

The contribution of residual force enhancement to the stretch-shortening cycle effect

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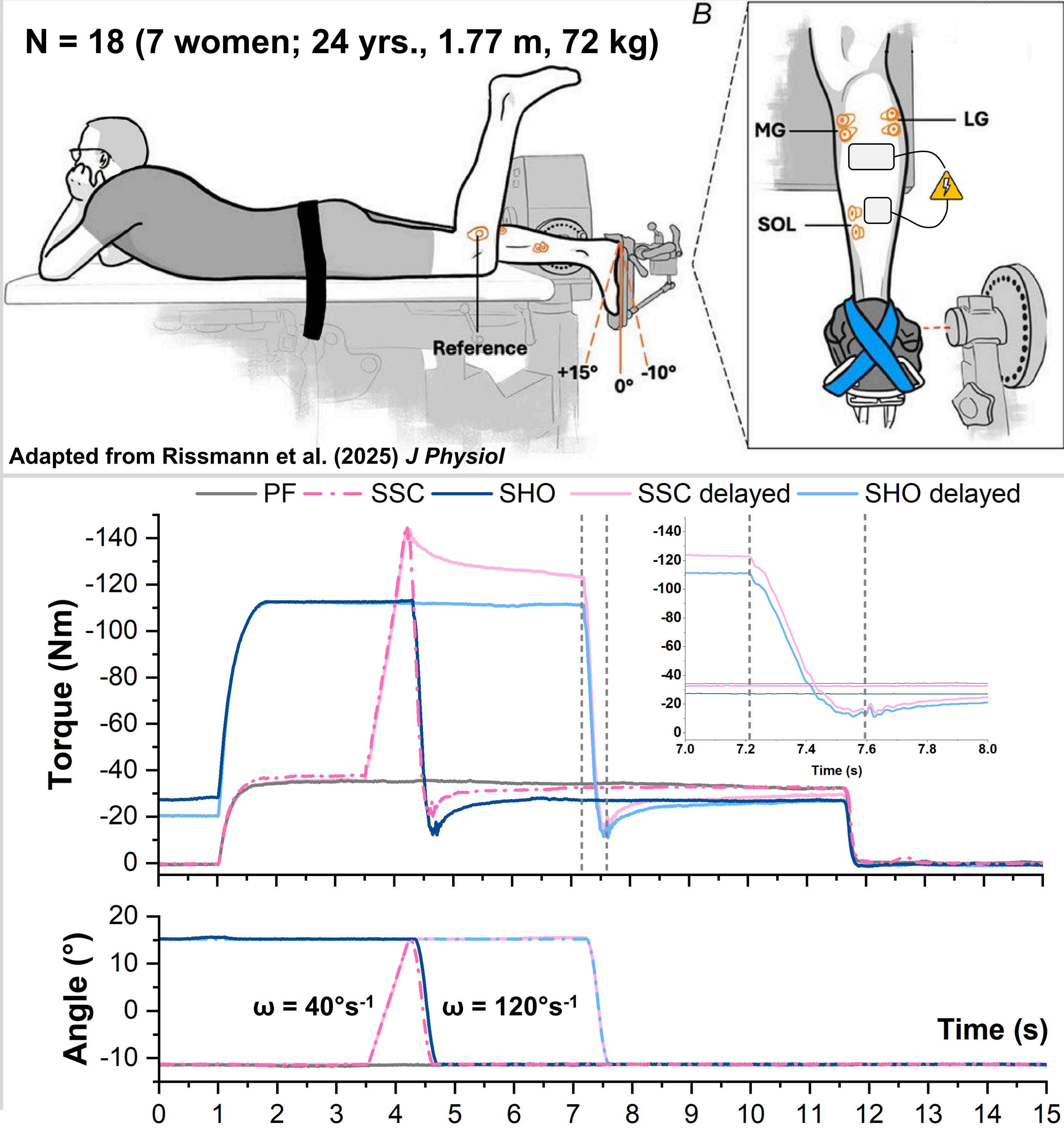
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Background



Setup / Conditions



Results

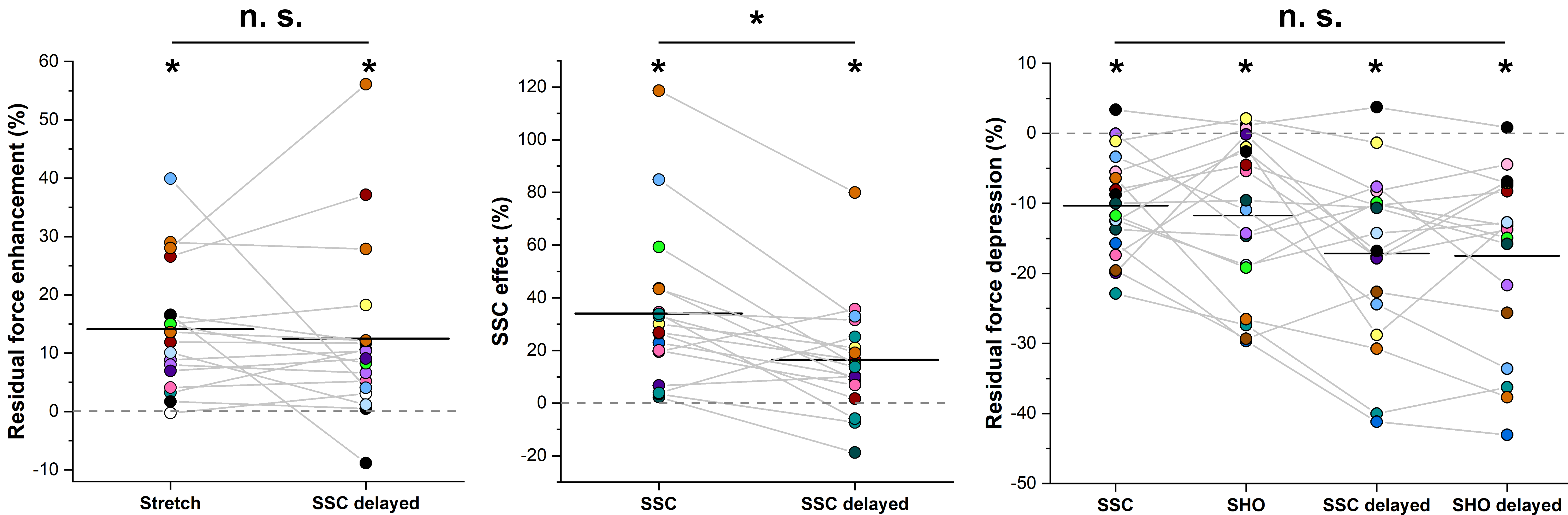


Fig. 1: Residual force enhancement; i.e. \uparrow steady-state torque following stretch compared with fixed-end reference.

Fig. 2: SSC effect; i.e. \uparrow mean torque during SSC shortening compared with shortening without prior stretch.

Fig. 3: Residual force depression; i.e. \downarrow steady-state torque following shortening compared with fixed-end reference.

Conclusion

- The mechanisms underpinning residual force enhancement contribute **~50%** to the overall SSC effect.
- The viscoelastic element **titin** presumably has a strong contribution to the SSC effect [3].

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References

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