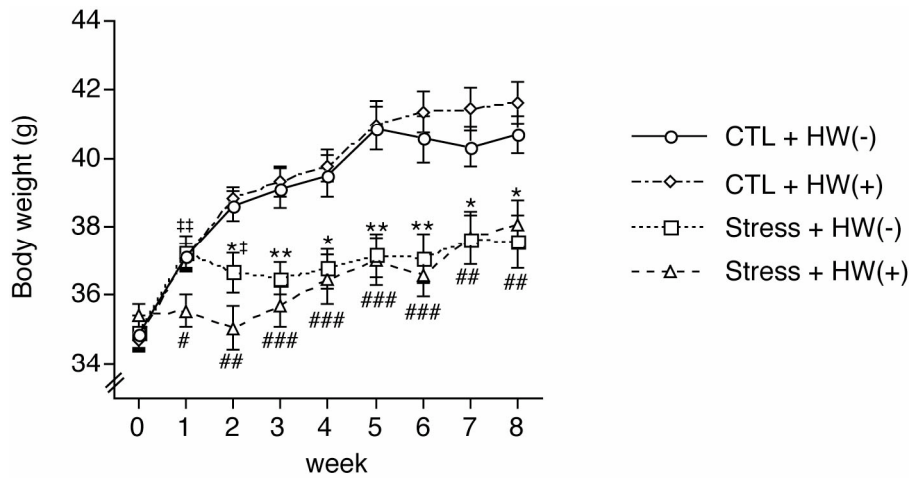
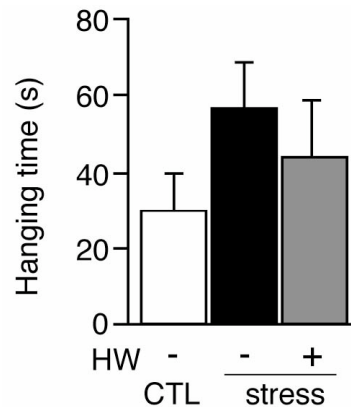


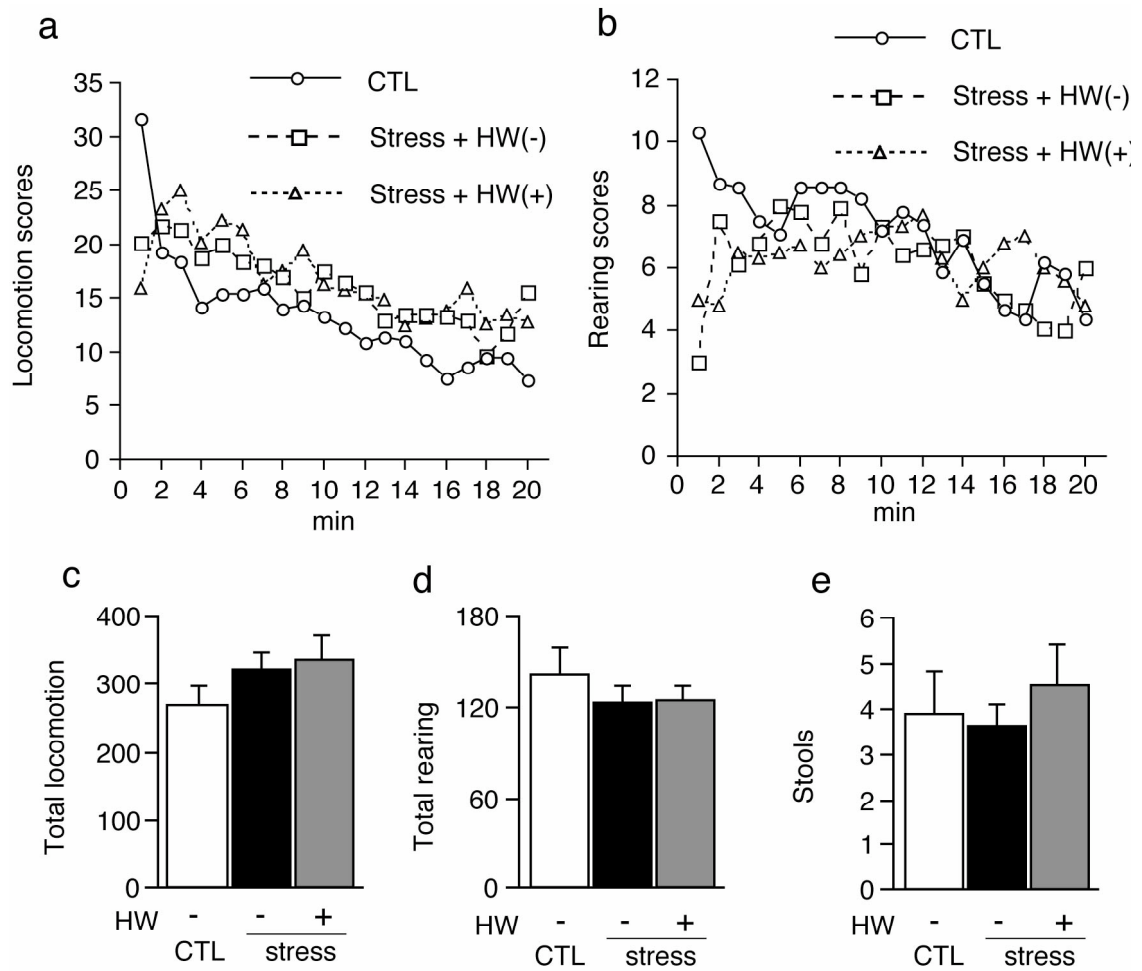
## Supplementary Figures



**Figure S1** Body weight. Changes in body weight during the experimental period were measured. Stress and CTL: groups with or without restraint stress, respectively. HW(+) and HW(-): groups given water with and without hydrogen, respectively. Data are the mean  $\pm$  s.e.m. (each group contained 10 mice. \* $P < 0.01$  and \*\* $P < 0.001$  vs CTL + HW(-) and CTL + HW(+). # $P < 0.03$ , ## $P < 0.01$  and ### $P < 0.001$  vs CTL + HW(-) and CTL + HW(+). †  $P < 0.03$  and ‡  $P < 0.01$  vs. Stress + HW(+).



**Figure S2** Wire hanging test. After 6-week restraint stress, wire-hanging test to determine neuromuscular strength was performed by measuring the hanging time. Stress and CTL: groups with or without restraint stress, respectively. HW(+) and HW(-): groups given water with and without hydrogen, respectively. Data are the means  $\pm$  s. e. m. (each group contained 10 mice).



**Figure S3** Open field test. After 7-week restraint stress, the open field test was performed to examine the change in movement ability. (a) locomotion score, (b) total locomotion score, (c) rearing score, (d) total rearing score, and (e) stools found at the end of the session were also counted. Stress and CTL: groups with or without restraint stress, respectively. HW(+) and HW(-): groups given water with and without hydrogen, respectively. Data are the mean  $\pm$  s. e. m. (each group contained 10 mice).