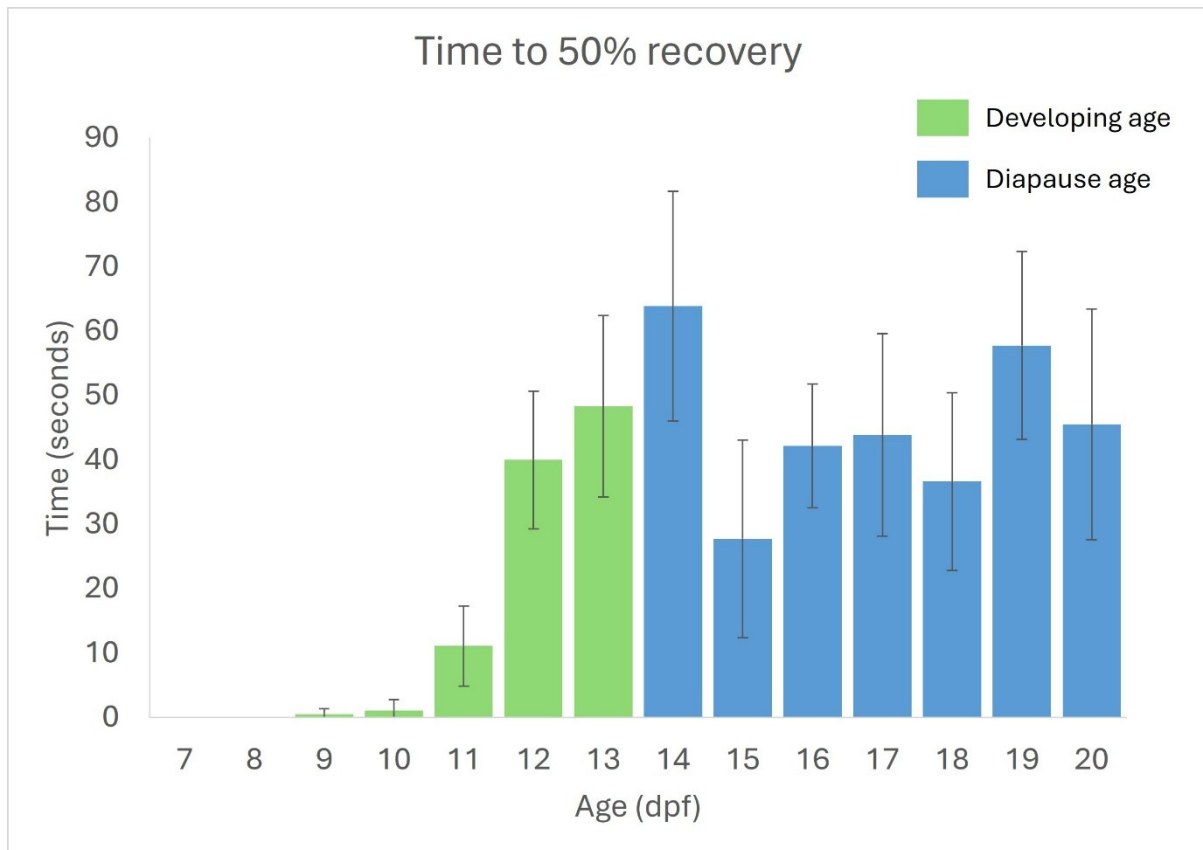
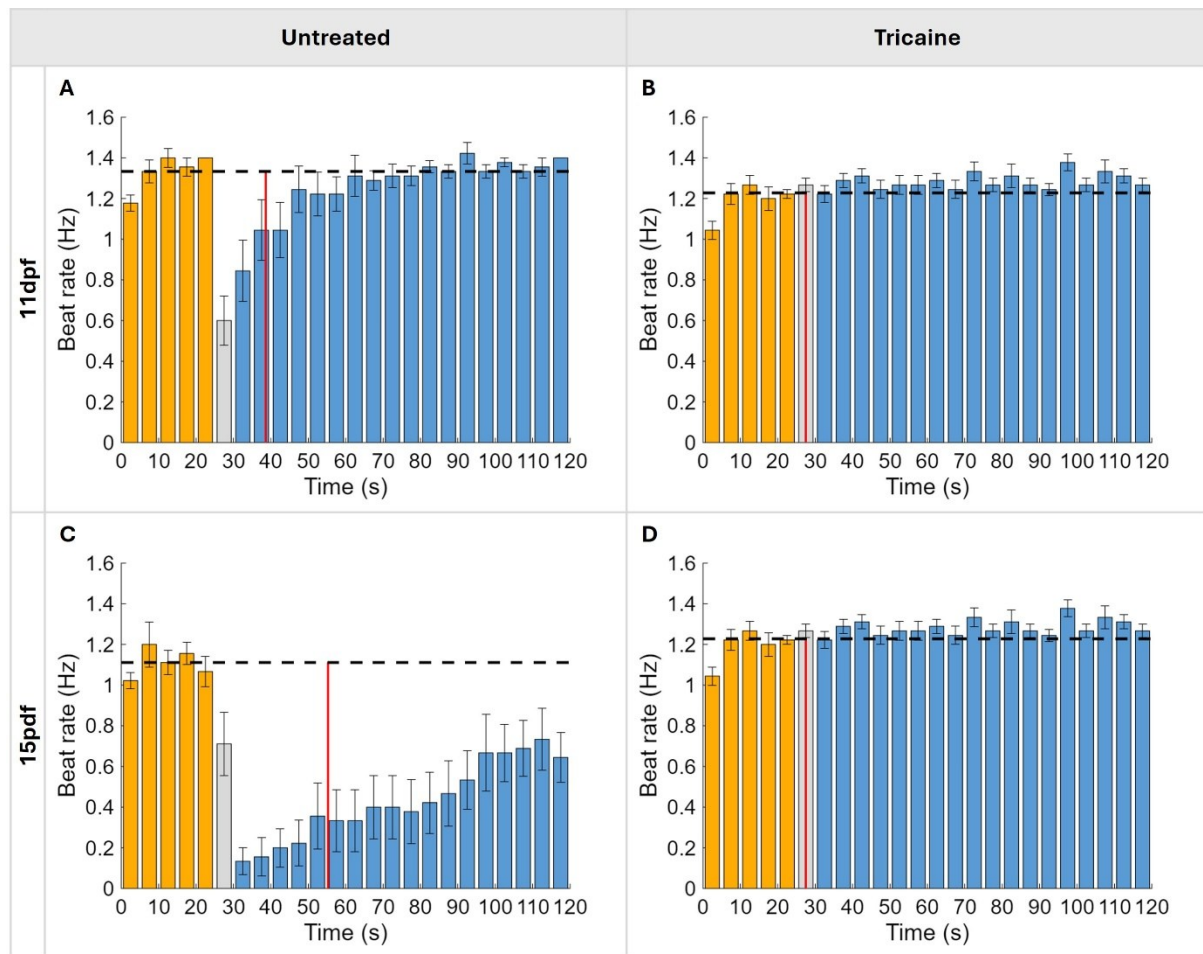
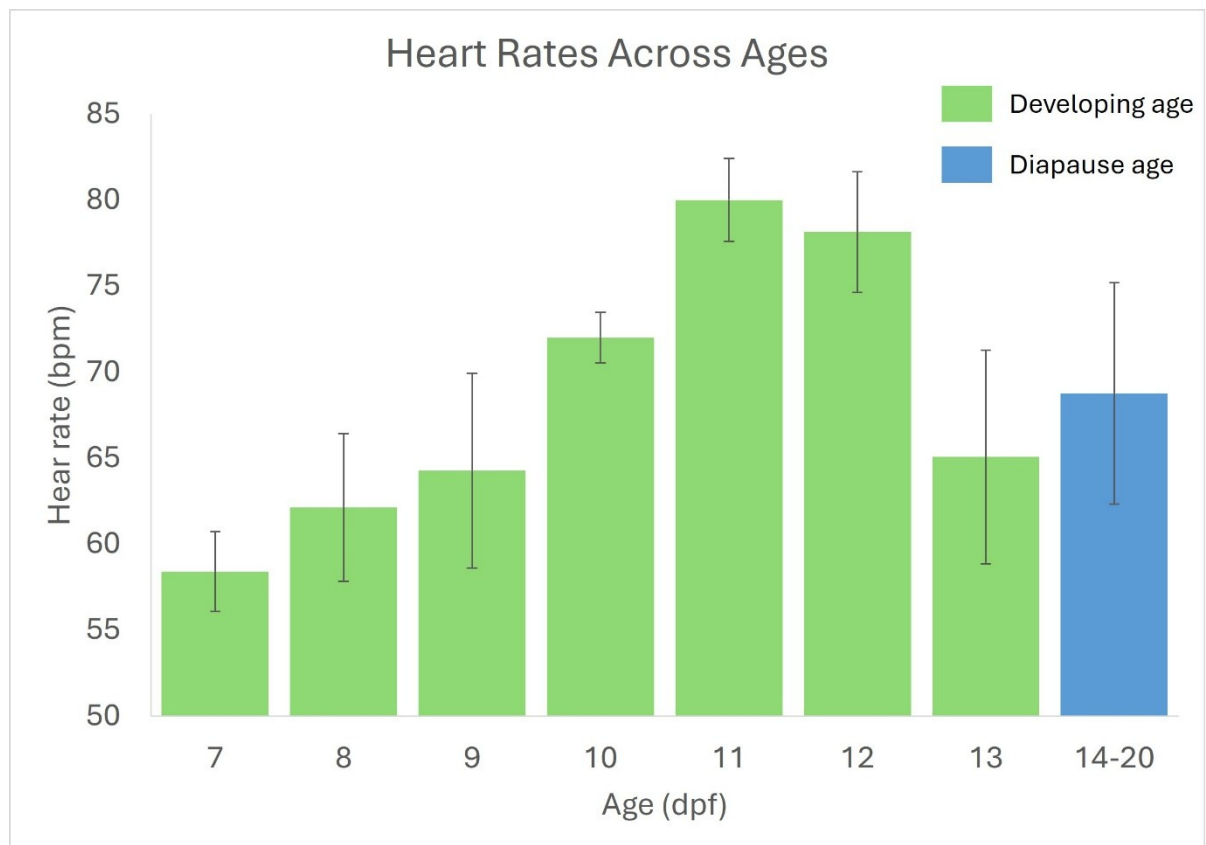




Supplementary figure 1. Time to 50% recovery of pre-stimulation heart rate across ages.

Green bars represent embryos at developing ages; blue bars represent diapause-aged embryos ($n=9$ per age). For 120 second recordings, average heart rates were calculated at 5 second intervals for each age. Stimulation was applied at 25s, inducing HSPD. For 7 and 8dpf embryos, time to reach 50% recovery was 0s as they did not show HSPD. Error bars show standard deviation.





Supplementary figure 3. Baseline, pre-stimulus heart rates of *K. marmoratus* embryos. Green bars show heart rates for developing embryos (7-13dpf) and blue for those in diapause (14-20dpf); $n=9$ for each age. Error bars show standard deviation.

Supplementary video 1. Video highlighting the sensitivity of embryos to physical disturbance. In this video, the embryo is gently nudged using the tip of a tweezer, imitating the movement of a crab claw. This disturbance causes HSPD. This stimulation is administered at ~40s. The heart rate for this embryo was 57bpm. After the stimulation, time to 50% recovery was 90s and time to full recovery was 145s. This video also highlights the sensitivity of *K. marmoratus* embryos to physical disturbance, causing HSPD.

Supplementary video 2. Videos showing other movements during HSPD. Videos are shown for two individual 13dpf embryos. Heart stops were stimulated at 10s. In example 1, eye movement can be seen during HSPD. The heart restarts beating at ~26s. In example 2, mouth and opercular movement can be seen. The heart restarts beating at ~24s. This shows how HSPD does not cause complete paralysis of the body.