

Description of Additional Supplementary Files

Supplementary Movies

Supplementary Movie 1 We illustrate the on-rate of tricaine by applying anesthesia to a fish reared under standard conditions. We pour the anesthesia on at 10s, and for the following 20s the fish slows its swim bouts. After 30-40s, the fish floats, losing posture and no longer responding to physical stimuli.

Supplementary Movie 2 We illustrate the off-rate of tricaine by washing out the anesthesia in the fish in Supplemental Movie 1. In the first 10s, the fish is in a tricaine bath, and continues to be immobile and does not respond to physical touch. We then transfer the fish to a bath of standard fish water by 20s, and after 1 minute and 10 seconds we see the first touch-evoked swim. The fish continues to recover for the next minute, and by 2 minutes after wash out begins to swim in responses to taps.

Supplementary Movie 3 Full anatomy stacks of four normally reared (left) and tricaine-reared (right) fish shown in Supplemental Figure 10.

Supplementary Movie 4 Recording of fish in Figure 4 while still under tricaine (first 303 frames, 10s at 30 frames/s) and after washout (frames 304-1201, last 30s at 30 frames/s). No coordinated activity is observed while still under anesthesia, despite being shown continuous visual stimuli, while strong coordinated activity is seen even immediately after washout.