

Online Supplemental

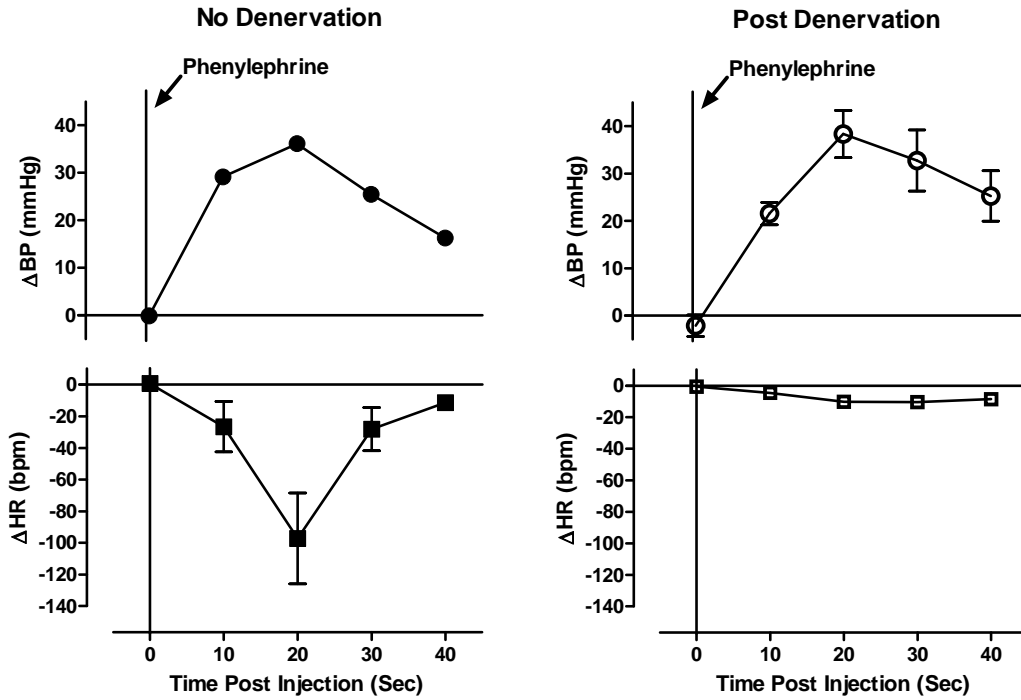
Short title: Portal Osmopressor Mechanism Linked to TRPV4

**Portal Osmopressor Mechanism Linked to TRPV4 and Blood Pressure
Control**

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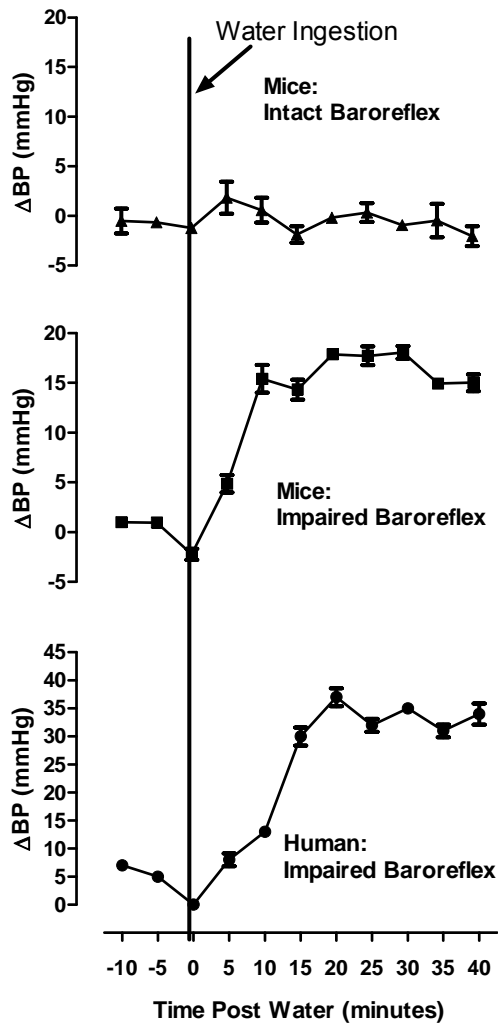
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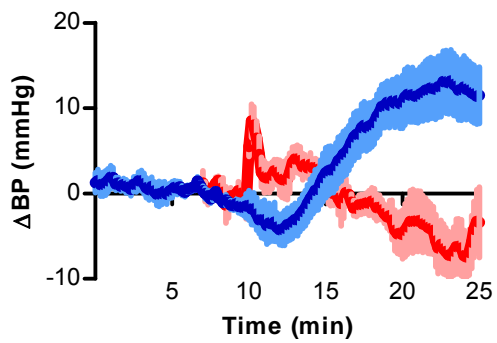
S1. Blunted HR response to phenylephrine after baroreflex deafferentation.

Representative BP and HR changes after i.v. phenylephrine (t = 0), pre and post baroreflex deafferentation. Phenylephrine challenge was used to validate successful baroreflex deafferentation in mice.

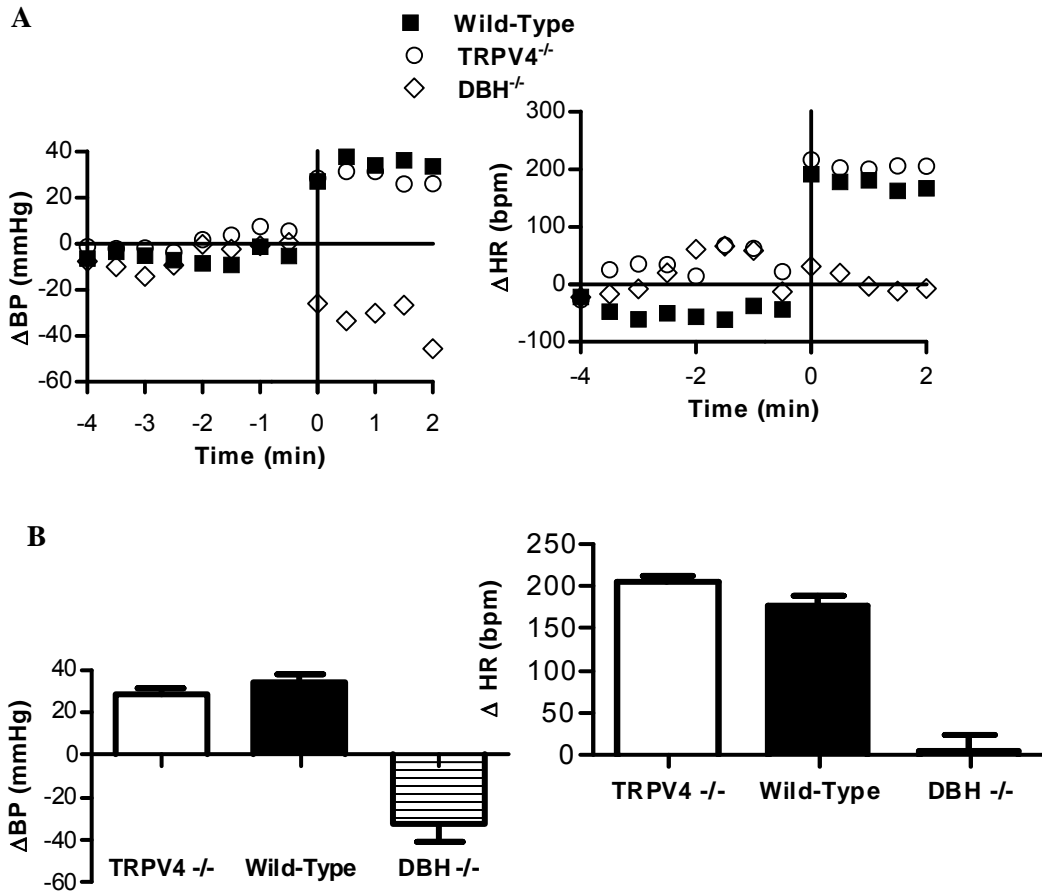


S2. BP profile during water consumption in humans and mice.

Mice with intact baroreflexes show little BP response to water infusion, since baroreflex buffering attenuates it. Surgically baroreflex-impaired mice, as well as patients with baroreflex impairment, show a robust increase in BP that is sustained well beyond the period of water ingestion. This enhanced pressor response facilitates mechanistic studies of water's cardiovascular effects.



S3. Role of plasma volume in pressor response. 150 μ L intravenous saline (*red*), given at 10 minutes elicited only a small, transient pressor response. Duodenal (*blue*) infusion of water is shown for comparison.



S4. *Trpv4*^{-/-} have intact sympathetic efferents. A, Representative tracings of the change in BP and HR during restraint for wild-type (■), *Trpv4*^{-/-} (○), and *Dbh*^{-/-} (◇) mice. B, Average change in BP and HR during 2-minute restraint.