The prevalence of low back pain (LBP) that limits activity is estimated to be 70-78% (7/9) who exceeded.

An association between a low level of low back dysfunction and lower extremity injuries has been established. Wilkerson GB, Giles JL, Seibel DK. Prediction of core and lower extremity injuries. Intra-3D Static Strength Prediction. ROC analyses performed to categorize participant characteristics.

None of the 31 participants exceeded.

The National Institute of Occupational Safety and Health (NIOSH) has established safe load limits. C

A strong association appears to exist between intervertebral compression level and low back dysfunction. Andersson. Lifting technique may be an important factor that influences LBP severity and risk for disc degeneration. Both height and load level appear to be important determinants of the potential for degenerative changes. MPL.

52% (6/9) who exceeded.

Participants with both factors positive were 8X more likely to report low back dysfunction.

31 NCAA Division I Football players (20.0 ± 1.1 years of age; 182.5 ± 10.2 cm; 72.9 ± 15.4 lbs) were recruited from the Miami University (Ohio) football program. Static Analysis of Load on the Lumbar Spine During an Olympic-Style Lift Performed by College Football Players. Lauren J. Miller, MS, ATC; Tara M. Milburn, MS, ATC; Marisa A. Colston, PhD, ATC; Gary B. Wilkerson, EdD, ATC.

A high degree of agreement was evident between MFS and ODI for self-reported low back dysfunction (Figure 4).

Bivariate correlation between MFS and ODI = .81, p<.001.

52% (16/31) of participants exceeded LS-S1 LL during catch stage.

10% (3/31) exceeded MPL.

None of the 31 participants exceeded Adj MPL.

100% of 31 participants exceeded LS-S1 LL during pull stage.

77% (24/31) exceeded MPL.

29% (9/31) exceeded Adj MPL (Figures 5-7).

67% (6/9) who exceeded Adj MPL had an ODI ≥ 80%.

78% (7/9) who exceeded Adj MPL had height ≥ 188 cm (74 in).

67% (6/9) who exceeded Adj MPL were lifting a load ≥ 1.1 times body weight (BW).

67% (4/6) of participants with height ≥ 188 cm and Load/BW ≥ 1.1 exceeded Adj MPL (Figure 6).

Participants with both factors positive were 8X more likely to report low back dysfunction.

83% (5/6) of participants with height ≥ 188 cm and Load/BW ≥ 1.1 had ODI ≥ 6 (Figure 6).

Participants with both factors were 10X more likely to exhibit excessive intervertebral compression.

CONCLUSIONS

A strong association appears to exist between intervertebral compression level and low back dysfunction.

Both height and load level appear to be important determinants of the potential for degenerative changes.

Intra-abdominal peak pressure during an explosive lift has been shown to be 20% greater than a sustained effort.

3DSSPP provides static estimates that may substantially underestimate dynamic loads.

Cartridge endplate microfractures are likely to occur at ≥ 2.10 MPL, which may weaken the annulus fibrosus.

Lack of pain receptors may result in cumulative damage without symptoms, other than minor discomfort.

An association between a low level of low back dysfunction and lower extremity injuries has been established.

Excessive power clean loads may induce degenerative changes that increase sport-related injury risk.

REFERENCES


