
Action Unit Combination – 9+16+25

A. Appearance Changes due to AU Combination 9+16+25

The elements described separately for 9 and 16+25 are combined additively without eliminating or changing the appearance associated with each. The appearance changes below compile those listed earlier for 9 and for 16+25.

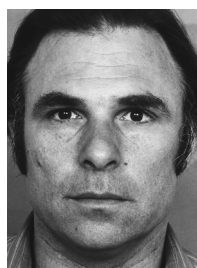
AU 9

1. Pulls the skin along the sides of the nose upwards towards the root of the nose causing wrinkles to appear along the sides of the nose and across the root of the nose.
2. Pulls the infraorbital triangle upwards, causing the infraorbital furrow to wrinkle (or, if it is permanently etched, to deepen), and bunching or bagging of the skin around the lower eyelid.
3. Lowers the medial portion of the eyebrows, which tends to conceal any raising of the inner corners of the brow if AU 1 were to act.
4. Narrows the eye aperture due to the actions described in appearance changes 2 and 3.
5. Pulls the center of the upper lip upwards. If the action is strong, the lips part, otherwise the lips may remain closed.
6. May widen and raise the nostril wings.
7. May deepen the nasolabial furrow if the action is strong.

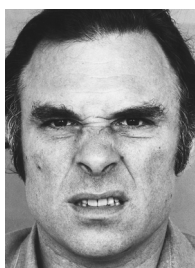
AU 16+25

8. Pulls the lower lip down.
9. Stretches the lower lip and pulls it somewhat laterally.
10. May cause the lower lip to protrude or flatten.
11. Usually parts the lips (scored 16+25) exposing more of the lower teeth, usually including the roots of the teeth, and in a strong action the lower gum is exposed as well. Sometimes a 16 does not part the lips and is scored 16 alone.
12. Stretches the chin boss laterally and down, flattening the skin over the chin boss, and sometimes causing wrinkles to appear over the chin boss.
13. In some people, may cause wrinkle to appear directly below the lower lip.

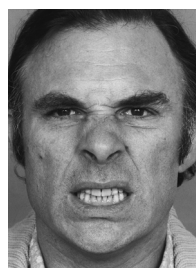
Compare images of 9+16+25 with 9+25. Inspect the video of 9+16+25.



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[video 9+16+25](#)
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B. How to do AU Combination 9+16+25

Follow the instructions for AU 9 and for 16+25, repeated below, and do these actions together.

AU 9 (repeated from [page 93](#)): This movement is easy to do, but often recruits additional muscle strands of AU 4 that are not part of the 9 action. Wrinkle your nose. Do it as strongly as you can. Do it as weakly as you can. Note all of the appearance changes described in Section A above. Try to do AU 9 without doing AU 4, which pulls the brows together and forms vertical wrinkles. Action of AU 9 beyond low intensities usually recruits the muscle fibers involved in AU 4, which pull the inner corners of the eyebrows down. With AU 9, the brows may lower, but not draw together, unless AU 4 co-occurs. AU 4 is not scored with AU 9 when only the inner corners are lowered. If you have trouble doing AU 9 at all, try squinting your eyes as though blocking out a bright light, though this motivation may also produce AUs 4 and 6, which you must then eliminate.

AU 16 (repeated from [page 113](#)): With your mouth closed, and your teeth together but not clenched, pull your lower lip straight down so that the center of your lip is lowered to show the lower front teeth, as though baring your teeth to check how clean and bright they are. If you are still unable to do AU 16, place your fingers below the center of your lower lip on either side of your chin boss and pull down. Then try to maintain this appearance when you take your fingers away. Try to detect the action of 16 before it parts your lips (you may be unable to do this if your lips part when you merely relax your lips). Also, try to do 16+26 and 16+27, noting how the appearance changes for AU 16 remain the same, but are added to those of AU 26 or 27. To do these combinations, perform the AU 26 or 27, then add the AU 16, scored 16+25+26 and 16+25+27, respectively.

C. Intensity Scoring for AU Combination 9+16+25

The criteria for scoring the intensity of AUs 9, 16, and 25 are unchanged in the combination of 9+16+25. They are repeated below for convenience. Any combination of intensities can occur for AU 9, AU16, and AU 25 in the combination 9+16+25, and you have to assign intensity scores based on analysis of each AU independently.

AU 9A

The appearance changes for AU 9 are sufficiently present to indicate AU 9, but are insufficient to score 9B (e.g., a *trace* of infraorbital triangle raise with skin drawn medially towards the bridge of the nose). Mere faint wrinkles on the nose are insufficient evidence as these may appear or deepen when skin is tightened by other actions without 9, especially on women with thin, light skin.

AU 9B

1. The skin from the medial portion of the infraorbital triangle to the side of the nose is *slightly* drawn medially and upward towards the bridge of the nose.

If you did not see the movement, then the appearance change must meet the following criteria:

2. *Slight* evidence of nose wrinkling and *slight* evidence of infraorbital triangle raise (which deepens the infraorbital furrow), as long as the nose wrinkling is not just a horizontal crease across the very top of the bridge of the nose. If it is just a crease, it is probably due to AU 4, and the proper scoring would be 4, or perhaps 4+10 if there is also infraorbital triangle raise.
or
3. If the only clue is nose wrinkling (and it is not just the horizontal line across the bridge of the nose just described), then the wrinkles which appear must be more than a surface line, and there must be some impression that the wrinkles have some depth. Sometimes there are a few very faint surface lines on the nose, barely visible, with no other evidence of 9 (e.g., raising of nostril wings, upper lip, or infraorbital triangle). In such cases do not score 9.

AU 9C

At least *marked* evidence of medial infraorbital triangle raise that draws the skin towards the nasal bridge to form nose wrinkles, but the evidence is less than the criteria for 9D.

AU 9D

At least *severe* evidence of medial infraorbital triangle raise that draws the skin towards the nasal bridge to form nose wrinkles, but the evidence is less than the criteria for 9E. A 9D or 9E parts the lips, unless AU 17 or AU 24 also occurs, and so a 17, 24, or 25 must be scored with these intensities.

AU 9E

Nose wrinkling, infraorbital triangle raise drawing the skin towards the nasal bridge, and deepening infraorbital furrow are in the *maximum* range. A 9D or 9E parts the lips, unless AU 17 or AU 24 also occurs, and so a 17, 24, or 25 must be scored with these intensities.

AU 16A

The appearance changes for AU 16 are sufficiently present to indicate AU 16, but are insufficient to score 16B (e.g., a *trace* of the lower lip, skin below the lower lip, or chin boss actively pulled down, not merely a passive lip part).

AU 16B

1. The lower lip is pulled *slightly* down and *slightly* laterally. Also, the lower lip is *slightly* flattened or *slightly* protruded. The lowering of the lip must be more than just the movement which occurs when the lips simply part without being pulled by AU 16.
or,
2. The skin below the lip is pulled down and laterally *slightly*
or,
3. The chin boss is pulled down. Be careful not to confuse this change in the chin with the changes due to AU 15, or with chin movements due to moving the jaw.

If you did not see the lip move down and laterally, do not score 16B without parted lips (AU 25). To score 16B+25 (without 12, 18, 20, 22, or 23) if movement is not observed:

1. criterion 1 above,
and
2. the lower gum is revealed across the entire row of front teeth.

AU 16C

The pulling downwards and laterally of the lip and skin below the lip is *marked* and both criteria 1 and 2 listed for 16B are *marked*, but the evidence is less than the criteria for 16D. (16C means 25 will probably also be scored.)

AU 16D

The pulling downwards of the lip and skin below the lip is *severe*. All criteria listed for 16B are present and at least two are *severe*, but the evidence is less than the criteria for 16E. (16D means 25 will probably also be scored.)

AU 16E

The pulling downwards of the lip and skin below the lip is in the *maximum* range. (16E will most likely also be scored with 25.)

AU 25A

When the jaw is shut, the appearance changes for AU 25 are sufficiently present to indicate AU 25, but are insufficient to score 25B (e.g., a clear opening between the lips that is less than 2 millimeters, but you can see no teeth).

When the jaw is lowered by AU 26 or 27, score 25A when actions that act to move the lips together have reduced the lip separation at least *severely* from the separation produced by the jaw opening itself.

In either case, if you are uncertain that the lips are parted, do not score 25A.

AU 25B

There are two alternative criteria for scoring 25B when the jaw is shut:

1. Teeth show - you can see teeth without doubt. The sight of but one part of one tooth is sufficient, but you must be certain that you see a tooth.
or
2. Space between lips – must be at least 2 millimeters (the thickness of 2 quarters, an American coin) between the lips.

When the jaw is lowered, use the intensity score of B to indicate that lip uniting actions are reducing the lip separation at least *slightly* from what they would otherwise be, given the extent of jaw lowering.

AU 25C

If the teeth remain together, i.e., no jaw drop can be detected, the increased lip separation from the criteria for 25B likely comes from another lip separating action or actions and must be a *marked* or *pronounced* departure from the B criteria. For example, you might score a 25C if there is a moderate action of AU 10 or AU 16 (or other lip parting action) or a small action of both 10 and 16 that parts the lips at least *markedly* more than the criteria for 25B, but less evidence than the criteria for 25D.

If the jaw is lowered by AU 26 or 27 to separate the lips, and the separation is not increased more than a *trace* by other lip separating actions or decreased more than a *trace* by lip constricting actions, score 25C. The intensity score of C for AU 25 represents the lip separation controlled virtually entirely by the jaw lowering, the lips otherwise remaining relaxed or minimally affected by other muscles pulling them open or constricting them, regardless of the absolute distance between the lips. Use the relative position of the upper lip to the upper teeth and the lower lip to the lower teeth as a guide to whether the lip separation is more or less than the jaw lowering alone produces. If other muscles act to constrict the lips, consider scoring B or A; if they act to separate the lips, consider scoring D or E.

AU 25D

When there is no jaw lowering and the lips part due to other lip separating actions, the lip separation must be *severely* greater than the criteria for 25B to assign a D intensity code to AU 25. Thus, when the teeth are together, lip parting actions other than jaw lowering, such as AU 10 and/or 16, must be pulling the lips apart at least *severely* beyond the B criteria, but less evidence than the criteria for 25E.

When the jaw is lowered, assign a D intensity score to AU 25 when these same lip lowering and raising actions are separating the lips at least *slightly* more than they would be from the jaw lowering alone, but not more than the criteria for the E intensity score. A *slight* departure from the opening caused by the jaw lowering might result from a lip lowering action, a lip raising action, or both.

AU 25E

Like the other intensities of AU 25, the E intensity is not intended to reflect the absolute maximum possible separation of the lips, but rather the maximum possible separation given the degree of jaw lowering, if any. When the teeth remain together, score an E intensity when lip parting actions, such as AUs 10 and 16, separate the lips at least *extremely* or near *maximum* by both lowering the lower lip and raising the upper lip, so that the lips are separated about as much as possible.

When the jaw is lowered, assign the E intensity when both the upper lip is raised and the lower lip is lowered so that the lips are separated at least *severely* more parted than what would result from the lowered jaw alone. Thus, for example, if AU 10 and AU 16 were both acting at *maximum* so that you think the lips are separated as much as possible given the jaw lowering, you assign an E intensity code to 25.