**The Other Senses**

***Touch***

Touch is composed of 4 senses: **Warmth,Pain,Cold***,*and **Pressure**(the only sense with identifiable receptors. The other three do not have specific receptors). Combinations of these create other sensations. For example, warmth and cold create the sensation of hot,pressure and cold create the sensation of wet,pressure and pain create the sensation of a tickling itch.

***Pain***

Pain is your bodys way of letting you know that there is trouble. There is *no* specific type of stimulus that triggers pain and there are *no* specific receptors for pain.

**Phantom Limb Sensations**occur when pain is felt in a nonexistent limb. Even though the leg is not present, the receptor neurons previously connected to them are still there and will fire, resulting in pain sensations.

**Why do we feel pain?**

Although there is no one theory that completely explains the sensation of pain, the following appears to be a useful model. The **Gate-Control Theory**states that the spinal cord has "*gates"*that open or close to transmit pain impulses. *Small***nerve**fiber activity **opens**the gates and we feel pain while *large***nerve**fibers **close** the gates turning off pain**.**Hence, one way to treat pain is to stimulate "gate-closing" activity such as when you rub a sore shoulder or put ice on a bruised knee.

Pain is a physical and psychological interpretation. Distraction methods, such as La maze, where attention is focused elsewhere, can ease the pain that one feels. Other treatments that may affect gate-control include *acupuncture*, *electrical stimulation*, and *exercise*.

***Taste***

Taste is a **Chemical Sense**composed of 4 basic senses: *Sweet, Sour, Salty,*and *Bitter*.

Taste receptors or taste buds (found not only on the tongue but also at the back of the mouth) regenerate every 1 or 2 weeks, but age, smoking, and alcohol will lower your number of taste buds and reduce your taste sensitivity.

**Sensory Interaction**is when one sense affects another sense. For example, tasting apples and potatoes seem the same if we cannot see it or smell it (blindfolded with your nose plugged). Generally, One must be able to smell their food as well as taste it in order to distinguish its flavor.

***Smell***

Smell or **Olfaction**is also a **chemical sense**that directly transmits information from thenose to the temporal lobe*.\*\*****Important note***: It is the only sense that *does not* first relay impulses to the*thalamus*. Instead, information is sent from the receptors to the olfactory nerve that directs this information to the olfactory bulb at the front base of the brain. It is then forwarded to the smell cortex in the temporal lobe as well as other brain regions, especially the limbic system involved in memory and emotion.

Olfactory receptors recognize odors individually and therefore there are many different receptors to detect the thousands of odors that we come in contact with.

We have a remarkable talent to recognize long-forgotten odors and their associated situations and they often evoke memories and feelings. This may be due to the brains circuitry for smell being connected to areas of the limbic system that is associated with memory and emotions.

***Body Position and Movement***

**Kinesthesis** is our sense of body position and movement using motion sensors in the muscles, tendons and joints.

**Vestibular sense**makes use of fluids in our semicircular canal, cochlea, and vestibular sacs in the inner ear in order to monitor head position in relation the body and therefore is very important for our sense of balance.

***Sensory Restriction***

Psychologists use **REST** (Restricted Environmental Stimulation Therapy), where you are put into a warm bath with eyes closed, or in a totally dark room, to lower stimulation and reduce stress, or unwanted behaviors (i.e. drinking).