# Effect of disgust on facial landmarks

Disgust is an expression that shows a state of dissatisfaction with something or someone. An expression of disgust is classified when a person’s nose bridge between the eyebrows is wrinkled, and the lower lip goes down, showing the teeth

* Ekman P., Friesen W.V. Constants across cultures in the face and emotion. *J. Personal. Soc. Psychol.*1971;**17**:124–129. doi: 10.1037/h0030377. [[PubMed](https://pubmed.ncbi.nlm.nih.gov/5542557)] [[CrossRef](https://doi.org/10.1037%2Fh0030377" \t "_blank)] [[Google Scholar](https://scholar.google.com/scholar_lookup?journal=J.+Personal.+Soc.+Psychol.&title=Constants+across+cultures+in+the+face+and+emotion&author=P.+Ekman&author=W.V.+Friesen&volume=17&publication_year=1971&pages=124-129&doi=10.1037/h0030377&)] [[Ref list](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9698760/#B7-sensors-22-08704)]

Studies using eye trackers showed that, for example, when looking at faces expressing happiness or disgust, the observers tended to look at the upper lip.

* Schurgin M.W., Nelson J.S., Iida S., Ohira H., Chiao J.Y., Franconeri S.L. Eye movements during emotion recognition in faces. *Journal of vision*. 2014, 14 13, 14. doi: 10.1167/14.13.14 [[PubMed](https://pubmed.ncbi.nlm.nih.gov/25406159)] [[CrossRef](https://doi.org/10.1167%2F14.13.14" \t "_blank)] [[Google Scholar](https://scholar.google.com/scholar_lookup?journal=Journal+of+vision&title=Eye+movements+during+emotion+recognition+in+faces&author=M.W.+Schurgin&author=J.S.+Nelson&author=S.+Iida&author=H.+Ohira&author=J.Y.+Chiao&volume=14&issue=13&publication_year=2014&pages=14&pmid=25406159&doi=10.1167/14.13.14&)] [[Ref list](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10550163/#pone.0291735.ref016)]

Disgust appears to be a universal and basic emotion. On the output side, it is characterized by a withdrawal response, a physiological concomitant of nausea, and a distinct facial expression, focused around the nose and mouth.

* P. Rozin, in [International Encyclopedia of the Social & Behavioral Sciences](https://www.sciencedirect.com/referencework/9780080430768/international-encyclopedia-of-the-social-and-behavioral-sciences), 2001

# Effect of fear on facial landmarks

Fear is an expression that shows someone’s scarcity or fear of someone or something. The expression of fear is seen when eyebrows slightly go up, eyelids tighten, and lips are open horizontally along the side of the cheek.

* Ekman P., Friesen W.V. Constants across cultures in the face and emotion. *J. Personal. Soc. Psychol.*1971;**17**:124–129. doi: 10.1037/h0030377. [[PubMed](https://pubmed.ncbi.nlm.nih.gov/5542557)] [[CrossRef](https://doi.org/10.1037%2Fh0030377" \t "_blank)] [[Google Scholar](https://scholar.google.com/scholar_lookup?journal=J.+Personal.+Soc.+Psychol.&title=Constants+across+cultures+in+the+face+and+emotion&author=P.+Ekman&author=W.V.+Friesen&volume=17&publication_year=1971&pages=124-129&doi=10.1037/h0030377&)] [[Ref list](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9698760/#B7-sensors-22-08704)]

When looking at faces expressing anger, fear, or sadness, they tended to look at the eyes.

* Schurgin M.W., Nelson J.S., Iida S., Ohira H., Chiao J.Y., Franconeri S.L. Eye movements during emotion recognition in faces. *Journal of vision*. 2014, 14 13, 14. doi: 10.1167/14.13.14 [[PubMed](https://pubmed.ncbi.nlm.nih.gov/25406159)] [[CrossRef](https://doi.org/10.1167%2F14.13.14" \t "_blank)] [[Google Scholar](https://scholar.google.com/scholar_lookup?journal=Journal+of+vision&title=Eye+movements+during+emotion+recognition+in+faces&author=M.W.+Schurgin&author=J.S.+Nelson&author=S.+Iida&author=H.+Ohira&author=J.Y.+Chiao&volume=14&issue=13&publication_year=2014&pages=14&pmid=25406159&doi=10.1167/14.13.14&)] [[Ref list](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10550163/#pone.0291735.ref016)]

the statistical testing has determined that the sizes of eyes in the neutral state are smaller than the sizes of eyes in the fearful state.

* Rawinan Praditsangthong, Bhattarasiri Slakkham, Pattarasinee Bhattarakosol,

A fear detection method based on palpebral fissure,

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Volume 33, Issue 8, 2021, Pages 1030-1039, ISSN 1319-1578, https://doi.org/10.1016/j.jksuci.2019.06.001.