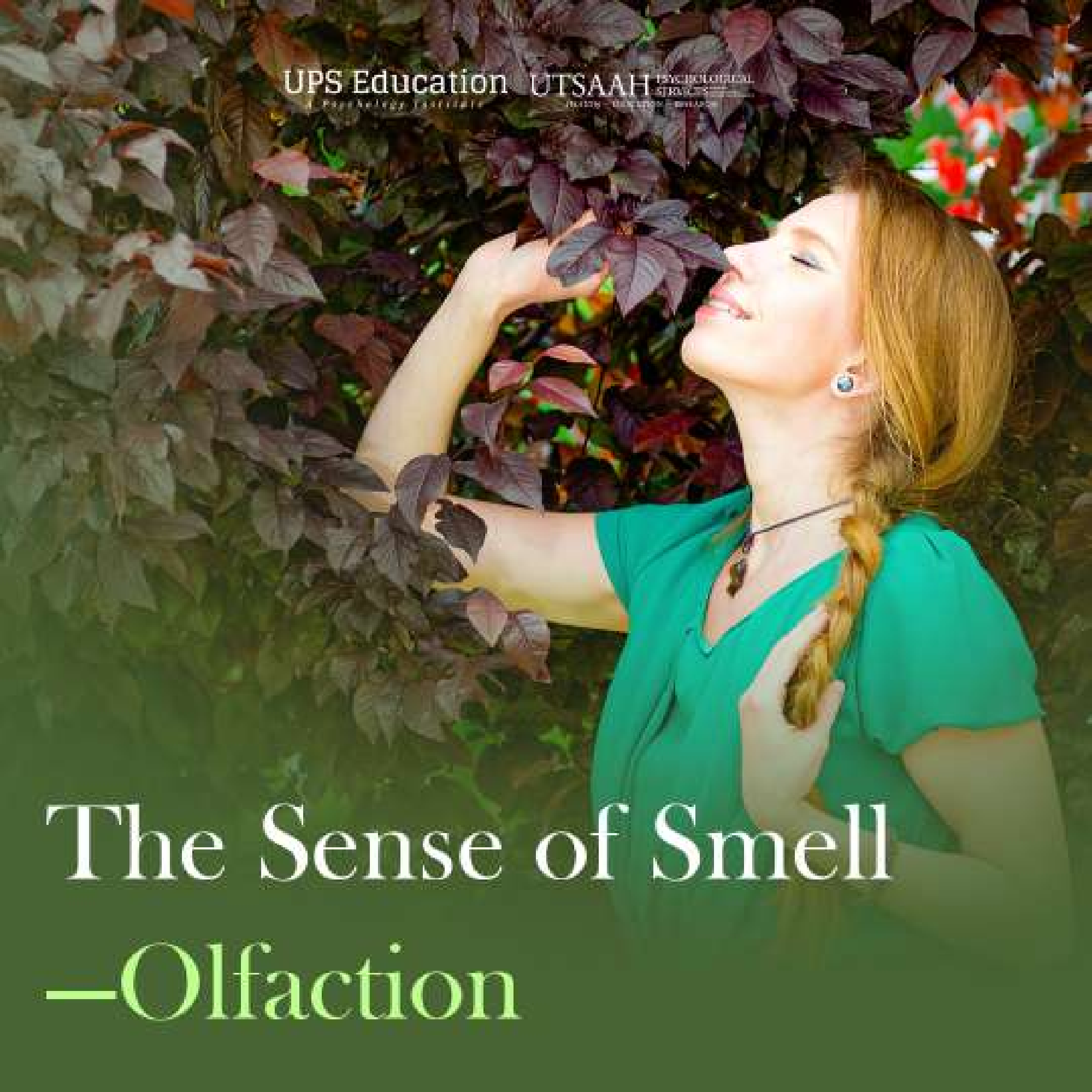


The Sense of Smell

–Olfaction

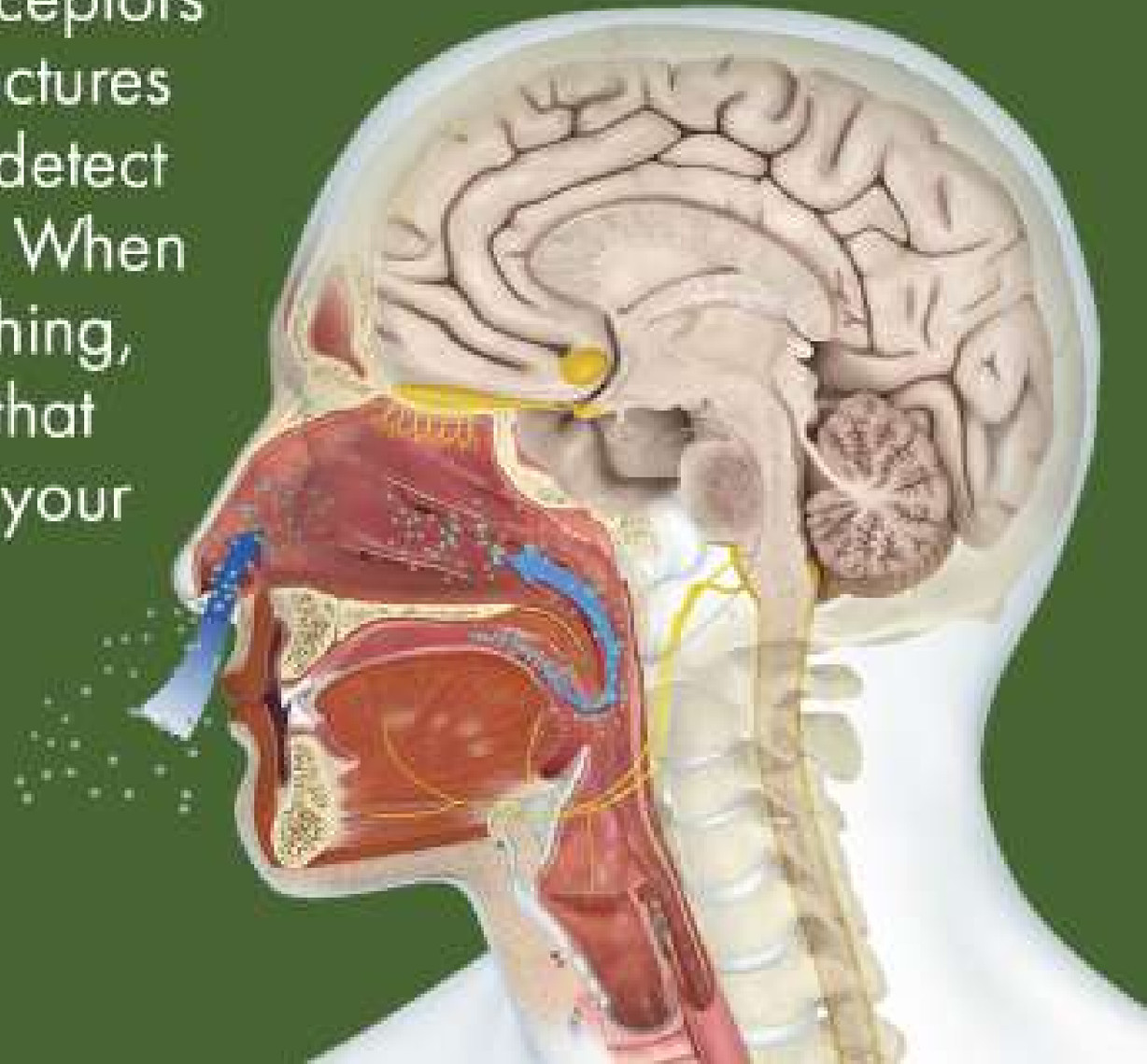
Olfaction, or the sense of smell, is a chemical sense, just like taste. It allows us to detect different odors in the environment. The outer part of the nose acts as a collector, guiding odor molecules into the nasal passages where they can be processed. Once inside, the molecules are detected by specialized receptors, which convert them into signals that the brain can interpret.

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How Smell Works?

The olfactory receptors are located at the top of the nasal passages, in a small area of about 1 square inch, but contain millions of receptor cells. Each of these receptors has hair-like structures called cilia that detect odor molecules. When you smell something, tiny particles of that substance enter your nose, where the receptors are stimulated and send signals to the brain.

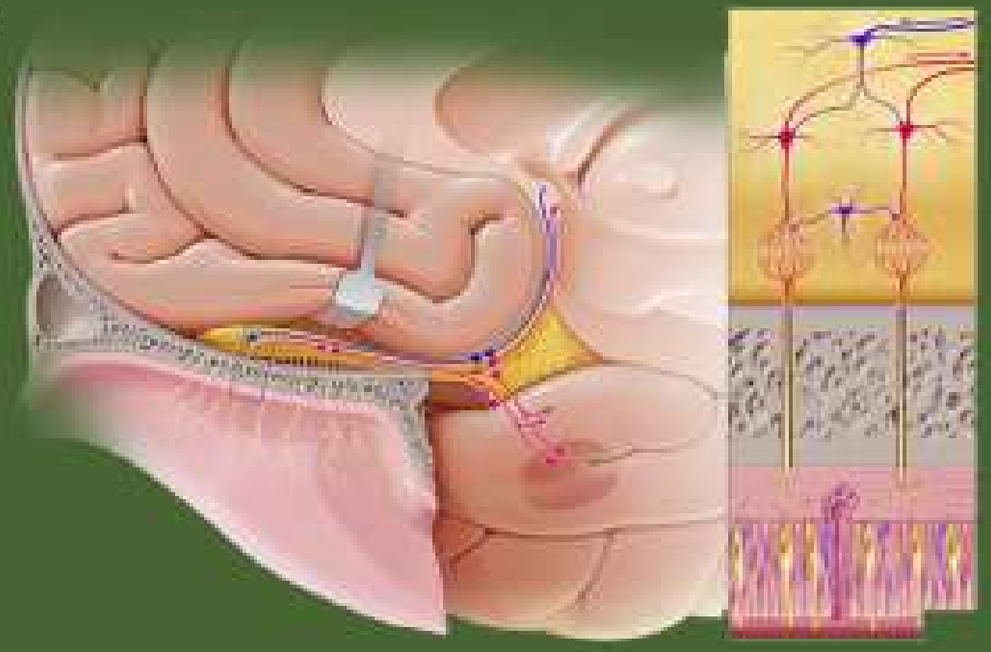


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Unique Pathway of Smell

Unlike other senses, smell bypasses the brain's relay center (the thalamus). Instead, the signals from the olfactory receptors are sent directly to the olfactory bulbs, located just above the nasal cavities. From there, the information is sent to areas of the brain responsible for processing odors and emotions, such as the amygdala and orbitofrontal cortex, which explains why certain smells can trigger emotional memories.



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Conclusion

The sense of smell is a powerful tool that helps us detect odors in the environment, closely linking us to memory and emotions. It works through a complex system of receptors and brain areas that process and interpret different smells, influencing both our survival and emotional experiences.

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