

Activity 4

This is patient AM, 28-year-old male who came in the ER because of drooping of his left face. He said he woke up and he could not move his left face.

He has no other muscle weakness. He is conscious and coherent although he had a little difficulty speaking because the left side of his lips drooped. He had normal blood pressure and he had no other co-morbidities. He was diagnosed to have Bell's palsy. Name 5 muscles which are affected and list its actions. Describe the mechanism of his muscle weakness. What other symptoms could the patient exhibit as a result of facial muscle weakness?

- Bell's palsy affects the muscles that innervate from the Facial (VII) nerve. The five muscles prominently affected by this disorder are the **frontal belly, orbicularis oculi, orbicularis oris, buccinator, and platysma muscles**. The *frontal belly* draws the scalp anteriorly, raises the eyebrows, and could wrinkle the skin of the forehead horizontally. The *orbicularis oculi* is responsible for the closing of the eyes. Next is the *orbicularis oris*, which closes and protrudes the lips, forms the action of kissing, compresses lips against the teeth, and shapes lips during speech. Then the *buccinator* acts by pressing the cheeks against the teeth and the lips for kissing, whistling, and sucking. It also draw the corner of the mouth laterally and assists mastication. Lastly the *platysma muscle*. This muscle draws the outer part of the lower lip inferiorly and posteriorly as in pouting and it also dresses the mandible.

Bell's palsy is a condition in which it is caused by some viral infection like shingles or a bacterial infection such as Lyme disease. This results in facial paralysis as the Facial (VII) is being damaged. The paralysis causes the face to droop in severe cases. With this, the person cannot move the muscles affected by the paralysis. Other symptoms are loss in the sense of taste, weaker production of, and loss of ability to close the eyes, even during sleep. Lastly, due to face paralysis, aside from the immovable muscle eyes, a person with this condition might also experience paralyzed forehead muscles and lips.

Source:

Tortora, G. J., & Derrickson, B. (2017). Tortora's Principles of Anatomy and Physiology. In *John Wiley & Sons, Inc. eBooks*. <https://ci.nii.ac.jp/ncid/BB23861293>