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The perioral area responds less predictably than other treatment areas because the dynamic muscle actions associated with eating, drinking, speaking, and smiling may be impaired. A cautious approach to this area is warranted.

Only 50 % of patients are satisfied with perioral botulinum toxin because of lack of perceived benefit or side effects of drooling, difficulty in puckering and whistling, and impaired enunciation.

Perioral botulinum toxin therapy may focus on the orbicularis oris muscle to relax perioral rhytids, the depressor anguli oris muscle to produce an upturn in the lateral oral commissure, or the mentalis muscle to relax a peau d'orange chin.

## Orbicularis Oris Therapy

The orbicularis oris muscle must be treated cautiously with very small doses of botulinum toxin. Singers and woodwind instrumentalists must be avoided (Fig. 132.1).

## Depressor Anguli Therapy

The depressor anguli oris is treated cautiously to give a subtle, but pleasing, upturn to the lateral oral commissure (Fig. 132.2). Caution must be exercised to avoid injecting too medially and weakening the depressor labii inferioris, which will produce a stroke-like appearance.



**Fig. 132.1** Typical treatment sites for vertical lip lines. Minute doses, i.e., 1–1.5 units per site, are delivered. Dose and number of injection sites may be gradually increased if the response is inadequate

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**Fig. 132.2** (a) Preoperative appearance of patient with depressed lateral oral commissures. Note the slight downward angulation of the lateral oral commissures prior to injection. (b) Injection sites for treatment of depressed lateral oral commissures. Generally, 3–8 units per site are delivered. Injection is inferior to the lateral commissure and two thirds of the distance to the chin border.

(c) Overlay of perioral muscles. *Red lines* represent depressor anguli oris. *Green lines* represent depressor labii inferioris. Both muscles may be targeted for botulinum toxin-A treatment. (d) Note subtle improvement in wrinkles and slight elevation of the lateral oral commissures 2 weeks following injection