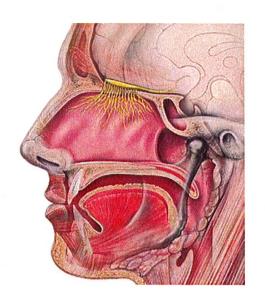
Your Sense of Smell (Olfaction)

- Humans have a total of about 40 million olfactory receptors.
- These receptors are located at the top of the nasal passages (the yellow fibers in the diagram at the right).
- There are about 350 different types of olfactory receptors that respond to one or more types of odorants.
- Humans can distinguish about 10,000 different scents



Our perception of different scents results from stimulation of different combinations of odorant (olfactory) receptors, for example:

				m											
Odorant receptors	1	2	. 1	4	5	6	7	8	9			1	13		gen kallender den der der der der kommen der
Odorants			and the second s	Constitution (Scientistics)	interior control of the control of t	The second definition of the second definition	A version of the second	e en placated projection on	n vijaslinggunssoni	The factor of th	The same is a second	or and a factor of the same and	or control of the con		Description
A ~~~~	encent encented decide reposition			ake i kana mpokiki ili bakerinaka	0	phythaptining Thro benefittly and	ny ny faritana ao atamin'ny farita	indiana manada in manada na ma	go surreported companies per	By and the result of the second	despitation of management and ground	enterior de la companya de la compa		esse pedago var dojumbila u dispensión de la pedago dela pedago de la pedago dela pedago d	rancid, sour, goat-like
В ~~~он		0	The state of the s	art demonstrations and the con-	Control of the contro	0		- I	A manufacture of the control of the	The second secon	And and the state of the state	and the control of th	1	Office species as high and (Conden	sweet, herbal, woody
C whoh	0			0	0	Service of the servic	0	And the state of t		0	0	The state of the s			rancid, sour, sweaty
D ~~~oH		0			0	0		And the state of t	The second secon		Control of the Contro		The state of the s	And the same of th	violet, sweet, woody
Е ~~ °ОН	0			0	0	phone confidence and a second	0	(0		0			rancid, sour, repulsive
F ~~~~oH		And the state of t		0	0	or the tile and refer and the tile	0	and a visit of the second seco	And secretary the secretary of the secre	0	CONTRACTOR OF THE PARTY OF THE				sweet, orange, rose
G WYYOH	0	Wind to sometime of the sound o		0	0	and the state of t	0	Constitution of the Consti	And the same of th	0		0	The state of the s	0	waxy, cheese, nut-like
Н ~~~~он			Alles tricks wesiete	0	0	a popular heroing tanan by	0	Control Services Control Services	Control of the Contro	0		0		The state of the s	fresh, rose, oily floral

MODIFIED AFTER LINDA BUCK AND COLLEAGUES IN CELL VOL 96, MARCH 5, 1999

Your Sense of Taste (Gustation)

We can detect 5 "tastes" vs. 10,000 "smells"

Taste Sensation	What triggers the	Example
1,3	receptor	1.3
Salty	Sodium ions, Na ⁺	Table Salt
Sour	Hydrogen Ions, H ⁺	Acids, e.g. vinegar,
		lemon juice, etc.
Sweet	Sugars	Sugars, e.g. sucrose
Bitter*	Compounds with large	Quinine, caffeine,
	carbon rings	
Umami (translation =	Salts of glutamic acid	MSG (monosodium
"savory")		glutamate)

^{*}there are 25 different known receptors for bitter molecules

Gustatory Receptors and their Location on the Human Tongue

