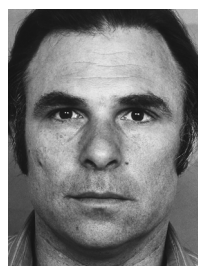

Action Unit 9 – Nose Wrinkler

Figure 4-1 shows that muscle underlying AU 9 reaches from the area near the root of the nose downward to a point adjacent to the nostril wings. When contracted, this muscle pulls skin from the area below the nostril wings upwards towards the root of the nose. Figure 4-1 shows one of the strands of AU 4 that usually acts with AU 9 to lower the eyebrows.

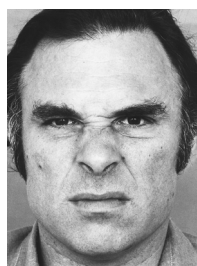
A. Appearance Changes due to AU 9

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.
8. Since AU 9 almost always involves some brow lowering, you cannot score 4+9 unless you also see evidence that the eyebrows have been pulled together by 4, or if they act sequentially so their independent action can be seen.

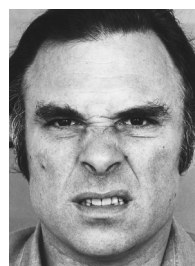
Compare images of 9 and 9+25 with 0. Note that when the lips are parted we added the score 25, producing the notation 9+25. Also inspect the video of AU 9.



0 [page 465](#)
[page 381](#) for score



9 [page 473](#)
[page 389](#) for score



9+25 [page 473](#)
[page 389](#) for score



video 9
[page 417](#) for score

B. How to do AU 9

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.

C. Intensity Scoring for AU 9

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.