

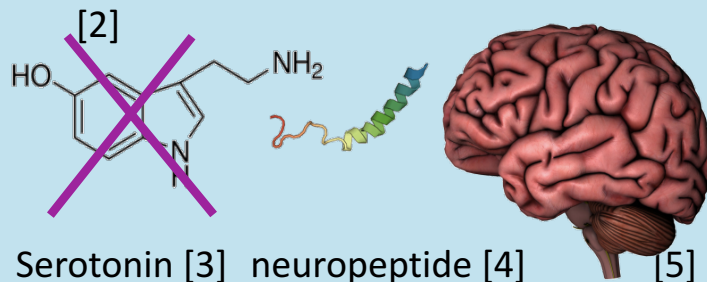
ONZETRA™ XSAIL™ (SUMATRIPTAN NASAL POWDER)

What Are Migraines?

Migraines are severe headaches triggered by changes to nerve signals and blood vessels in the brain, leading to temporary unusual functioning of the brain [1].

Examples of the triggers are:

- the release of neuropeptides which lead to inflammatory responses in the brain.
- Decreased levels of serotonin, a vasoconstrictor, leading to vasodilation of cerebral blood vessels



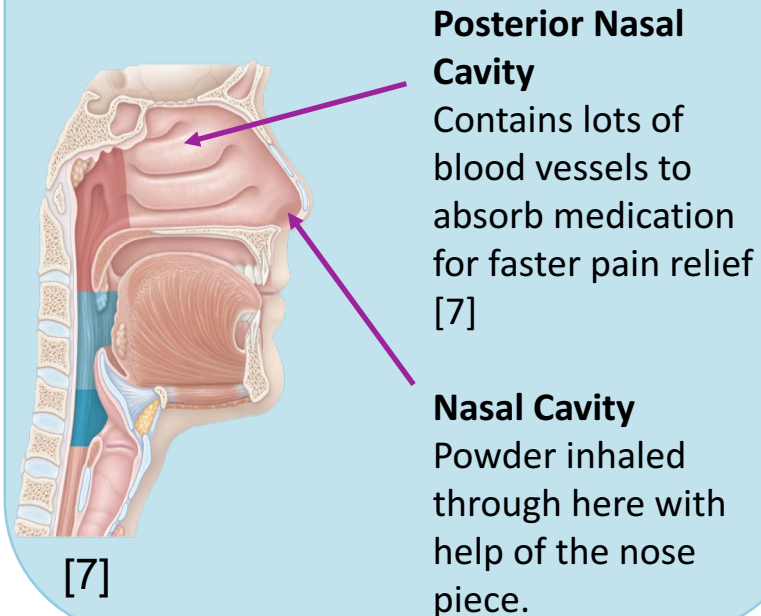
- Affect 1/7 people in the world.
- Top 3 most common diseases. [6]

Symptoms

- Throbbing pains in head
- Nausea or vomiting
- Sensitivity to light or sounds
- Dizziness [1]

Why a Powder?

The drug, sumatriptan, is administered as a powder by inhalation using the device, Xsail.



Metabolism and Side Effects

COMMON:

- Metallic taste
- Nasal discomfort/ blocked nose

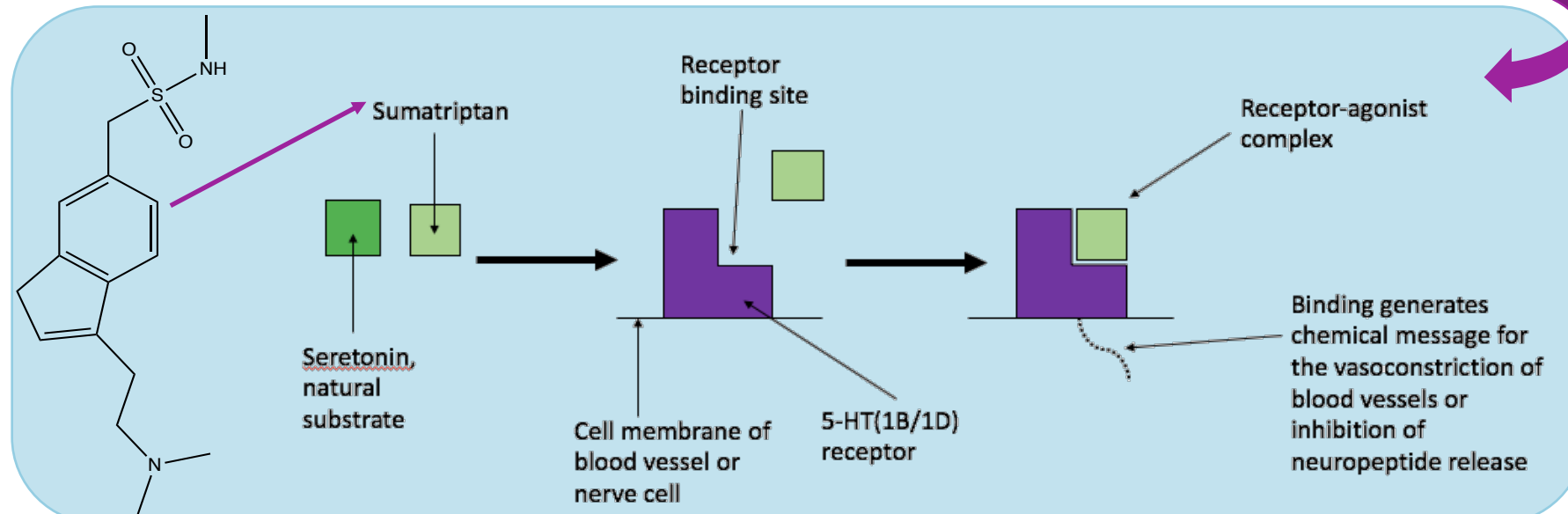
SERIOUS

- Heart problems
- Intestinal problems
- Seizures [7]

METABOLISM

- Metabolized by the enzyme monoamine oxidase (MAO)
- The major metabolite, the indole acetic acid analogue is excreted in the urine [8]

How it works



Literature Cited

- [1] NHS, <https://www.nhs.uk/conditions/migraine/>, [2] Center Watch, <https://www.centerwatch.com/drug-information/fda-approved-drugs/drug/100129/onzetra-xsail-sumatriptan-nasal-powder->
[3] Sigma Aldrich <https://www.sigmaaldrich.com/catalog/product/sial/14927?lang=en®ion=GB> [4] NOP online, <http://www.onconet.cz/index-en.php?pg=news&aid=1104> [5] Clipart <http://cliparting.com/free-brain-clipart-4922/> [6] Migraine Trust, <https://www.migrainetrust.org/about-migraine/migraine-what-is-it/facts-figures/> [7] Onzetra™ Xsail™, <https://www.onzetra.com/>
[8] Drug Bank, <https://www.drugbank.ca/drugs/DB00669> All websites accessed April 2018. Megan McInnes