



Brain 360°

Your Brain

Brain 360°

The compounds in cannabis affect the same biological system in the brain that directs brain development. Through this experience, participants learn the facts on how cannabis affects each area of this vital organ, and what could potentially happen long term. Participants will be able to access different parts of the brain and understand what they do, and what impact cannabis use can have. It is important to stress that cannabis use can have a significant impact in adolescent brains, as the brain is still developing up to the age of 25. As a

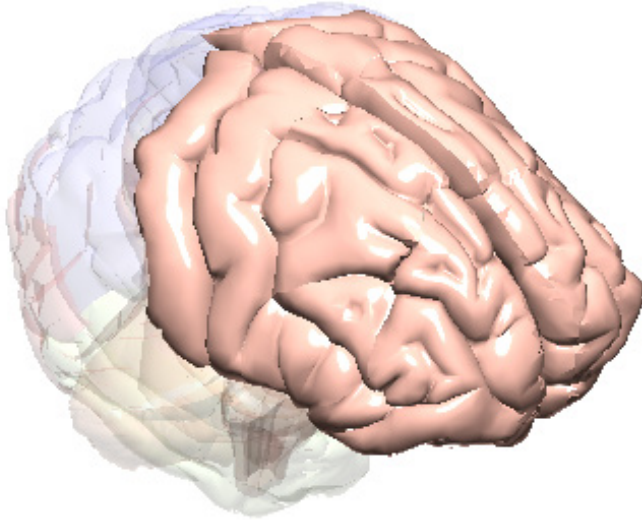
result, youth are especially vulnerable to the effects of cannabis on brain development and function.

Your Brain

Explore the different areas of the brain to learn how each part helps us all to function each and every day. Through this experience, you can learn the facts on how cannabis affects each area of this vital organ, and what could potentially happen long term.

Thinking & Planning

Frontal Lobe



Thinking & Planning, Decision Making, Senses, Speech/Language, Behaviour

Key Function

The frontal lobe is the area of the brain that plays a role in information processing & retrieval of memories, problem solving, planning, language, speech, attention, and movement.

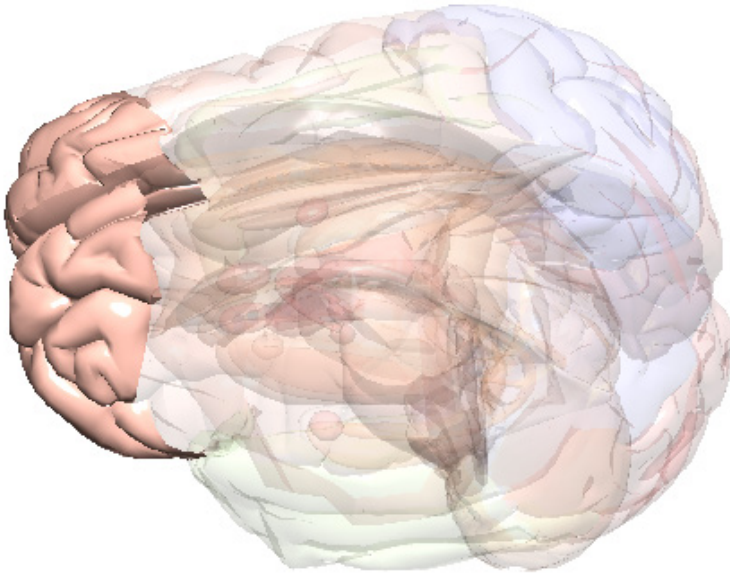
Fact

The compounds in cannabis (e.g., THC) bind to brain receptors (cannabinoid receptors) located in the frontal lobe. These compounds can change the way brain cells communicate with one another. In the frontal lobe, this can affect the way a person thinks, their ability to make decisions, plan and organize their thoughts and actions, create and retrieve memories, pay attention, speak and move.



Thinking & Planning

Prefrontal Cortex



Thinking & Planning, Decision Making, Behaviour

Key Function

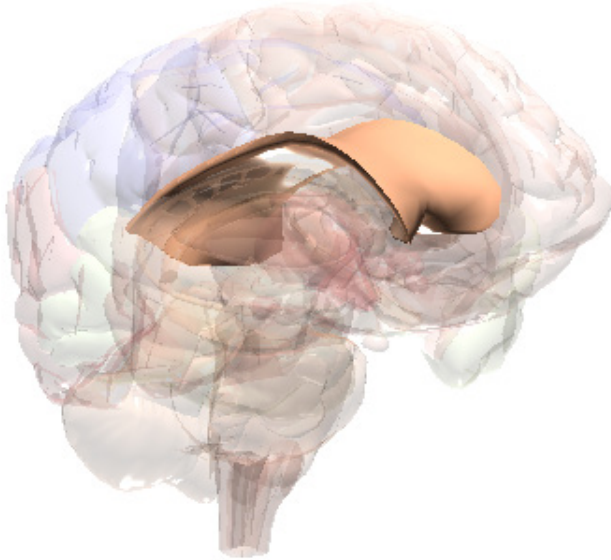
The prefrontal cortex is a part of the frontal lobe and is where the brain thinks, plans, and makes decisions.

Fact

The compounds in cannabis (e.g., THC) bind to brain receptors (cannabinoid receptors) located in the prefrontal cortex. These compounds can change the way brain cells communicate with one another. In the prefrontal cortex, this can affect the way a person thinks, their ability to make decisions, plan and organize their thoughts.

Thinking & Planning

Corpus Callosum



Thinking & Planning, Movement & Coordination, Decision Making, Emotions & Feelings, Senses, Behaviour

Key Function

The corpus callosum connects the two hemispheres of the brain to help integrate information.

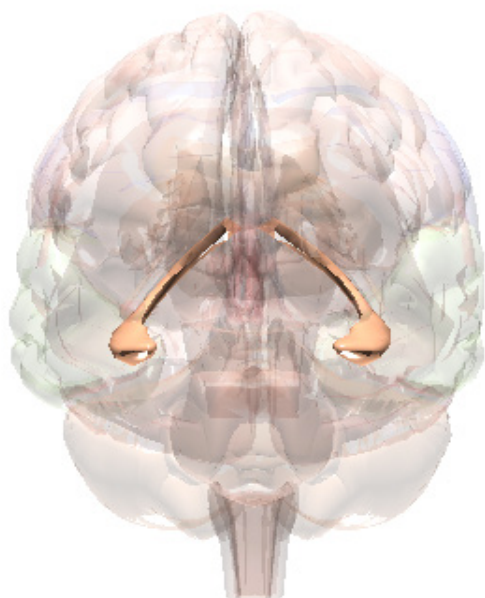
Fact

The compounds in cannabis (e.g., THC) bind to brain receptors (cannabinoid receptors) located in the corpus callosum. These compounds can change the way brain cells communicate with one another. In the corpus callosum, this can result in experiencing disorganized, strange or abnormal thoughts. This can also result in psychosis or schizophrenia (in those who are vulnerable).



Thinking & Planning

Hippocampus



Thinking & Planning, Decision Making

Key Function

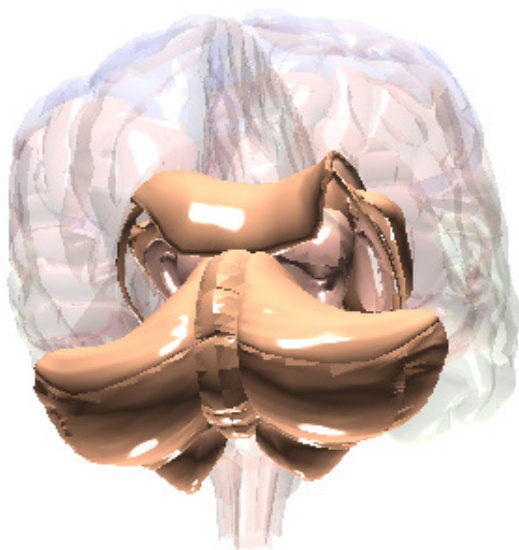
The hippocampus is where the brain registers and stores memories.

Fact

The compounds in cannabis (e.g., THC) bind to brain receptors (cannabinoid receptors) located in the hippocampus. In the hippocampus, this can result in memory loss and difficulty learning new things and making decisions.

Movement & Coordination

Cerebellum



Movement & Coordination

Key Function

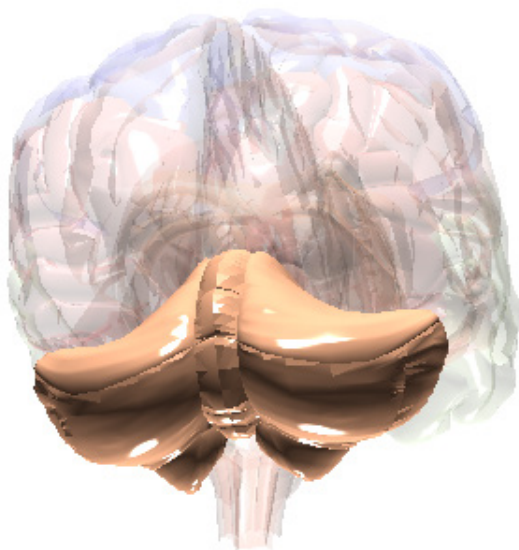
The cerebellum is where the brain controls movement and coordination.

Fact

The compounds in cannabis (e.g., THC) bind to brain receptors (cannabinoid receptors) located in the cerebellum. These compounds can change the way brain cells communicate with one another. In the cerebellum, this can result in feelings of dizziness or a loss of balance/coordination which can make activities requiring coordination, such as driving, dangerous.

Movement & Coordination

Basal Ganglia



Movement & Coordination

Key Function

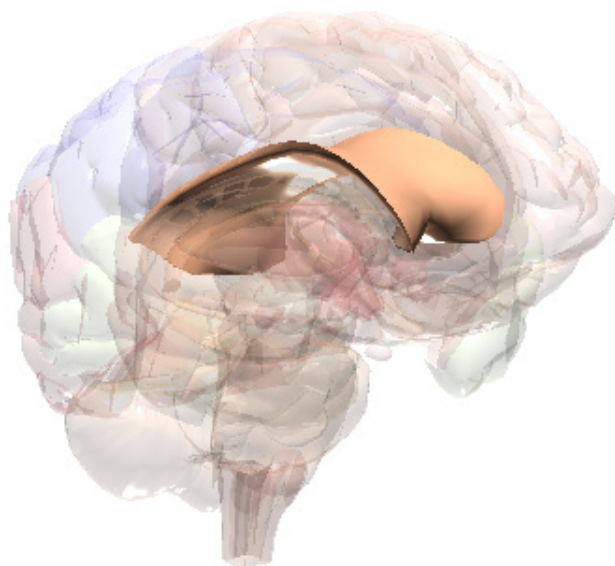
The basal ganglia is where the brain controls movement and coordination.

Fact

The compounds in cannabis (e.g., THC) bind to brain receptors (cannabinoid receptors) located in the basal ganglia. These compounds can change the way brain cells communicate with one another. In the basal ganglia, this can result in problems with coordination which can make activities requiring coordination, such as driving, dangerous.

Movement & Coordination

Corpus Callosum



**Thinking & Planning,
Movement & Coordination,
Decision Making, Emotions
& Feelings, Senses,
Behaviour**

Key Function

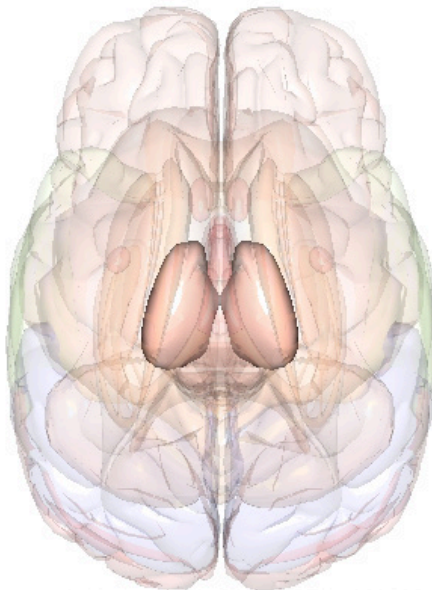
The corpus callosum connects the two hemispheres of the brain to help integrate information.

Fact

The compounds in cannabis (e.g., THC) bind to brain receptors (cannabinoid receptors) located in the corpus callosum. These compounds can change the way brain cells communicate with one another. In the corpus callosum, this can result in experiencing disorganized, strange or abnormal thoughts. This can also result in psychosis or schizophrenia (in those who are vulnerable).

Movement & Coordination

Thalamus



Movement & Coordination, Behaviour

Key Function

The thalamus is the part of the brain that integrates and helps make sense of information, such as sensory information from many other areas of the brain.

The thalamus also plays a role in sleep/wakefulness, mood, and behavior, including movement.

The thalamus may also play a role in psychosis/schizophrenia.

Fact

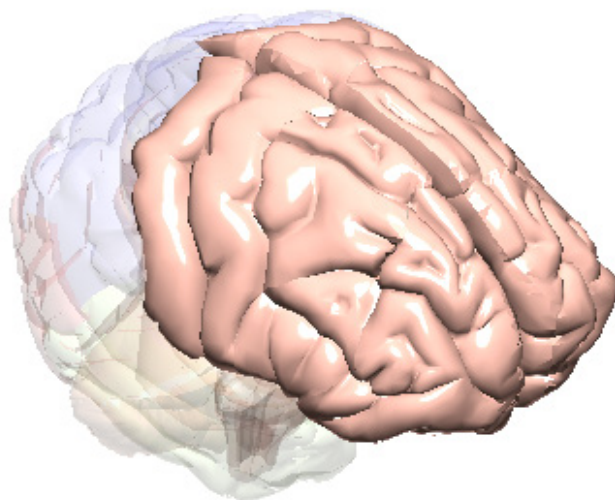
The compounds in cannabis (e.g., THC) bind to brain receptors (cannabinoid receptors) located in the thalamus. These compounds can change the way brain cells communicate with one another.

In the thalamus, this can result in loss of coordination, changes in sleep/wake cycle, and changes in behaviour including psychosis or schizophrenia (in those who are vulnerable).



Decision Making

Frontal Lobe



Thinking & Planning, Decision Making, Senses, Speech/ Language, Behaviour

Key Function

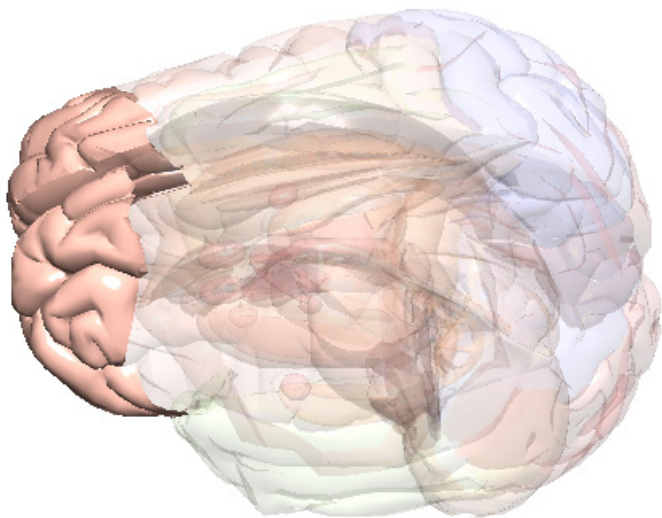
The frontal lobe is the area of the brain that plays a role in information processing & retrieval of memories, problem solving, planning, language, speech, attention, and movement.

Fact

The compounds in cannabis (e.g., THC) bind to brain receptors (cannabinoid receptors) located in the frontal lobe. These compounds can change the way brain cells communicate with one another. In the frontal lobe, this can affect the way a person thinks, their ability to make decisions, plan and organize their thoughts and actions, create and retrieve memories, pay attention, speak and move.

Decision Making

Prefrontal Cortex



Thinking & Planning, Decision Making, Behaviour

Key Function

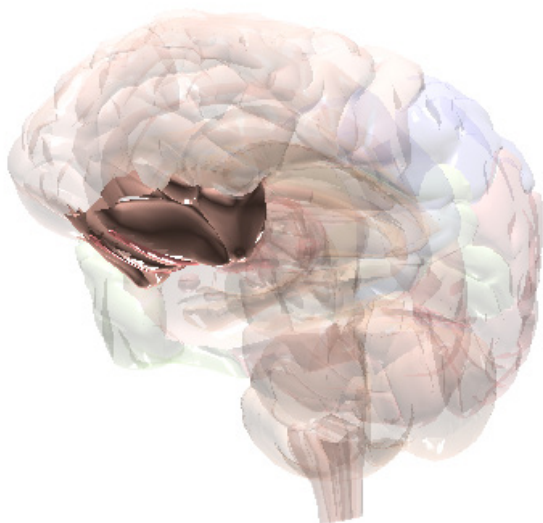
The prefrontal cortex is a part of the frontal lobe and is where the brain thinks, plans, and makes decisions.

Fact

The compounds in cannabis (e.g., THC) bind to brain receptors (cannabinoid receptors) located in the prefrontal cortex. These compounds can change the way brain cells communicate with one another. In the prefrontal cortex, this can affect the way a person thinks, their ability to make decisions, plan and organize their thoughts.

Decision Making

Orbitofrontal Cortex



Decision Making

Key Function

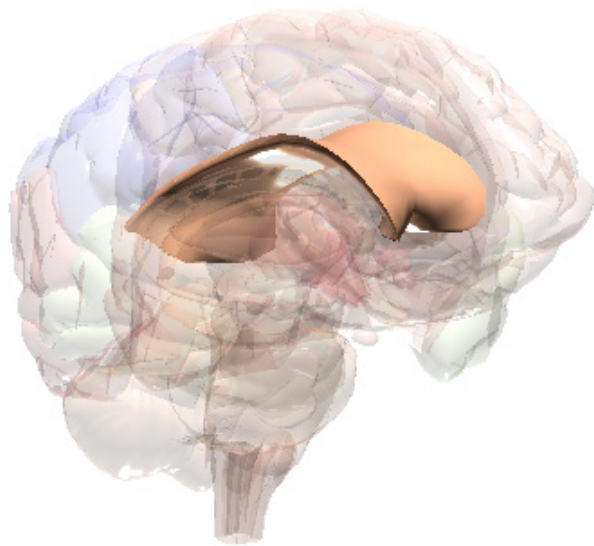
The orbitofrontal cortex is where the brain makes decisions.

Fact

The compounds in cannabis (e.g., THC) bind to brain receptors (cannabinoid receptors) located in the orbitofrontal cortex. These compounds can change the way brain cells communicate with one another. In the orbitofrontal cortex, this can affect one's ability to make decisions.

Decision Making

Corpus Callosum



**Thinking & Planning,
Movement & Coordination,
Decision Making, Emotions
& Feelings, Senses,
Behaviour**

Key Function

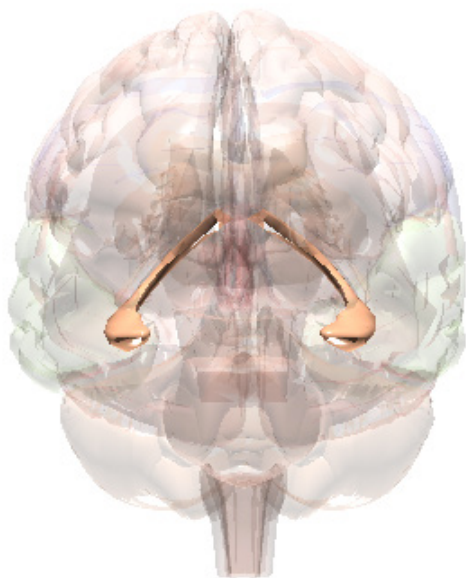
The corpus callosum connects the two hemispheres of the brain to help integrate information.

Fact

The compounds in cannabis (e.g., THC) bind to brain receptors (cannabinoid receptors) located in the corpus callosum. These compounds can change the way brain cells communicate with one another. In the corpus callosum, this can result in experiencing disorganized, strange or abnormal thoughts. This can also result in psychosis or schizophrenia (in those who are vulnerable).

Decision Making

Hippocampus



Thinking & Planning, Decision Making

Key Function

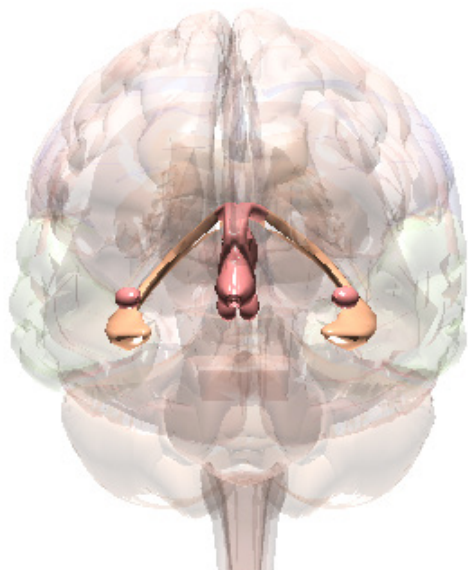
The hippocampus is where the brain registers and stores memories.

Fact

The compounds in cannabis (e.g., THC) bind to brain receptors (cannabinoid receptors) located in the hippocampus. In the hippocampus, this can result in memory loss and difficulty learning new things and making decisions.

Emotions & Feelings

Limbic System



Emotions & Feelings

Key Function

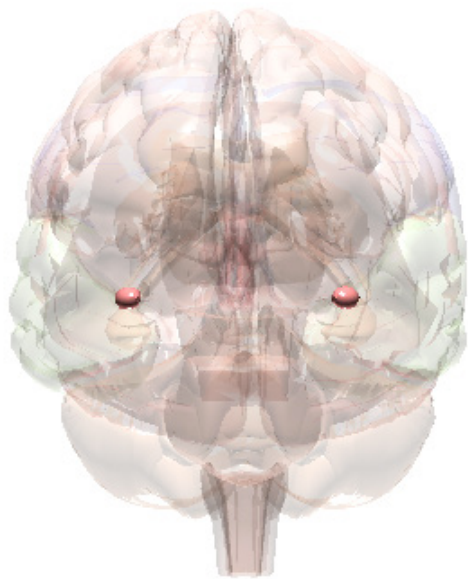
The limbic system is where the brain regulates emotions. It consists of the cingulate gyrus, the hippocampus and the amygdala.

Fact

The compounds in cannabis (e.g., THC) bind to brain receptors (cannabinoid receptors) located in the limbic system. These compounds can change the way brain cells communicate with one another. In the limbic system, this can result in changes in emotions such as feeling happy, excited, calm, or feeling anxious, depressed, or paranoid.

Emotions & Feelings

Amygdala



Emotions & Feelings

Key Function

The amygdala is where the brain processes emotions such as fear and anxiety.

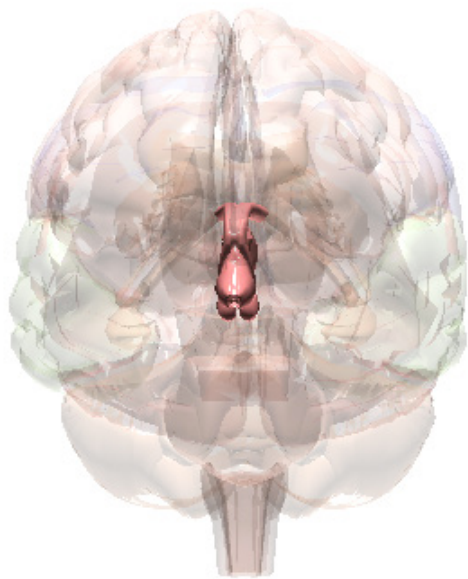
Fact

The compounds in cannabis (e.g., THC) bind to brain receptors (cannabinoid receptors) located in the amygdala. These compounds can change the way brain cells communicate with one another. In the amygdala, this can result in changes in emotions such as feeling anxious, fearful or calm.



Emotions & Feelings

Hypothalamus



Emotions & Feelings, Behaviour

Key Function

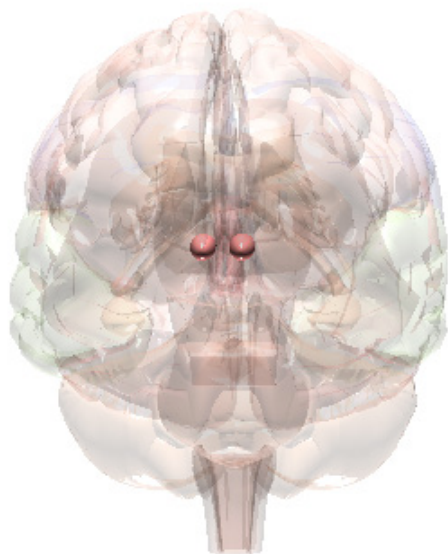
The hypothalamus is where the brain controls sleep, motivation, appetite and thirst as well as response to stress.

Fact

The compounds in cannabis (e.g., THC) bind to brain receptors (cannabinoid receptors) located in the hypothalamus. These compounds can change the way brain cells communicate with one another. In the hypothalamus, this can result in feeling tired, sleepy and calm. This can also result in feeling hungry ('the munchies') and thirsty.

Emotions & Feelings

Nucleus Accumbens



Emotions and Feelings, Behaviour

Key Function

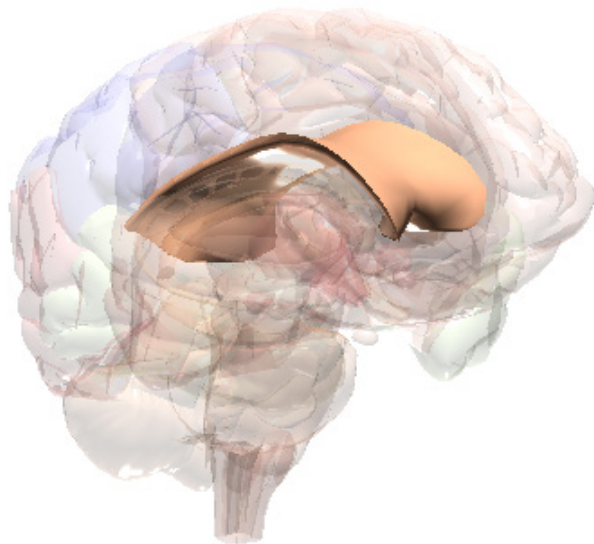
The nucleus accumbens is part of the brain's pleasure and reward system and regulates motivation.

Fact

The compounds in cannabis (e.g., THC) bind to brain receptors (cannabinoid receptors) located in the nucleus accumbens. These compounds can change the way brain cells communicate with one another. In the nucleus accumbens, this can result in feeling 'high' when using cannabis and developing a dependence or addiction to cannabis.

Emotions & Feelings

Corpus Callosum



**Thinking & Planning,
Movement & Coordination,
Decision Making, Emotions
& Feelings, Senses,
Behaviour**

Key Function

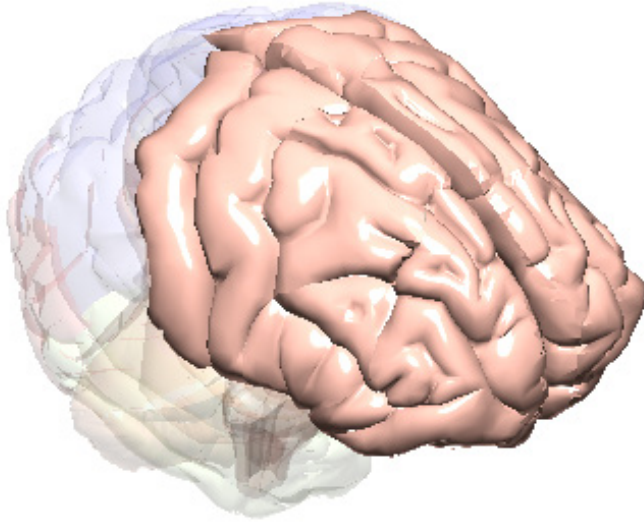
The corpus callosum connects the two hemispheres of the brain to help integrate information.

Fact

The compounds in cannabis (e.g., THC) bind to brain receptors (cannabinoid receptors) located in the corpus callosum. These compounds can change the way brain cells communicate with one another. In the corpus callosum, this can result in experiencing disorganized, strange or abnormal thoughts. This can also result in psychosis or schizophrenia (in those who are vulnerable).

Senses

Frontal Lobe



Thinking & Planning, Decision Making, Senses, Speech/Language, Behaviour

Key Function

The frontal lobe is the area of the brain that plays a role in information processing & retrieval of memories, problem solving, planning, language, speech, attention, and movement.

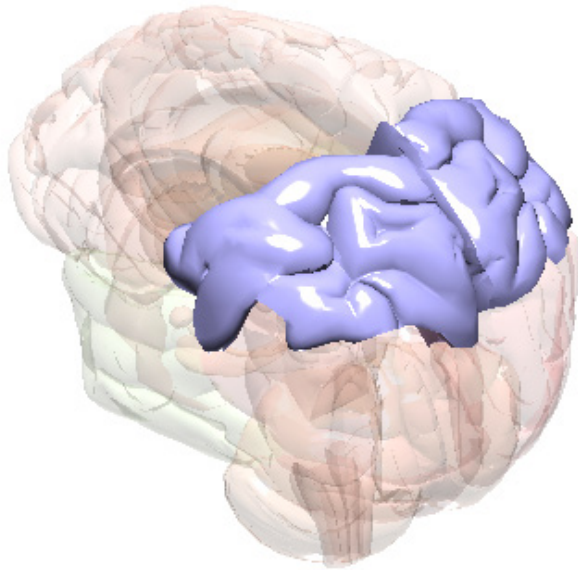
Fact

The compounds in cannabis (e.g., THC) bind to brain receptors (cannabinoid receptors) located in the frontal lobe. These compounds can change the way brain cells communicate with one another. In the frontal lobe, this can affect the way a person thinks, their ability to make decisions, plan and organize their thoughts and actions, create and retrieve memories, pay attention, speak and move.



Senses

Parietal Lobe



Senses

Key Function

The parietal lobe is where the brain processes sensory information, helps to control movement and visual orientation, speech, visual perception and recognition.

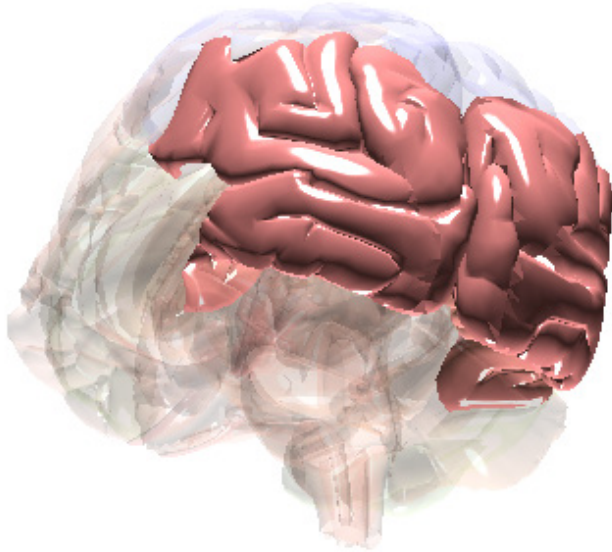
Fact

The compounds in cannabis (e.g., THC) bind to brain receptors (cannabinoid receptors) located in the parietal lobe. These compounds can change the way brain cells communicate with one another.

In the parietal lobe, this can result in altered sensations and perceptions including hallucinations, disorientation, confusion, loss of coordination, and problems speaking.

Senses

Occipital Lobe



Senses

Key Function

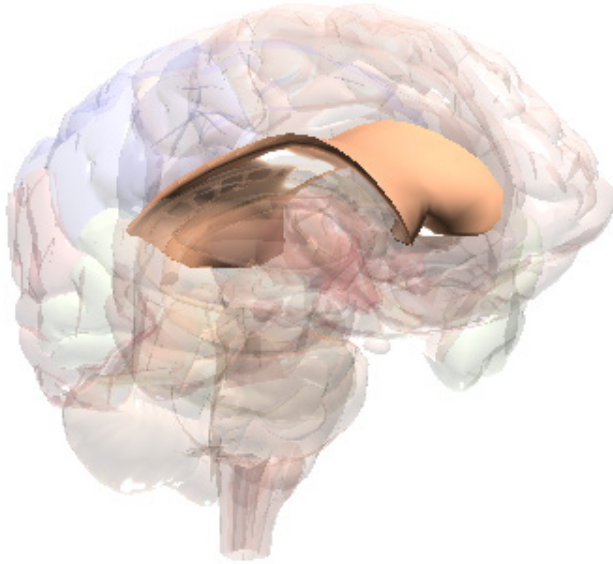
The occipital lobe is where the brain processes vision, spatial cues, and movement.

Fact

The compounds in cannabis (e.g., THC) bind to brain receptors (cannabinoid receptors) located in the occipital lobe. In the occipital lobe, this can result in changes in visual perception, ability to judge distances, and even hallucinations.

Senses

Corpus Callosum



**Thinking & Planning,
Movement &
Coordination, Decision
Making, Emotions
& Feelings, Senses,
Behaviour**

Key Function

The corpus callosum connects the two hemispheres of the brain to help integrate information.

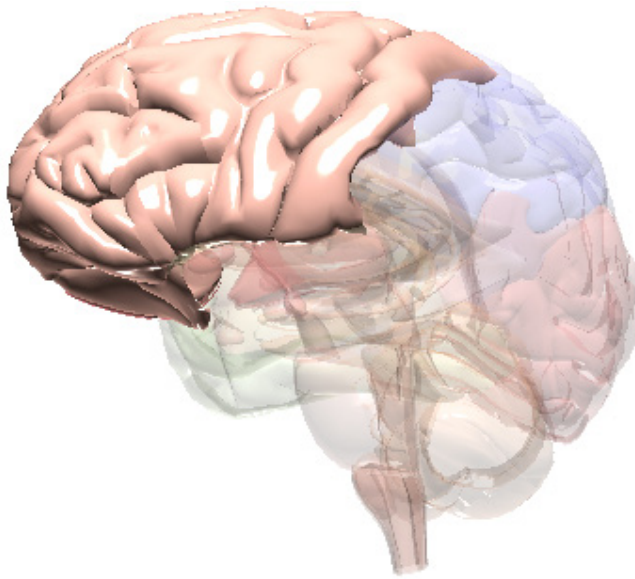
Fact

The compounds in cannabis (e.g., THC) bind to brain receptors (cannabinoid receptors) located in the corpus callosum. These compounds can change the way brain cells communicate with one another. In the corpus callosum, this can result in experiencing disorganized, strange or abnormal thoughts. This can also result in psychosis or schizophrenia (in those who are vulnerable).



Speech/ Language

Frontal Lobe



Thinking & Planning, Decision Making, Senses, Speech/Language, Behaviour

Key Function

The frontal lobe is the area of the brain that plays a role in information processing & retrieval of memories, problem solving, planning, language, speech, attention, and movement.

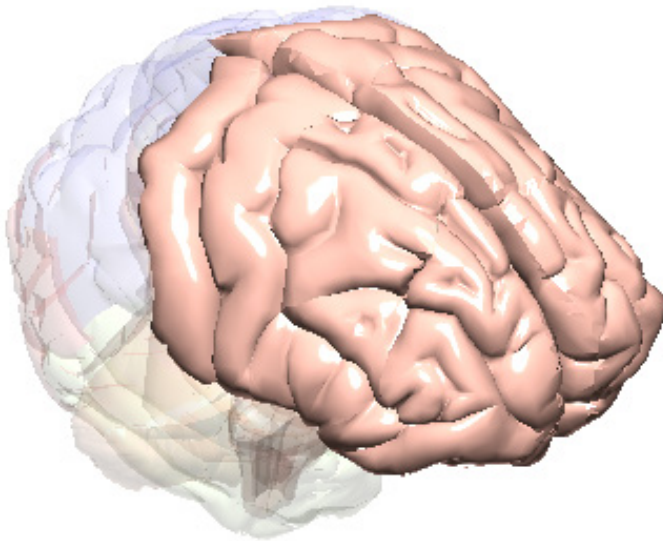
Fact

The compounds in cannabis (e.g., THC) bind to brain receptors (cannabinoid receptors) located in the frontal lobe. These compounds can change the way brain cells communicate with one another. In the frontal lobe, this can affect the way a person thinks, their ability to make decisions, plan and organize their thoughts and actions, create and retrieve memories, pay attention, speak and move.



Behaviour

Frontal Lobe



Thinking & Planning, Decision Making, Senses, Speech/Language, Behaviour

Key Function

The frontal lobe is the area of the brain that plays a role in information processing & retrieval of memories, problem solving, planning, language, speech, attention, and movement.

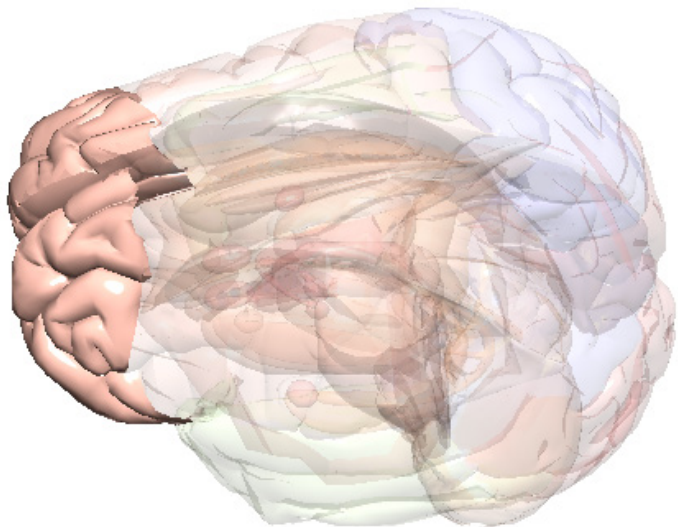
Fact

The compounds in cannabis (e.g., THC) bind to brain receptors (cannabinoid receptors) located in the frontal lobe. These compounds can change the way brain cells communicate with one another. In the frontal lobe, this can affect the way a person thinks, their ability to make decisions, plan and organize their thoughts and actions, create and retrieve memories, pay attention, speak and move.



Behaviour

Prefrontal Cortex



Thinking & Planning, Decision Making, Behaviour

Key Function

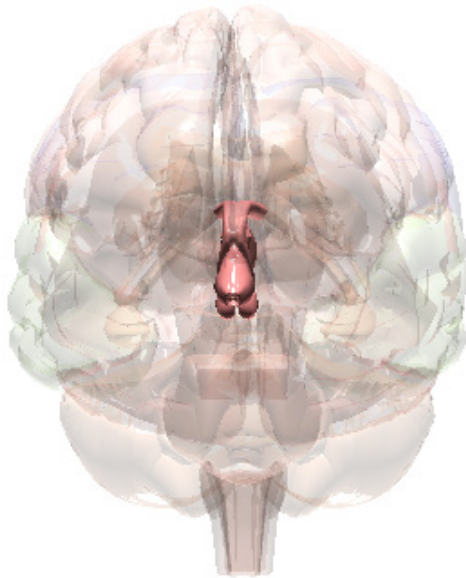
The prefrontal cortex is a part of the frontal lobe and is where the brain thinks, plans, and makes decisions.

Fact

The compounds in cannabis (e.g., THC) bind to brain receptors (cannabinoid receptors) located in the prefrontal cortex. These compounds can change the way brain cells communicate with one another. In the prefrontal cortex, this can affect the way a person thinks, their ability to make decisions, plan and organize their thoughts.

Behaviour

Hypothalamus



Emotions & Feelings, Behaviour

Key Function

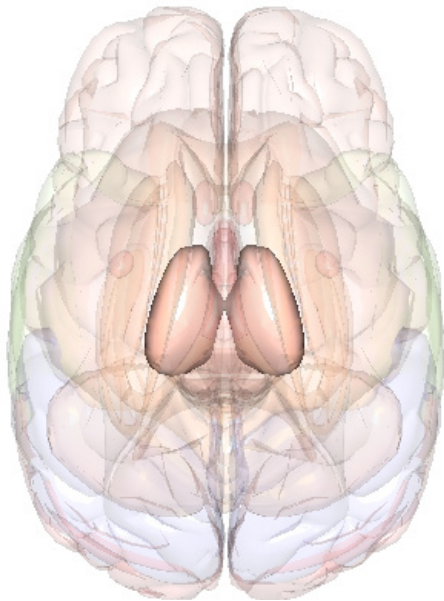
The hypothalamus is where the brain controls sleep, motivation, appetite and thirst as well as response to stress.

Fact

The compounds in cannabis (e.g., THC) bind to brain receptors (cannabinoid receptors) located in the hypothalamus. These compounds can change the way brain cells communicate with one another. In the hypothalamus, this can result in feeling tired, sleepy and calm. This can also result in feeling hungry ('the munchies') and thirsty.

Behaviour

Thalamus



Movement & Coordination, Behaviour

Key Function

The thalamus is the part of the brain that integrates and helps make sense of information, such as sensory information from many other areas of the brain.

The thalamus also plays a role in sleep/wakefulness, mood, and behavior, including movement.

The thalamus may also play a role in psychosis/schizophrenia.

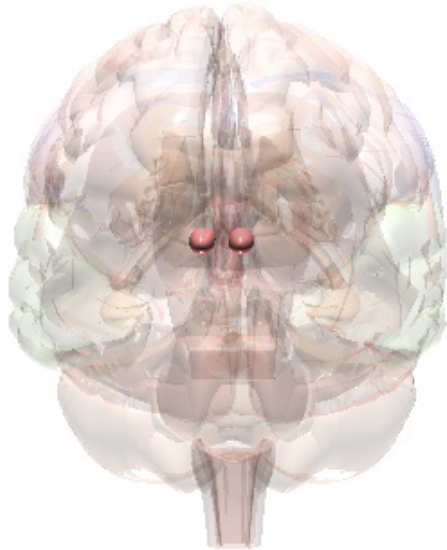
Fact

The compounds in cannabis (e.g., THC) bind to brain receptors (cannabinoid receptors) located in the thalamus. These compounds can change the way brain cells communicate with one another.

In the thalamus, this can result in loss of coordination, changes in sleep/wake cycle, and changes in behaviour including psychosis or schizophrenia (in those who are vulnerable).

Behaviour

Nucleus Accumbens



Emotions And Feelings, Behaviour

Key Function

The nucleus accumbens is part of the brain's pleasure and reward system and regulates motivation.

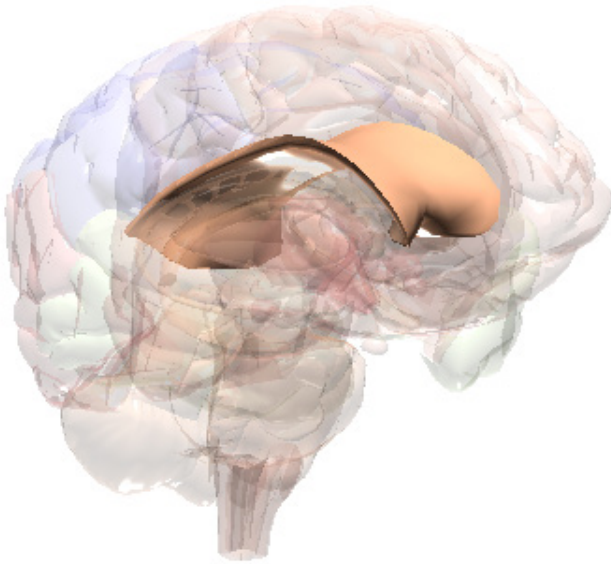
Fact

The compounds in cannabis (e.g., THC) bind to brain receptors (cannabinoid receptors) located in the nucleus accumbens. These compounds can change the way brain cells communicate with one another. In the nucleus accumbens, this can result in feeling 'high' when using cannabis and developing a dependence or addiction to cannabis.



Behaviour

Corpus Callosum



**Thinking & Planning,
Movement & Coordination,
Decision Making, Emotions
And Feelings, Senses,
Behaviour**

Key Function

The corpus callosum connects the two hemispheres of the brain to help integrate information.

Fact

The compounds in cannabis (e.g., THC) bind to brain receptors (cannabinoid receptors) located in the corpus callosum. These compounds can change the way brain cells communicate with one another. In the corpus callosum, this can result in experiencing disorganized, strange or abnormal thoughts. This can also result in psychosis or schizophrenia (in those who are vulnerable).

