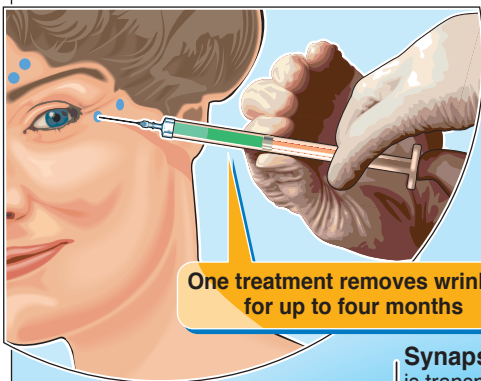


# Drug that is changing the face of ageing

One of the world's most deadly nerve agents is being used as a cosmetic treatment for wrinkles. When injected in highly diluted form, *Botulinum toxin*, or *Botox* for short, paralyses facial muscles – leaving the overlying skin smooth and unwrinkled – while normal facial expression remains unaffected



One treatment removes wrinkles for up to four months

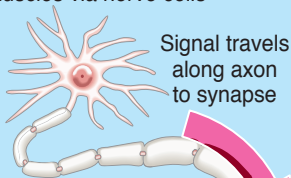
**Transmitter:** Chemical called *acetylcholine* acts as transmitter, passing signal from nerve-ending to muscle

Muscle

Receptor

Acetylcholine triggers muscle contractions which eventually cause wrinkles on forehead and crow's feet around eyes

**Muscle movement:** Brain sends electrical messages to muscles via nerve cells



Signal travels along axon to synapse

Axon

**Synapse:** Electrical message is transmitted from nerve-ending to stimulate muscle contraction



**Botox:** Enters synapse and blocks release of acetylcholine. Muscle activity is dampened, resulting in smooth skin