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NEUROTOXIN COMPARISON: BOTOX, DYSPORT, AND XEOMIN

What are the differences between neurotoxins: Botox, Dysport, and Xeomin? Is Botox better than Dysport or Xeomin? Does Botox last longer than Dysport or Xeomin?

If you've ever found yourself asking these questions or are just curious about how neurotoxins function, keep reading below as I dive into 3 of the most popular neurotoxins in the market.
Neurotoxin use for its "wrinkle relaxing" effects is the most common non-invasive cosmetic procedure in the United States. You might recognize it by its most popular name, Botox. And, while the chances that are you are getting "Botox" when visiting your favorite medical spa are high, there is also a possibility you're receiving one of 5 other FDA approved neurotoxins in the market! But do not be alarmed, they are all effective and great in their own way. In fact, your injector might find that a neurotoxin other than Botox works better for your particular needs. We will dive into the three neurotoxins used at Leo Aesthetics Boutique; Botox, Dysport, and Xeomin.

HOW DO BOTOX, DYSPORT, AND XEOMIN WORK?

Before we compare our favorite neurotoxins, it is important that we address their mechanism of action. Botox, Xeomin, and Dysport all work by interfering with acetylcholine release at the nerve and muscle junction and temporarily blocking muscle movement at the injection site. The result is a decreased appearance of dynamic wrinkles (wrinkles that appear with muscle movement) and softening of static wrinkles (wrinkles present regardless of muscle movement).

Botox, Dysport, and Xeomin all share the exact same active ingredient, botulinum toxin type A. In that sense, they are all the same! However, the neurotoxin molecule not only consists of the active ingredient, it also contains inactive accessory proteins attached to the active ingredient. The difference between Botox, Dysport, and Xeomin lies in the composition of these inactive proteins. Manufacturers of each neurotoxin subtly changed the inactive portion of the molecule to make it their own. These variations can result in differences in how quickly the product takes effect and how it spreads within the muscles.

BOTOX

Botox (onabotulinumtoxinA) is the oldest and most widely known neurotoxin. Formulated by Allergan pharmaceutical company, it was first approved for aesthetic treatment of the glabella (frown lines) in 2002 and later gained approval for the treatment of crows feet and forehead lines. Botox is also approved for therapeutic treatments outside aesthetic medicine such as migraines or urinary incontinence.

The formulation of Botox consists of its active ingredient, botulinum toxin type A, and large accessory proteins. Botox resistance can occur when patients develop antibodies to the accessory proteins portion of the Botox molecule. Botox takes 7-14 days to take full effect and lasts 3-4 months. Duration depends on dose and how your body metabolizes the product.

DYSPORT

Dysport (abobotulinumtoxinA) is formulated by Galderma. It was first FDA approved to treat the glabellar region in 2009, it is currently also approved for therapeutic use. The formulation of Dysport differs from that of Botox in the size of its accessory proteins, Dysport is attached to much smaller proteins thus affecting its molecular weight and potency. Dysport units are less potent that Botox units in a 3:1 ratio, respectively. However, Dysport units are priced much lower making it the same or slightly less expensive than Botox. Additionally, the molecular weight of Dysport affects its diffusion rate. As a smaller molecule, Dysport spreads further and is great for large areas such as the forehead. Dysport kicks in faster, usually in 2-3 days and lasts 3-4 months.