



Nitroglycerin-Induced Mouse Model

Migraine, and its associated headache and neurological symptoms, is a severely impairing condition affecting more than a billion people worldwide. Although migraine is one of the most common neurologic disorders, not much is known about it yet, highlighting the need for a fast turnaround model to study this condition.

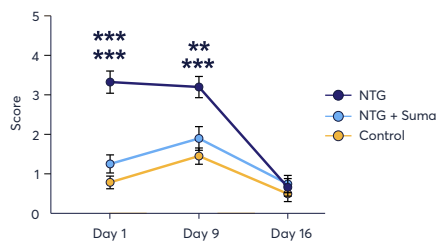
Injecting wild type mice with glyceryl trinitrate (a.k.a. nitroglycerin, NTG) is a fast and robust method to induce a migraine-like symptomatology that can efficiently be treated with an available migraine medication.

- Increased nociceptive response levels measurable with grimace score
- Induction of nociceptive response is independent of sex
- Nociceptive response can be reversed by sumatriptan treatment

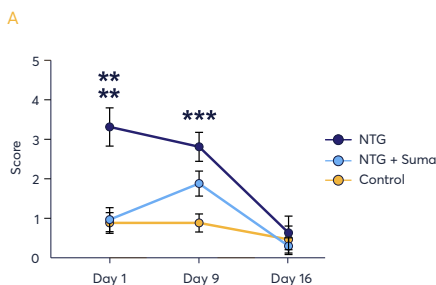
Figure 1: Effects of acute (day 1) and repeated (day 1-9) injection of nitroglycerin (NTG) on nociceptive response indicating a migraine-like symptomatic in wild type mice. Wild type mice, 3 months of age, were injected with saline, nitroglycerin alone (NTG; i.p.), or together with sumatriptan (Suma; i.p.). Score of facial expression associated with migraine-like nociceptive response. High scores indicate migraine-like symptoms. Grimace scale was scored on days 1, 9 and 16, 2 hours after injection. Day 1 and 9: n = 24 / group, day 16: n = 12 / group; two-way ANOVA with Bonferroni post hoc test; Mean ± SEM. **p<0.01, ***p<0.001.

Figure 1

Grimace Scale



Grimace Scale Male



Grimace Scale Female

