

Muscle Synergies

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Muscle synergies refers to the hypothesis that the central nervous system (CNS) simplifies the planning and production of movement by using a combination of a limited number of spatial and/or temporal modules¹

1 Tonic & Phasic

i From MSK 2 lecture

- Tonic vs phasic muscles
 - Tonic muscles: those that hold u in the fetal position, usually flexion synergistic, more spastic
 - * “Phylogenetically older”.
 - * you should STRETCH these muscles
 - Phasic muscles: ones that open you (ie ER, supination): the opposite as above, ie traps: long and weak, constantly need to strengthen for better posture and function.
 - * You should STRENGTHEN
 - Treatment: An idea is if you have poor mm length on a tonic muscle, strengthen the opposite phasic muscles to reduce tone in the tonic muscle

Read this article for more information about tonic/phasic muscles:¹

1. Brambilla C, Russo M, d’Avella A, Scano A. Phasic and tonic muscle synergies are different in number, structure and sparseness. *Human Movement Science*. 2023;92:103148. doi:[10.1016/j.humov.2023.103148](https://doi.org/10.1016/j.humov.2023.103148)