



Corrigendum: Musculoskeletal modeling of the lumbar spine to explore functional interactions between back muscle loads and intervertebral disk multiphysics

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In Toumanidou and Noailly (2015), the general forms of the second Piola-Kirchhoff and Cauchy stress tensors on Eqs (12) and (16) in Materials and Methods were not reported correctly. This should read as follows:

$$\mathbf{S} = 2 \frac{\partial U}{\partial \mathbf{C}} = \frac{G}{2} \left(2J^{-2/3} \mathbf{I} - \frac{2}{3} \bar{\mathbf{I}}_1^C \mathbf{C}^{-1} \right) + K \ln J \mathbf{C}^{-1} + U'_F \left[J^{-2/3} \bar{\lambda}_f^{-1} (\mathbf{N} \otimes \mathbf{N}) - \frac{1}{3} \bar{\lambda}_f \mathbf{C}^{-1} \right] \quad (12)$$

The Cauchy stress was related to the second Piola-Kirchhoff stress by:

$$\boldsymbol{\sigma} = \frac{1}{J} \mathbf{F} \mathbf{S} \mathbf{F}^{-T} = \frac{G}{2J} \left(2\bar{\mathbf{B}} - \frac{2}{3} \bar{\mathbf{I}}_1^C \mathbf{I} \right) + \frac{K \ln J}{J} \mathbf{I} + \frac{1}{J} \left[U'_F \left(\bar{\lambda}_f (\mathbf{n} \otimes \mathbf{n}) - \frac{1}{3} \bar{\lambda}_f \mathbf{I} \right) \right] \quad (16)$$

where \mathbf{n} is the direction of the muscle fibers in the deformed fascicle, $\bar{\mathbf{B}}$ the deviatoric part of the left Cauchy-Green tensor \mathbf{B} , and \mathbf{I} the second-order unit tensor.

Conflict of Interest Statement: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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