Eating Foods We Like

Hunger activates function that can mask preferences for certain flavour

Study of healthy college volunteers

- some maintained normal diet

- Some consumed monotonous diet of a vanilla-flavoured protein drink (9 8-oz cans a day) for two days

Tested in a brain scanner

Asked to imagine two of their favourite foods

Both groups could easily imagine the taste and smell of their favourite foods

Monotonous group had a craving for the food

Areas of the brain that were activate had overlaps with areas of the brain seen with drug abuse

Definitions

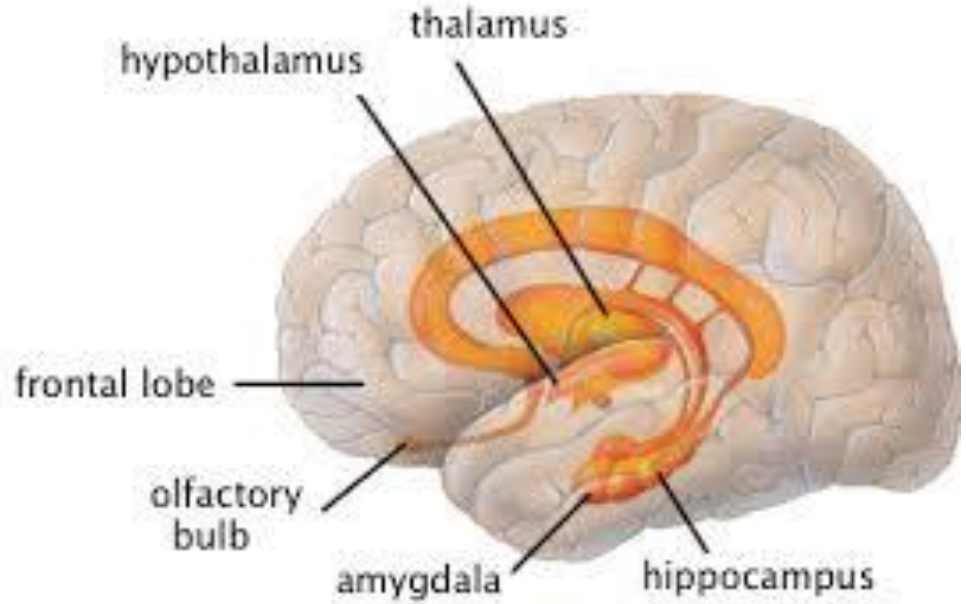
Amygdala: Arousal, autonomic responses associated with fear, emotional responses, hormonal secretions and memory

Fright or flight is co-ordinated by the amygdala

Hippocampus - Part of the limbic system

- Helps with consolidating information from short-term to long term memory

- Involved with spatial motion and navigation



Definitions

Insula: Part of cerebral cortex – involved in compassion and empathy, perception, motor control, self-awareness, cognitive functioning, and interpersonal experience

Left Insula: compassion, cognitive functioning

Cingulate: Found the cerebral cortex - links motivational outcomes to behavior (certain action induces a positive emotion, results in learning)

Anterior Cingulate: Part of the cingulate – link to reward, decision making, ethics and morality

Parahippocampal gyrus – Surround the hippocampus – is involved with memory and visual recognition

Fusiform gyrus – not well understood but connected to neural pathways and is also linked to recognition

Striatum – found at the involved with different cognitive functions

Caudate – part of the striatum – motor processes (Parkinsons) procedural, learning associative learning, and inhibitory control

Brain Activation

Areas Of The Brain Activated By Pleasant Foods	Areas of the Brain Activated By Drugs Abuse)	Brain Areas Activated By Craving A Food
Orbitofrontal cortex	Orbitofrontal cortex	
Insula	Insula	Left Insula
Cingulate	Anterior Cingulate	
Amygdala	Amygdala	
Parahippocampal gyrus	Dorsolateral Prefrontal Cortex	
Anterior fusiform gyrus	Hippocampus	Left Hippocampus
Striatum	Caudate	Right Caudate nucleus

Brain Regions Activated By Chocolate

Like	Dislike
Subcallosal region	Orbitofrontal cortex
Orbitofrontal cortex	Parahippocampus gyrus
Insula and operculum	Prefrontal regions
Striatum	Motivation shut down
Midbrain	Functionally – the more disliked foods, the more it affects all area of motivation
Create a reward and desire value in the brain and promoted action	

The orbitofrontal cortex is associated with reward

Decisions about consuming certain foods involves both hunger and satiety

Chocolate study found desire for chocolate went down as more chocolate was consumed

Eventually leading to dislike

Orbitofrontal cortex activated in both like and dislike states

Amygdala is involved with emotions, motivation and memories

It is activate with when we eat both foods we like and foods we don’t like

This means there is an emotional connection both positive and negative to what we eat

This will also be associated with what’s going around us

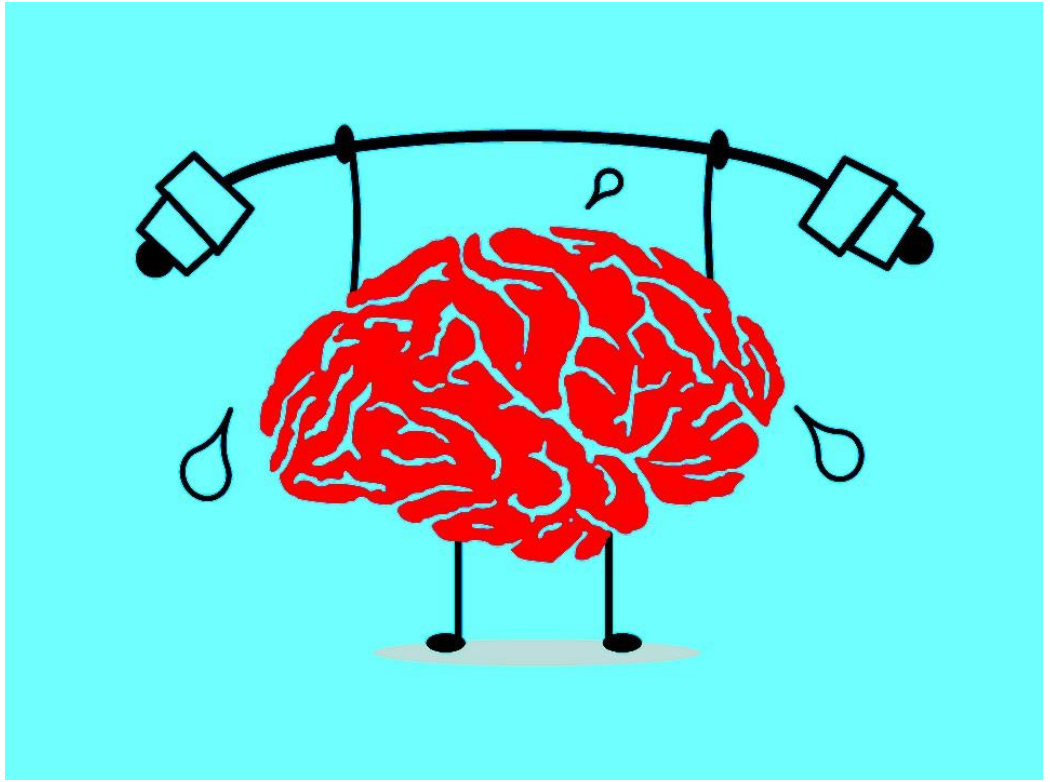
Research has determined

A monotonous diet can be link to food cravings

Too much a good things can lead to dislike

Taste is plastic – similar to the brain – meaning it can change over time

Flavour is critical to activating key areas of the brain such as desire, wellbeing, motivation



Sense of smell link to emotions –

Not just about joy of the food

Smell can encode the memory of things happening in person life

A certain smell can trigger a memory of the past

The food’s flavour can also remind us of the circumstance

If a client does not like the food you recommend

They either won’t eat it

Or

They will associated the flavour with something bad

Eating “healthy” can make people miserable

It’s all about taste and teaching them how to make it to their tastes

Taking time to learn the flavours and combination of flavour the client likes makes a different

Our goal is to help the client adjust their food more to their liking

In doing so, it will set a process of reward and continued motivation

Foods they don’t like will do the opposite

Lack of motivation is a symptom of depression

This does not have to be complicated

It doesn’t have to mean making complex recipes

It’s about encouraging them to know how to counter tastes they don’t like

Simple as countering sour or bitter with sweet or salty.

Adding fat to improve mouth feel or adding spice to change the taste completely