

## What Your Nose Knows

The nose is often overlooked, but sense of smell a powerful and under-rated member of the big five senses. Smells can inform us about simple matters of our physical world, like when something is dangerous approaching or something unhealthy should be avoided, and they can also form a strong link to important memories and deep emotions. We trust our noses to perform all sorts of tasks, big and small.



Have you ever been curious about how the brain identifies different odors? We looked into it when we first began designing [the Zephyr home scenting system](#). We were curious as to why some smells are pleasant while others are vile. What we learned was quite interesting. There is more to the sense of smell than most people know.

### It Starts in the Nose

All smells exist as molecules floating in the air. Those molecules are emanated by whatever objects are producing the smells. When the molecules travel up a person's nose, the sense of smell is triggered. Keep in mind that it all starts here.

The back of the nose is where you will find a large collection of olfactory receptors. These receptors are capable of binding the odor molecules we previously talked about. When the molecules are bound to the receptors, the union triggers an electrical signal that is sent to the brain.

Human beings have about 450 different kinds of receptors working for them; most animals have many, many more. Take dogs, for example. Most breeds have twice as many olfactory receptors as human beings, which is why they can smell things we (thankfully) cannot.



## **From the Nose to the Brain**

Getting back to how the sense of smell actually works, let us talk about those odor molecules in the electrical signals they send to the brain. The electrical signals travel along the nervous system until they reach that portion of the brain responsible for making heads and tails of the sense of smell.

Once the electrical signals reach their destination, the brain has to decide what to do with them. For some inexplicable reason, most human beings have a built-in sense of what smells foul and what smells pleasant. No one has to teach us that.

Of course, there are variations of degree. Something that smells good to you might not be so pleasant to someone else. Something you find slightly unpleasant could be revolting to someone else as well. But those variations aside, human beings generally agree on what's smells good and what does not.

## **Smell and Memory**

The most interesting thing about the whole olfactory system is how it works with the memory. Think about a child who smells an apple pie baking in the oven for the very first time. She has no idea what she's smelling, but she knows it smells good. She will forever know that smell is apple pie once her mother tells her what it is.

That is how the brain identifies different smells. The brain instinctively knows good smells from bad ones, but it doesn't know what to assign specific odors to. We have to be taught. But once a smell has been identified, we will remember that smell forever.

That brings us full circle to the Zephyr Fresh central air freshener. The Zephyr device is an HVAC diffuser that delivers that same positive experience of the girl smelling her mom's baked pie to your entire home, every day. than an air freshener. Nonetheless, we designed our system based on the knowledge that the brain recognizes pleasant scents.

You can diffuse those scents throughout your home by installing the Zephyr Fresh diffuser alongside your HVAC unit. Installation is fast, easy, and safe for virtually any furnace or air conditioner utilizing central forced air. Once installed, you are free to please your brain with all of your favorite scents, all made from natural, safe ingredients. Trust your sense of smell, it knows what's good!