

Supplementary Data

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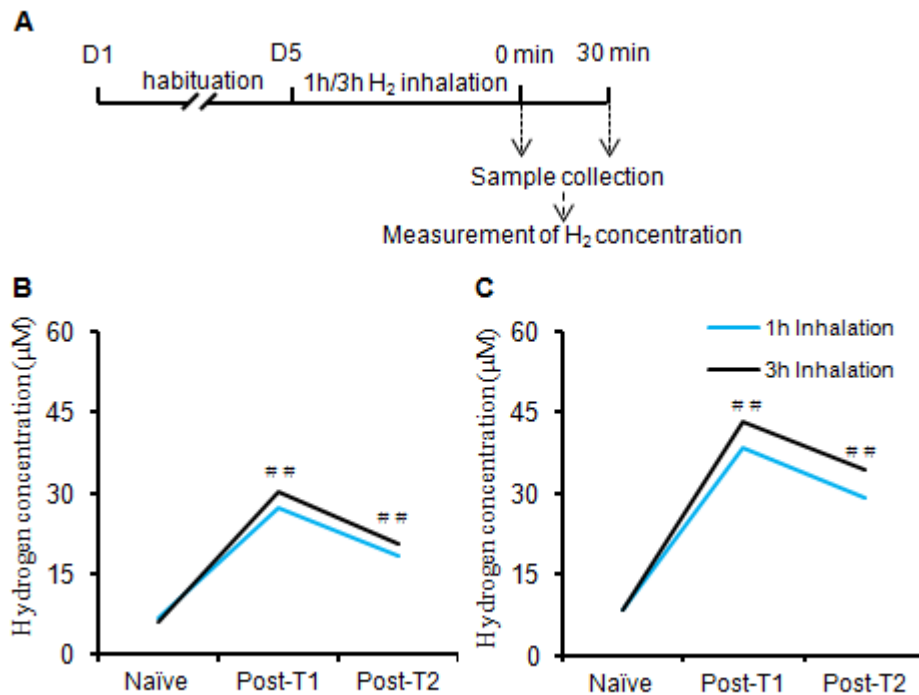
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Molecular hydrogen increases resilience to stress in mice

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Supplementary Figure 1. Measurement of H₂ concentration in the blood and hippocampus of mice exposed to H₂ inhalation.

Molecular hydrogen (H₂) present in water or organs of mice was measured using a needle-type Hydrogen Sensor (Unisense A/S, Aarhus, Denmark) following the method published by Hayashida et al^[1]. **(A)** Experimental procedure. After a 5-day adaption period, mice were randomly divided into three groups (n=10 in each group). Two groups of mice were exposed to H₂/O₂ mixture gas in a transparent closed box (20×18×15-cm, length × width × height) for 1h or 3h. Mice in naive group were kept in the treatment room without any treatment. The hippocampus and blood of all mice were collected immediately or 30 min after H₂ exposure. Measurement of H₂ were conducted based on previous investigation. H₂ concentration in the hippocampus **(B)** and blood **(C)** are significantly increased at both 0 min (Post-T1) and 30 min (Post-T2) after H₂/O₂ mixture gas inhalation, compared with that of naive mice.

Reference

- [1] Hayashida K, Sano M, Ohsawa I, *et al.* Inhalation of hydrogen gas reduces infarct size in the rat model of myocardial ischemia-reperfusion injury. *Biochem Biophys Res Commun.* 2008,373(1):30-5.