



## The Purpose of Crying

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What happens when you cry, exactly? A salty fluid chock full of protein, water, mucus and oil is released from the lacrimal gland in the upper, outer region of your eye. This fluid, better known as tears, then flows down the surface of your eye, across your face and smears your mascara.

Of course, not all tears are of the emotional variety. In fact, **three types of tears exist**, all with different purposes. **Basal tears** are omnipresent in our eyes. These constant tears are what keep our eyes from drying out completely. The human body produces an average of 5 to 10 ounces of basal tears each day. They drain through the nasal cavity, which is the reason so many of us develop runny noses after a good sobfest.

The second type is **reflex tears**, which serve to protect the human eye from harsh irritants such as smoke, onions or even a very strong, dusty wind. To accomplish this feat, the sensory nerves in your cornea communicate this irritation to your brain stem, which in turn sends hormones to the glands in the eyelids. These hormones cause the eyes to produce tears, effectively ridding them of the irritating substance.

The third type of tears is **emotional tears**. It all starts in the cerebrum where sadness is registered. The endocrine system is then triggered to release hormones to the ocular area, which then causes tears to form. Emotional tears are common among people who see Bambi's mother die or who suffer personal losses.

The phrase "having a good cry" suggests that crying can actually make you feel physically and emotionally better, which many people believe. Some scientists agree with this theory, asserting that chemicals build up in the body during times of elevated stress. These researchers believe that emotional crying is the body's way of ridding itself of these toxins and waste products.

In fact, one study collected both reflex tears (chopping an onion) and emotional tears (watching a sad movie). When scientists analyzed the tears, they found each type was very different. Reflex tears are generally about 98 percent water, whereas several chemicals are commonly present in emotional tears [Source: The Daily Journal.] First is a protein called prolactin, which is also known to control breast milk production. Adrenocorticotrophic hormones are also common and indicate high stress levels. The other chemical found in emotional tears is leucine-enkephalin, an endorphin that reduces pain and improves mood. Many scientists point out that the limited research in this area needs further study before any conclusion can be made.

The reasons for our crying change with age. During our earliest weeks and months, we cry to have our most basic needs fulfilled. If we're too hungry, sleepy, gassy or dirty, we cry so that a caretaker can rectify the problem. As babies grow and mature, however, crying becomes a more sophisticated way of communicating specific and varying needs, so it's necessary to change the pitch, intensity and length of the cry.

Babies are also believed to change their crying goals sometime around the age of 10 months. At this point, they often cry to gain attention for other reasons. Some experts believe this to be the beginning of manipulative crying. Some studies have reported that women in particular continue this behavior throughout life in order to manipulate others into giving them what they want -- for example, forgiveness, pity or a diamond bracelet [source: The Age].



After babyhood ends, researchers believe that girls and boys do equal amounts of crying until they reach the hormone-fraught adolescent years. As levels of testosterone skyrocket in boys, their amount of crying plummets. The opposite is true for girls, whose estrogen levels begin to rise substantially during the early teenage years. This is especially interesting, considering the relationship between the protein prolactin and breast milk production, which only happens in women. Perhaps this is why women cry roughly four times as much as men, according to biochemist and researcher William Frey and co-author Muriel Langseth, who wrote "Crying: The Mystery of Tears."

Frey estimates that women have about 60 percent more prolactin in their bodies at any given time than men [source: Women's Health]. He also believes that these elevated levels cause women to cry more because the protein revs up the endocrine system, which makes people more likely to cry. One study that required research subjects to record how often they cried over a one-year period found that women cried roughly 64 times a year, compared with only 17 for men [source: TheAge.com].

Interestingly, pretty much everyone involved in the study underestimated what his or her results would be at the end of that year. Another theory put forth to explain why men cry less is that they sweat a lot more on average, thereby releasing some of the toxins found in emotional tears. With age, however, the tables turn on men and women as it relates to crying. According to Women's Health Magazine, in middle age, men begin to cry more and get angry less, while women experience the exact opposite. This is due in large part to our old pals testosterone and estrogen, which begin to decline in men and women respectively and even out the playing field.

Frequency isn't the only aspect of crying that varies between the sexes. According to Women's Health Magazine, men typically cry only when suffering major losses. The rest of the time they just get angry when stressed or frustrated. Women, however, are more likely to tear up when simply frustrated. Women tend to cry more loudly and with more tears than men. This is believed to be because men have smaller tear glands than women, so they just can't produce the volume in one sitting that women do.

Popular lore holds that crying is a sign of weakness among people, especially men. One study even reported that people believed that others would be more bothered by male crying than they would be personally. According to the researchers, this shows a considerable acceptance of men shedding tears, although it still may fail to be commonly acknowledged. In fact, some men who cry publicly are viewed as sensitive and enlightened. Some public figures even consider it a good PR move to cry publicly in order to gain sympathy during a crisis.

Increased crying is also common in individuals suffering from post-traumatic stress disorder (PTSD), often endured by those who experience violent crime or another serious emotional upset, as well as soldiers returning from war (visit [APA.org](http://APA.org) for more information on the possible emotional repercussions of military deployment).

So how can crying actually help you? Overall, it's important to remember that crying is a critical part of the human emotional makeup, just as laughing is. While you may not want to cry in front of your boss or an ex-boyfriend who's with his beautiful new girlfriend, it is largely believed to be better both emotionally and physically to "let it out" rather than keeping it all inside.