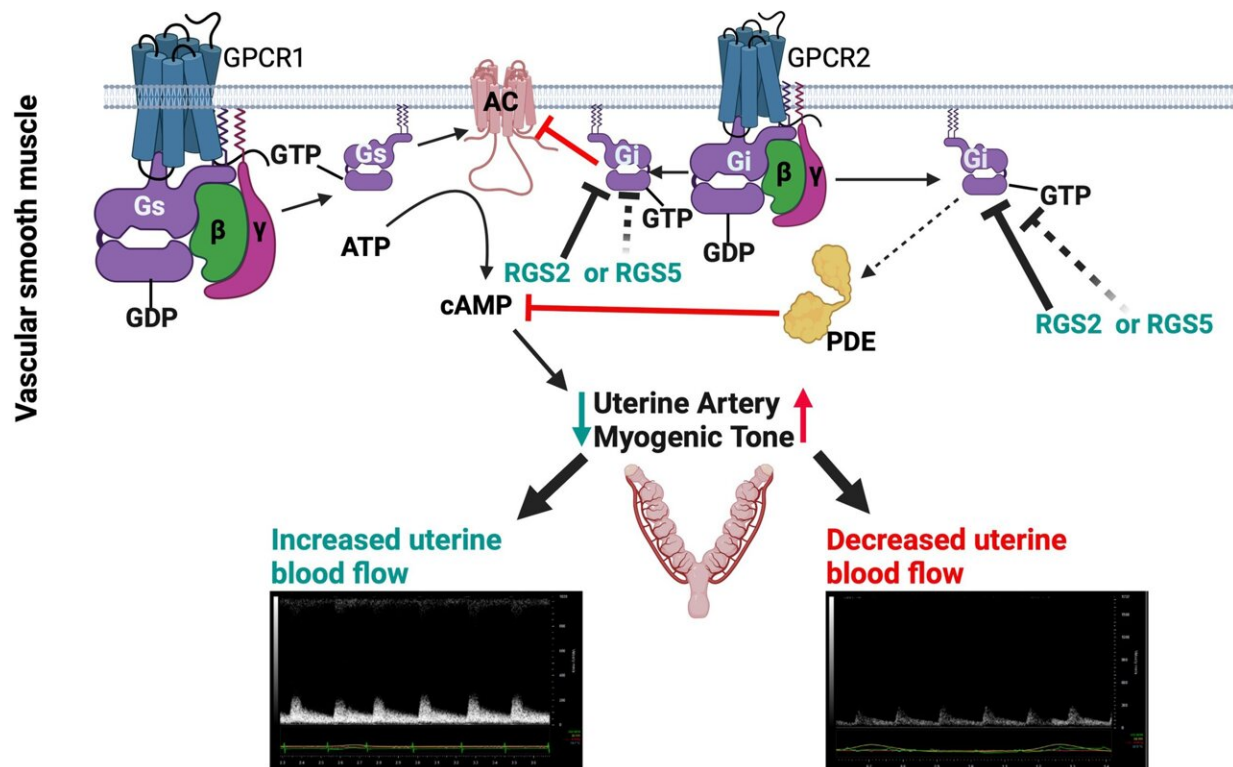


Blocking key protein normalizes uterine muscle tone, study shows

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Graphical abstract. Credit: *Function* (2024). DOI: 10.1093/function/zqae003

Abnormal uterine blood flow is a hallmark of hypertensive disorders of pregnancy, including chronic hypertension, preeclampsia and gestational hypertension. Abnormal uterine blood flow is also associated with a low fertility rate. However, the mechanisms controlling uterine blood flow

regulation, both in nonpregnant and pregnant states, are poorly understood.

In this study, researchers determined that blocking enzymes and proteins that play a key role in [brain development](#) (phosphodiesterases) decreased and normalized myogenic tone (the state of [muscle](#) tone in living beings that originates from the muscle itself) and blocked dopamine-induced myogenic tone in certain proteins.

"We conclude that Gi/o ([protein-coupled receptor](#)) augments UA (uterine arteries) MT (myogenic tone) in the absence of RGS2 (G protein regulator) by a novel mechanism involving PDE-mediated inhibition of cAMP-dependent vasodilation," the research team wrote.

The full article, "[Phosphodiesterases mediate the augmentation of myogenic constriction by inhibitory G protein signaling and is negatively modulated by the dual action of RGS2 and 5](#)," is published ahead of print in the journal *Function*.

More information: Bo Sun et al, Phosphodiesterases Mediate the Augmentation of Myogenic Constriction by Inhibitory G Protein Signaling and is Negatively Modulated by the Dual Action of RGS2 and 5, *Function* (2024). [DOI: 10.1093/function/zqae003](https://doi.org/10.1093/function/zqae003)

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