



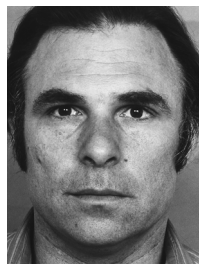
Action Unit Combination 1+4

A. Appearance Changes due to AU Combination 1+4

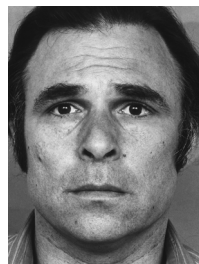
The combination of these two AUs maintains the raising action from AU 1 with the drawing together action of AU 4. The lowering effect of 4 is counteracted or restricted to the outer portions of the brow.

1. Pulls the medial portion of the eyebrows upwards and together.
2. Produces an oblique shape  to the eyebrows, (see 1+4i, 1+4ii). In some people the brows do not take on this shape but more of a dip in the center with a small pull up at the inner corners  (see j1+4).
3. Pulls medially and up on the mid to inner portions of the upper eyelid and eye cover fold, pulls the lateral portion of the brow down, producing a triangular shape to the upper eyelid (if it is visible) and eye cover fold.
4. Causes the skin in the center of the forehead to wrinkle horizontally. These wrinkles usually do not run across the forehead but are limited to the center. The wrinkles may be curved rather than horizontal or form an omega shape in some people. These wrinkles may not appear in infants or children.
5. May cause vertical lines, wrinkles or bunching of skin to appear between the eyebrows (1+4ii more than 1+4i), as the brows are drawn together.
6. In some people, the primary appearance change is an oblique wrinkle or bulge running from mid-forehead above the center of the brow to the inner brow corner area. The brows may or may not appear to be drawn together; but the inner corners are pulled up as their centers are pulled or held down.

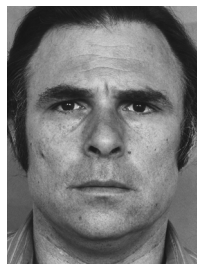
Compare AU combination 1+4 in images 1+4i and 1+4ii with the individual AUs in images 1 and 4. Also compare image j0 with images j1+4 and with 1+4ii. Inspect the video of 1+4.



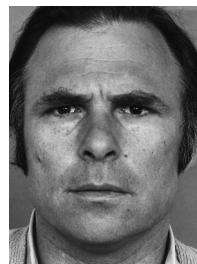
0 [page 465](#)
[page 381](#) for score



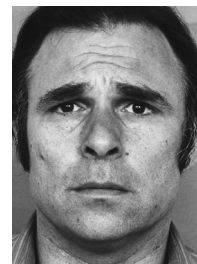
1 [page 466](#)
[page 383](#) for score



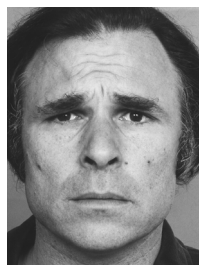
4i [page 466](#)
[page 382](#) for score



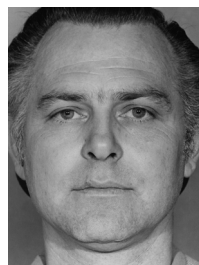
4ii [page 466](#)
[page 382](#) for score



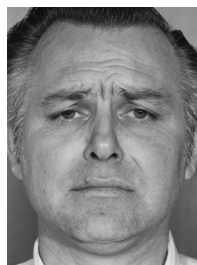
1+4i [page 470](#)
[page 386](#) for score



1+4ii [page 471](#)
[page 386](#) for score



j0 [page 465](#)
[page 387](#) for score



j1+4 [page 471](#)
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video 1+4
[page 415](#) for score

B. How to do AU Combination 1+4

It is usually easier to do 1+4 than 1 alone. Follow the instructions, repeated below, for doing AU 1, adding 4, as you do AU 1.

AU 1 (repeated from [page 20](#)): Raising the inner corners of the eyebrows is a difficult movement for most people to make voluntarily without adding AU 2. If you cannot do it, try the following:

- Raise your entire brow upwards (see images of AU combination 1+2 on [page 471](#)). Then try to raise just the inner corner, using AU 1.
- Add AU 4 to AU 1, pulling the brows together as you pull up the inner corners; if you succeed in this, you will look like the image 1+4 on [page 470](#).
- Place your fingers on the inner corners of your eyebrows and push your eyebrows up so they will look like image 1. Then, see if you can hold the appearance when you take your fingers away.

Once you can do AU 1, touch the outer corners of your brows to verify that AU 2 is not also acting.

AU 4 (repeated from [page 18](#)): This movement is easy for most people to do. Lower your eyebrows and pull them together. Try not to wrinkle your nose (if your nose is wrinkling, you are doing AU 9). If you are unable to make this movement so it looks like 4i or 4ii, turn to the description of AU 9 on [page 93](#). Make the nose wrinkling movement of AU 9, and watch what happens to your eyebrows. Notice that they come down and together. Now try to move your eyebrows without moving AU 9. Alternatively, imagine yourself puzzled with a problem that you can't figure out; you may make AU 4. If you are still unable to make this movement, use your fingers to push the skin on your face so you look like 4ii. Then try to hold that appearance when you take your fingers away.

C. Intensity Scoring for AU Combination 1+4

The criteria for AU 1 in AU Combinations of 1+4 are unchanged from AU 1 alone, and are repeated below. The criteria for AU 4 are altered since AU 1 counteracts the lowering effect of 4.

AU 1A

The appearance changes for AU 1 are sufficiently present to indicate AU 1, but are insufficient to score 1B (e.g., a *trace* of brow raising at the inner corners).

AU 1B

1. Inner corners of brows raised *slightly* manifest by hair moving or evidence of muscle bulge developing, showing that the inner corner area has been pulled up. In some people the eyebrows will not move but the skin above them will move upwards.

If you did not see the brow move, it must additionally have evidence that either criterion 1 is *marked*;
or,

2. *Slight* wrinkles in center of forehead; if such wrinkles are permanent, they must increase *slightly*.

In a child you might never see criterion 2. In such instances, if you did not see the brow move, then you must rely upon criterion 1, but it must be *marked* not *slight*.

AU 1C

Both the inner brow raising and wrinkling in the center of the forehead of the criteria for 1B are present together and at least one is *marked*, e.g., one step greater than *slight*, but the evidence is less than the criteria for 1D.

AU 1D

Both the inner brow raising and wrinkling in the center of the forehead of the criteria for 1B are present and both are at least *severe*, but the evidence is less than the criteria for 1E.

AU 1E

All the signs of AU 1 are present and the inner brow raising and wrinkling in the center of the forehead are in the *maximum* range.

The intensity criteria for AU 4 in combination 1+4 are different from those for 4 alone.

AU 4A in AU Combination 1+4

The appearance changes for AU 4 in 1+4 are sufficiently present to indicate AU 4, but are insufficient to score 4B in 1+4 (e.g., inner brow corners pulled together a *trace* and a *trace* of brow wrinkling).

AU 4B in AU Combination 1+4

1. The inner corners of the brows pulled *slightly* closer together than in the neutral face, and, one of the following two changes:
2. There is *slight* wrinkling or muscle bunching between the brows. If this sign is evident in the neutral face then it must increase *slightly*.
or
3. *Slight* wrinkle or bulge running from the forehead above the eyebrow to the inner corner of the brow. If present in neutral, must increase *slightly*.

AU 4C in AU Combination 1+4

1. The inner corners of the brows pulled *markedly* closer together than in the neutral face, and,
2. *marked* wrinkling/bunching, bulging in the medial part of the forehead.

AU 4D in AU Combination 1+4

1. The inner corners of the brows pulled *severely* closer together than in the neutral face, and,
2. *severe* wrinkling/bunching, bulging in the medial part of the forehead.

AU 4E in AU Combination 1+4

1. The inner corners of the brows pulled *maximally* closer together than in the neutral face, and,
2. *maximum* wrinkling/bunching, bulging in the medial part of the forehead.