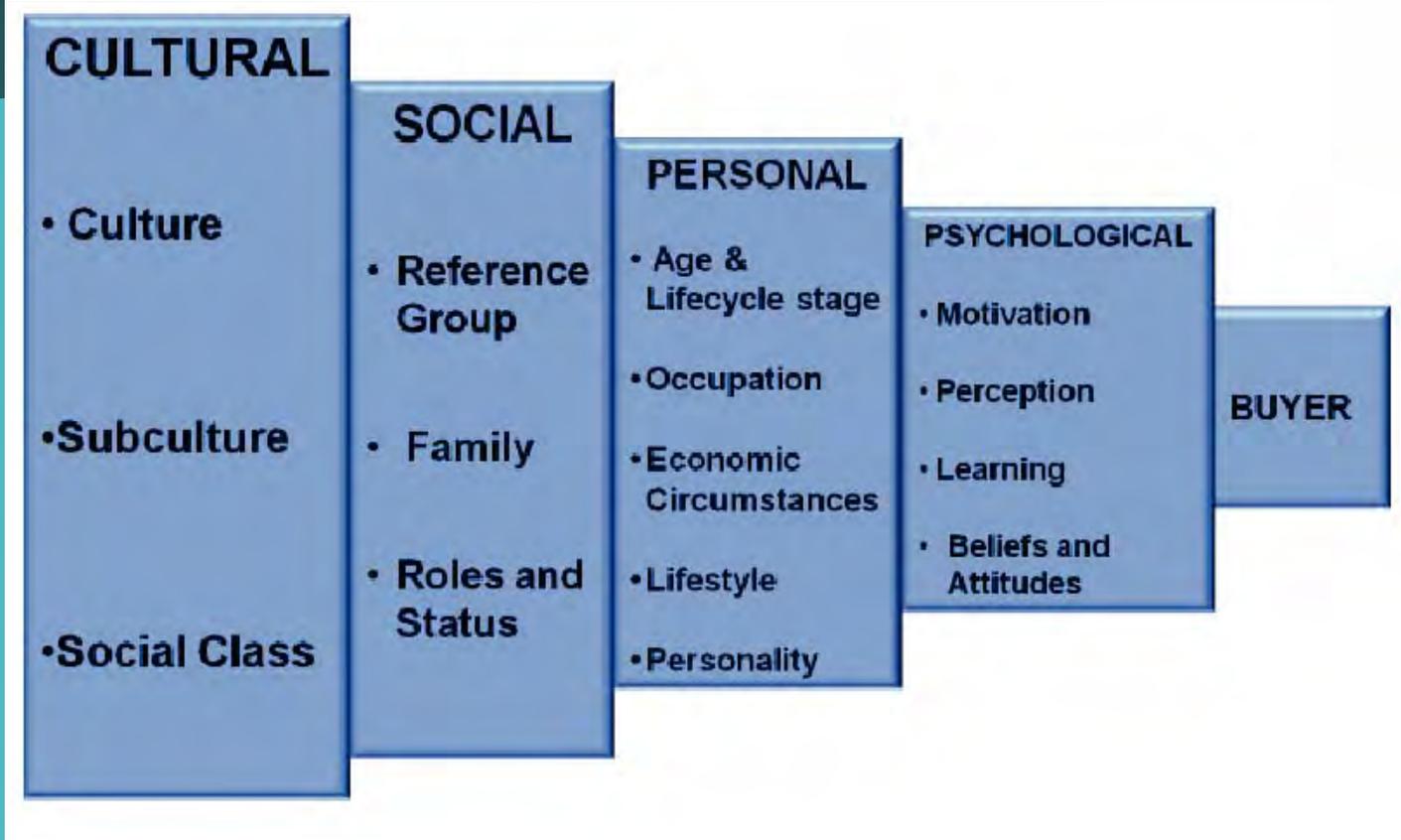
Most of us take food for granted ,we eat because we are hungry then to survive .

We eat in excess and often we do not consider the quality of what we eat.



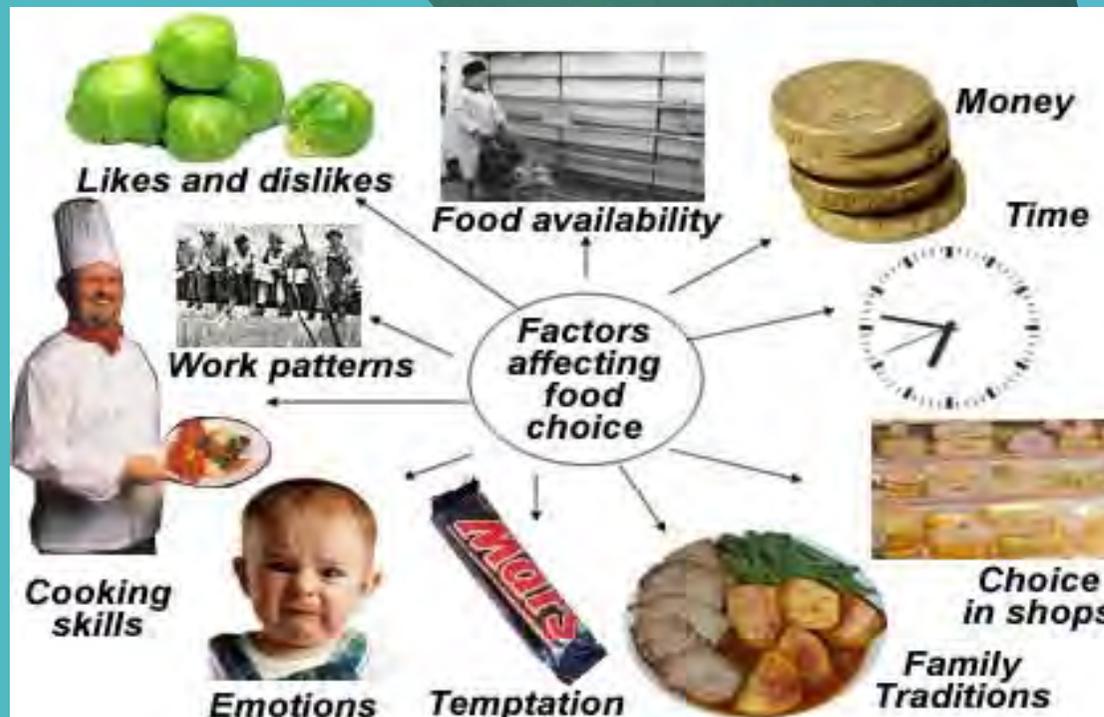
Attitudes to food and eating behaviour are influenced by a range of factors such as:





Social learning theory

- ▶ Is when our behaviour is learnt through observing.
- ▶ Modelling has an impact on our behaviour as we copy what others do whether this are media , family or parents , personal circumstances such as age, income , media, money , emotions,time,temptation,like&dislike.



Parental modeling.

Brown and Ogden (2004).

found that there were correlations between parents and their children in terms of snack food intake, eating motivations and body dissatisfaction.

This could be because :

-children observe the habits of their parents and copy what they do.(social learning)

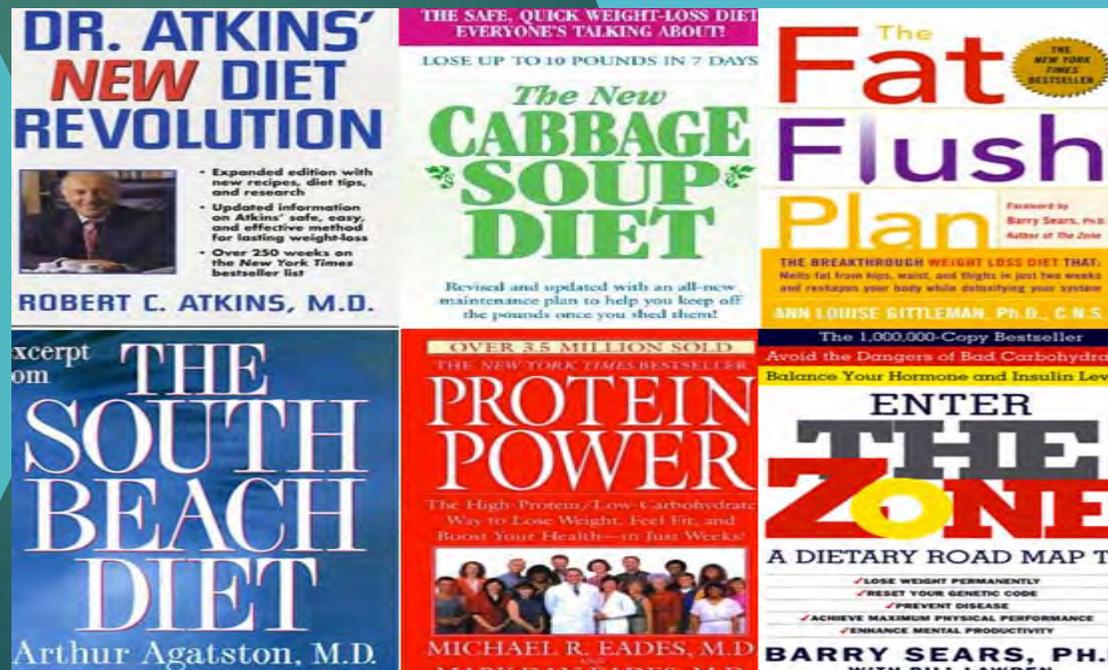
And parents tend to pick what food their child is eating and will often only buy foods that they like themselves



Media effects.

The role of social learning is evident in the impact of television, magazines...

Media can also influence children's eating behaviour. If a child is watching one of their favorite childhood characters eat a food they may not be so keen on, you may start to see that because the character they like is eating it, they also like it.



Culture influences.

Culture influences means that what we find attractive in terms of body image

- For example a white person is more likely to have eating concerns compared to an Asian or black women. White women tend to find a slim more attractive whereas a black women wouldn't as they see that as a sign of malnutrition therefore see more plump women more attractive.



Social class.

- ▶ Class also effects women's attitude to food. For example, body dissatisfaction is more commonly found in higher class individuals and more likely to diet than lower class individuals as income is dependant on being able to afford the more expensive ,healthier kinds of foods.



MOOD AND EATING BEHAVIOUR

Is defined as overeating in order to relieve negative emotions (such as sadness or anxiety). Thus, emotional eating is considered a maladaptive coping strategy. If an individual frequently engages in emotional eating, it can increase the risk of developing other eating disorders (such as bulimia and anorexia nervosa)



Dr. Axe
FOOD IS MEDICINE



1/11/2019
OKAY



+



=



BINGE-EATING

Is a pattern of disordered eating which consists of episodes of uncontrollable eating. It is sometimes a symptom of binge eating disorder or compulsive overeating disorder. During such binges, a person rapidly consumes an excessive quantity of food. A diagnosis of binge eating is associated with feeling of loss of control.

BULIMIA NERVOSA

An eating disorder in which a person engages in binge eating followed by some type of behaviour to prevent weight gain from the food that was eaten.



A girl with binge-eating problems always shows nervousness or a state of very negative mood an hour before starting to eat without stopping at nothing

CAUSES AND
CONSEQUENCES

CAUSES AND CONSEQUENCES

The causes of this disorder may be too much anxiety in making happy someone you care, the excessive depression that devours our body or too much sadness at being abandoned. Most of the people those have suffer a family separation, suffer too much pressure from their parents.

LOW MOOD



↓

SELF-INDUCED VOMITING

WORDS THAT ARE UNSAID

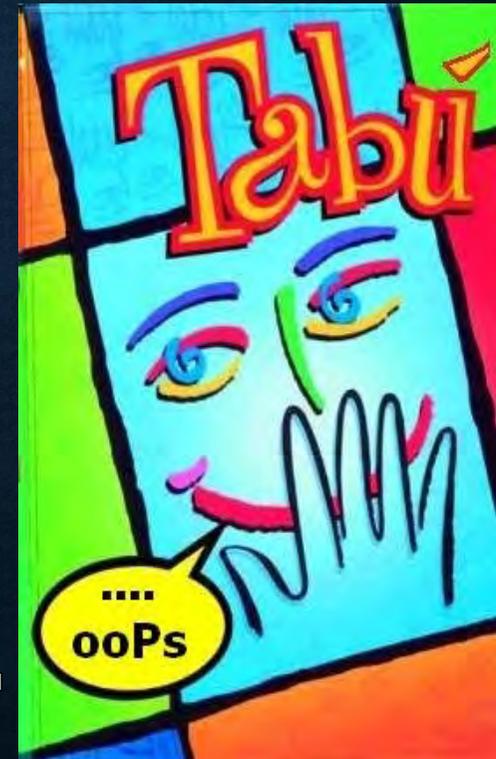
WHO HAS NEVER PLAYED A TABU?

Tabù expresses all our emotions, our thoughts our body and makes them understand other people

Tabù allows use to hide behind a mask until we discovered, that it does not fall to the ground

Tabù is a very fun game where you use the non-verbale language to communicate

**DON'T HIDE,
BUT ALWAYS BE YOURSELF**



HEALTHY



COMFORT-EATING

Go to McDonald's or others fast food makes people really euphoric, anxious to learn new tastes outside of the Mediterranean.

UNHEALTHY



The healthy food bring people out of their sepulchres, their insicurities and retain their full force all day

Eating healtily can lead to happiness and a good relationship with one's physical appearance

Junk food is good for young people to open up doors to a new socialization and something to keep them together without seeing them use the phone.

COMFORT-EATING IN THE CINEMA

In the cinema many teenagers eat popcorn of various types such as buttered popcorn and caramel popcorn without cognition (they still ends before the movie starts)



CONSEQUENCES OF
COMFORT-EATING

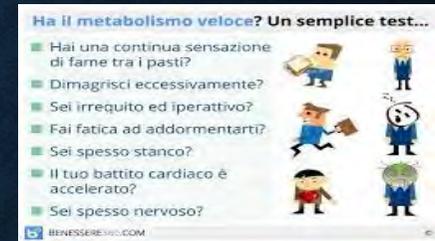
DIABETES



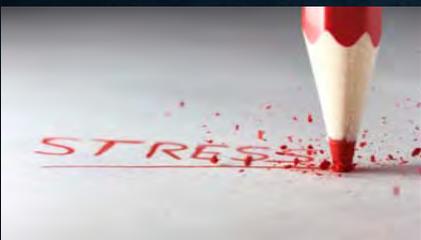
CARDIOVASCULAR PROBLEMS



METABOLIC IMBALANCE



STROKE AND HEART ATTACK



CHOLESTEROL



FOOD IS ASSOCIATED WITH HEALTH RATHER THAN WITH PLEASURE

Some researchers have studied the way of foods functions may be different in culture and they come from: U.S.A, Belgium, France and Japan.

ENVIRONMENTAL AND SOCIAL ISSEUS



EVALUATION

SOCIAL LEARNING



RESEARCH SUPPORT

There is a significant positive correlation between peer influence and eating disorder. The influence of peers was considered the most important factor in this relationship

MUCH MORE THAN LEARNING

The television idols are a negative example to follow because they influence our behavior.



***CULTURAL, MOOD AND
EATING INFLUENCES.***

DONT

BE

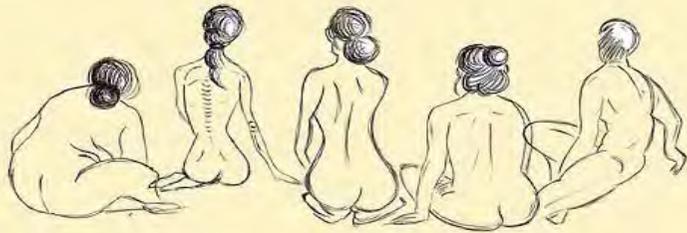
Research and studies

A

SKETCH



CULTURAL INFLUENCES



"All of these people suffer from a serious, life-threatening Eating Disorder."



Ethnicity

- White female or
- Asian (schoolgirl)
- Black girls

Social Class:

No relationship
Yes relationship(ex.)
Higher social class
Greater satisfaction

MOOD AND EATING BEHAVIOUR

A cartoon illustration of a young girl with long, wavy blonde hair, wearing a pink dress with white sleeves. She is looking into a large, ornate pink mirror. Her reflection in the mirror shows her with a sad expression, red cheeks, and a slightly slumped posture. The background is a light blue color with a decorative pink border on the right side.

Binge-eating

- After depressed mood
- Gratification
- Drop in mood

It is unclear what Binge eating can do,
however it depends from person to person.

CHOCOLATE

A recent study found that, although chocolate has a slight antidepressant effect for some people, when consumed as an emotional eating strategy, it'll prolong the negative mood, particularly if used repeatedly.



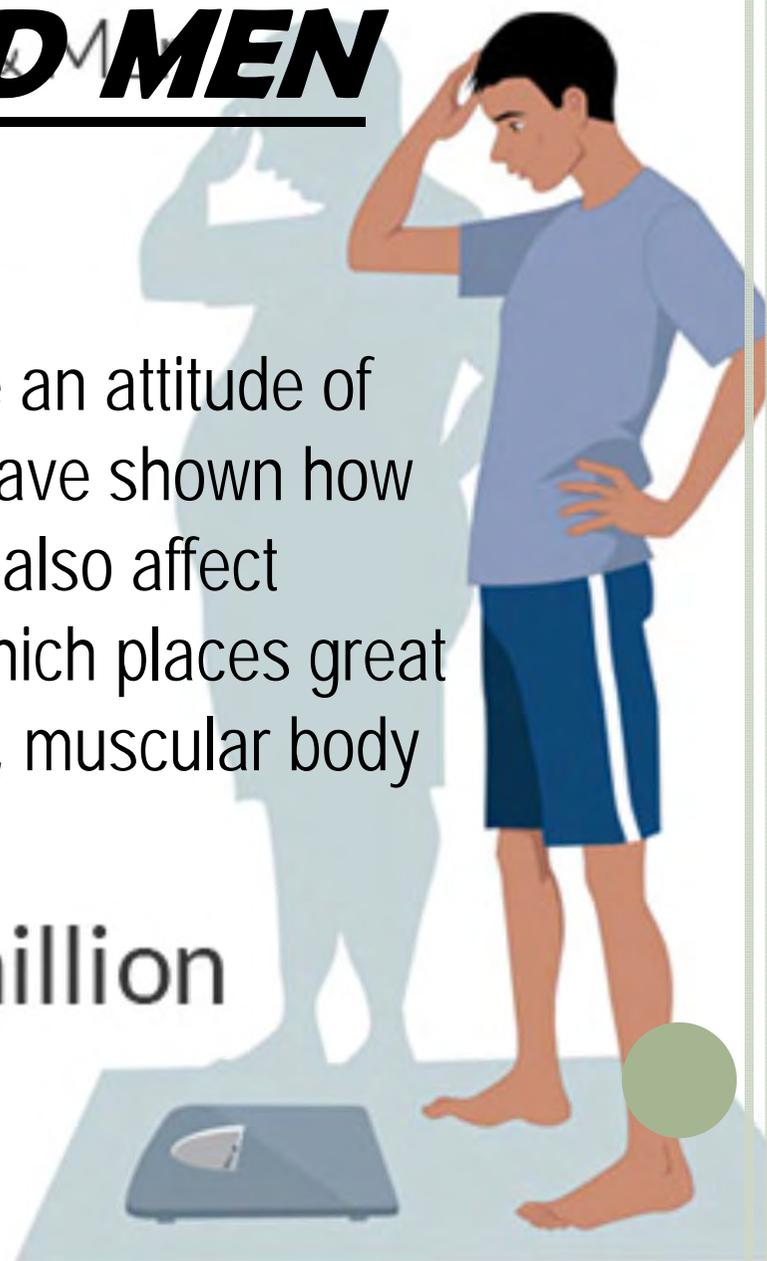
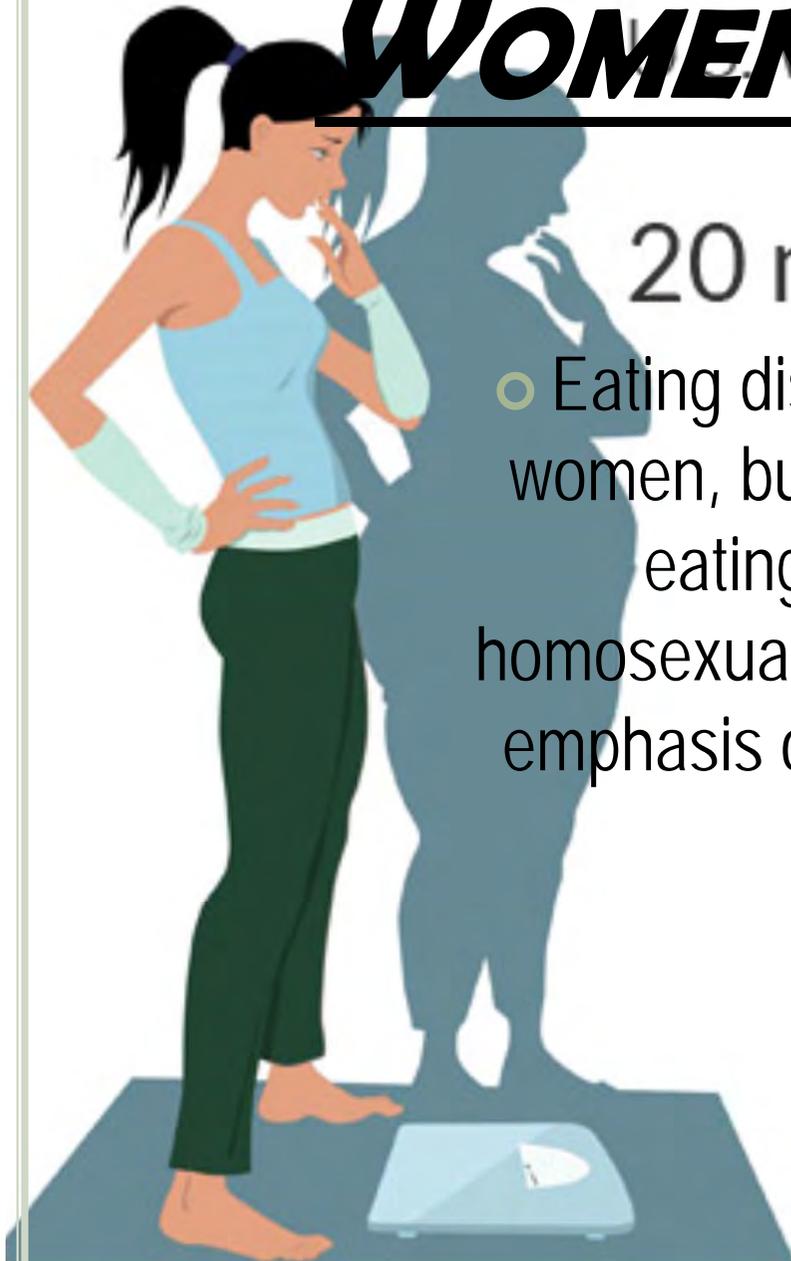
Eating Disorders

WOMEN AND MEN

20 million

- Eating disorders are an attitude of women, but studies have shown how eating disorders also affect homosexuality men, which places great emphasis on the lean, muscular body ideal.

10 million



YOU DESERVE RECOVERY.

You deserve to be *at peace*.

You deserve to be *happy*.

You deserve to be *healthy*.

You deserve to be *carefree*.

