

intentionally lowers its metabolic rate—reducing energy use, oxygen consumption, and activity levels. It's like putting the body into "low-power mode" to survive tough conditions.

Some young blue mussels *(Mytilus spp.)* may survive extreme heat by slowing their metabolism—reducing how much they eat and breathe. This strategy, called metabolic depression, helps them avoid a dangerous mismatch between energy supply and demand during heatwaves.

Research suggests that mussels with a naturally lower metabolic rate are better at handling daily temperature swings, but only a few individuals may have what it takes to survive future warming.

Metabolic depression also slows growth and reproduction, so it's a strategy used only when necessary. Species that can use metabolic depression may be better equipped to survive climate extremes, but only if they also have time to recover and reproduce.

I guess l'Il just have to wait this out then.

Vajedsamiei, Jahangir, Martin Wahl, Andrea Lee Schmidt, Maryam Yazdanpanahan, and Christian Pansch. 'The Higher the Needs, the Lower the Tolerance: Extreme Events May Select Ectotherm Recruits With Lower Metabolic Demand and Heat Sensitivity'. *Frontiers in Marine Science* 8 (2021).

https://www.frontiersin.org/articles/10.3389/fmars.2021.660427.

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