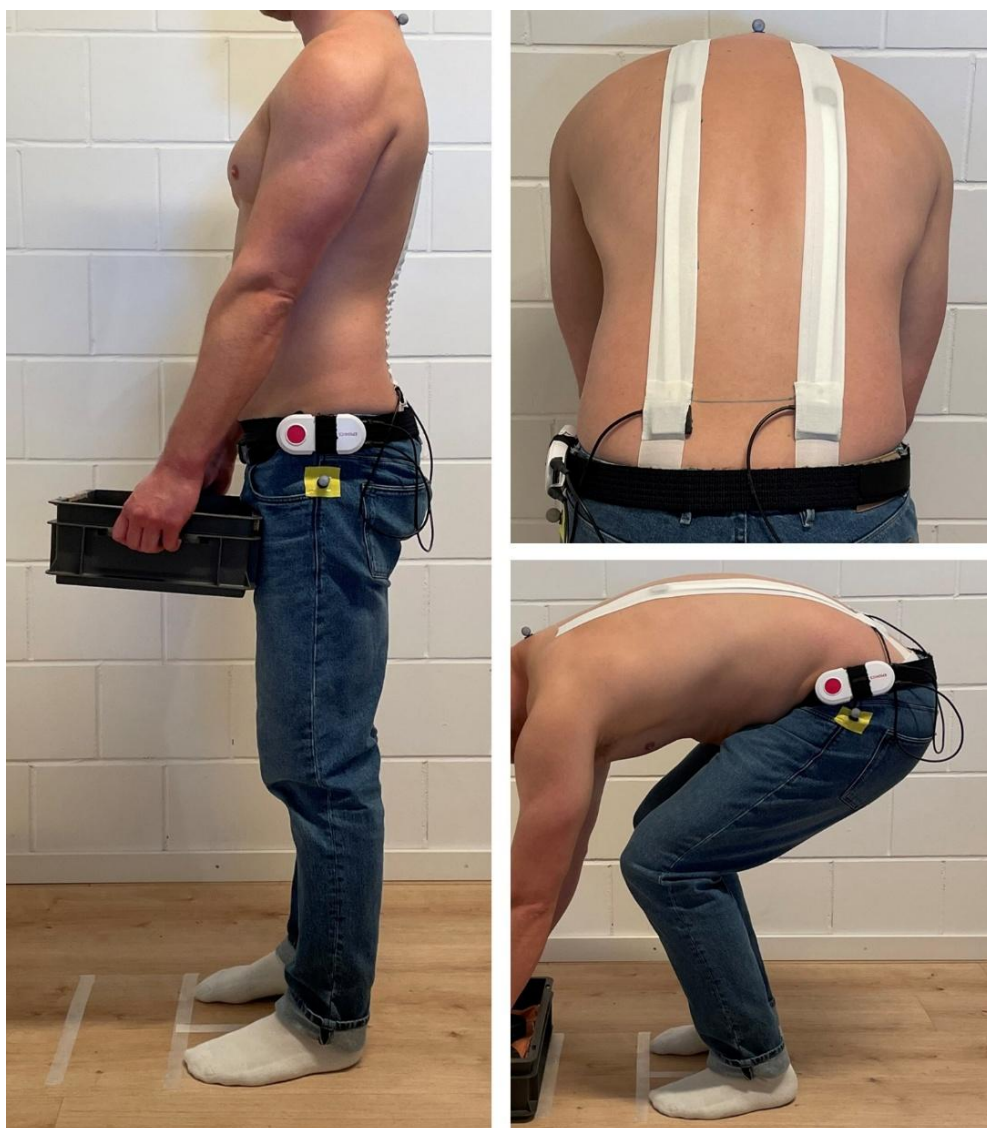


Supplementary Information



Supplementary Figure S1: Experimental setup for the biomechanical assessment of object lifting. The two sensor strips of the Epionics SPINE system were attached laterally to the spine and connected to the storage unit to enable the measurement of lumbar spine kinematics. Retro-reflective skin markers were placed on the left greater trochanter and the tip of the C7 spinous process for the video-based assessment of the Stoop-Squat-Index to quantify whole-body lifting strategy. Adhesive tape on the floor standardized the participants' stance and the placement of the box.