



Muscular Strength Loss Greater than Expected, Increasing the Risk of the Worker for MSK's!

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Summary:

The loss of absolute strength due to the lockdown was about 8 times greater than what was seen each year between 2005-2019.

Body weight increased on average 6-fold compared to the per year increase in weight between 2005-2019.

The percentage of workers in the morbid obese category increased 3 times the annual average over 15-years.

Implication: The amount of loss of muscle strength due to the lockdown will be difficult to make up which put the worker at greater risk for a musculo-skeletal injury and certain lifestyle diseases.

Over the last couple of years, I have written several papers discussing the impact that COVID has had on the workforce as a result of the lockdown. The research is clear that the lockdown for most Americans resulted in less physical activity and an increase in body weight because of an increase in high sugar foods consumption.

IPCS is in a unique position to measure retrospectively the impact that the lockdown had on the physical strength, strength-to-body weight ratio, and body mass index. IPCS conducts muscular strength tests for new hire applicants for physically demanding jobs for a number of industries across the United States.

To measure this impact, the new hire strength data in the IPCS database was statistically analyzed from January 1, 2019 to November 30, 2019 (Pre-COVID) and compared to the new hire strength data collected from January 1, 2021 to November 30, 2021 (Post-COVID). The results of this analysis can be found on the IPCS website at the following link:

<http://www.ipcs-inc.com/home/ipcs-data-on-the-lockdown/>

To add to this analysis, IPCS compared these changes from 2019 to 2021 to the expected changes in strength based on normative data collected and analyzed each year from 2005 through 2019. The average number of tests analyzed per year was 25,000.

Findings:

Chart 1 shows the loss in absolute strength for males by age groups due to the lockdown (2019 vs. 2021). It appears the biggest deficit occurred with the youngest workers.

Chart 1.

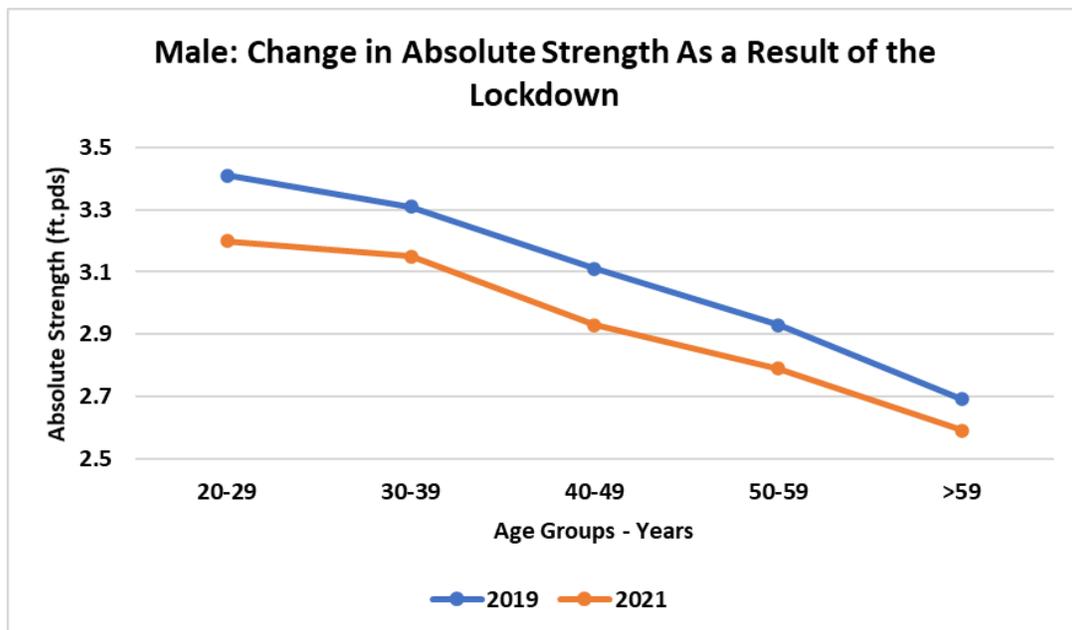
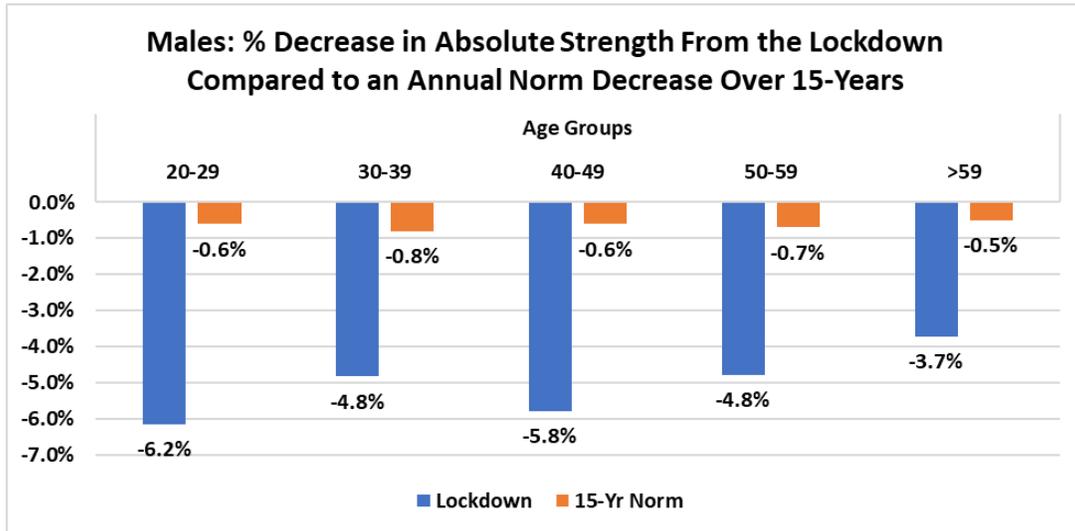


Chart 2 presents the loss of absolute strength as a percent for males by age group because of the lockdown compared to what is observed annually each year between 2005-2019. The loss due to COVID was about 8 times greater than what has been observed each year from 2005-2019 across all age groups.

Chart 2.



The female outcomes are shown in Chart 3. The data is similar the male data in that for each age group there was a loss in strength post-COVID compared to the pre-COVID data.

Chart 3.

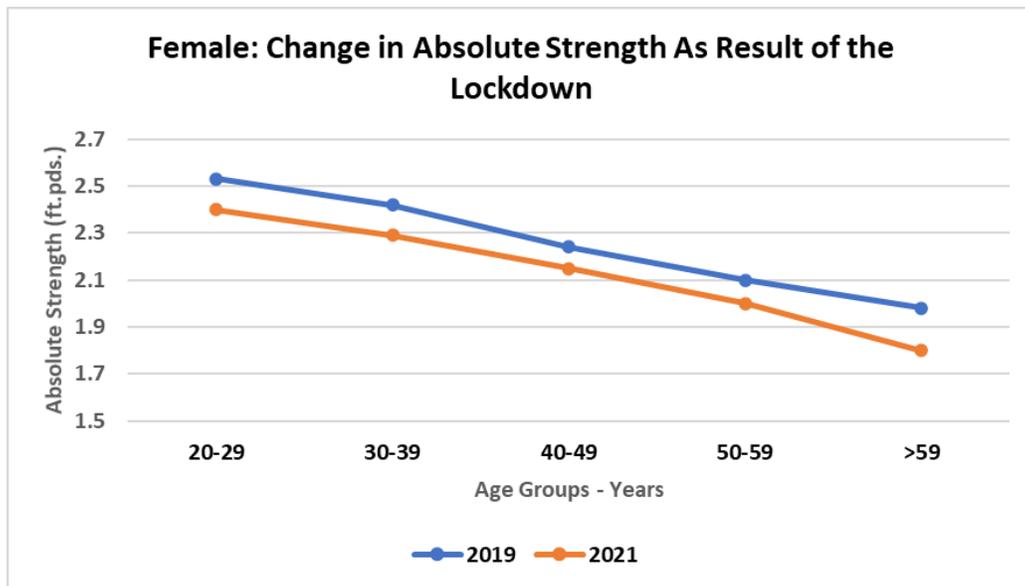
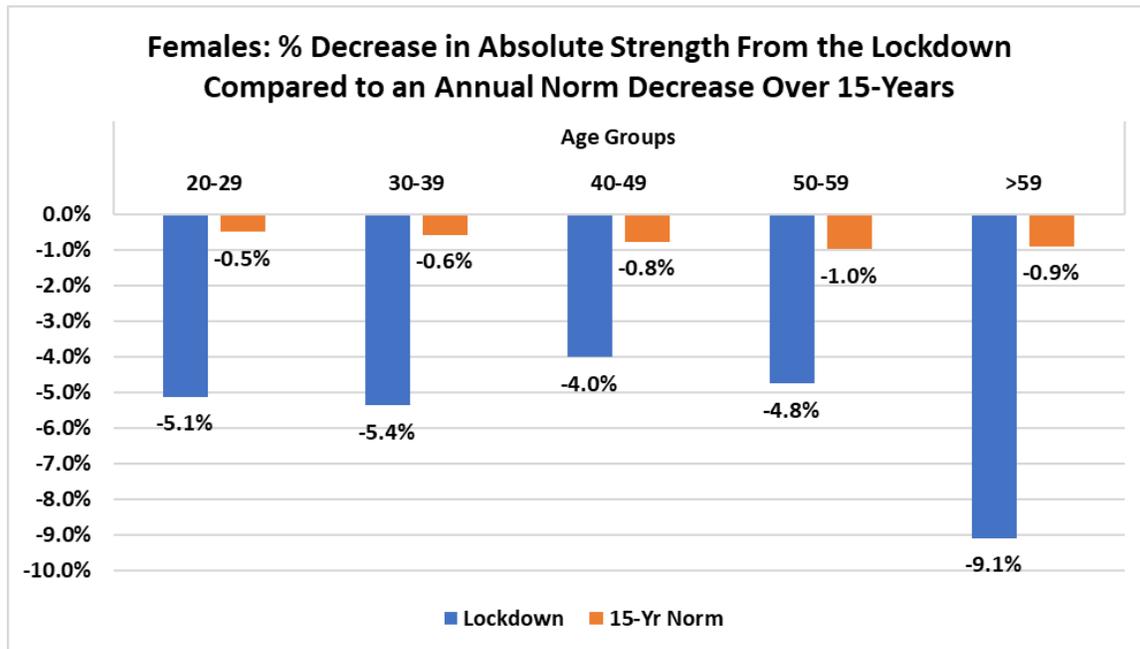


Chart 4 presents the loss of absolute strength as a percent for males by age groups because of the lockdown compared to what is observed annually each year between 2005-2019. The loss due to COVID was about 8 times greater than what has been observed each year from 2005-2019 across all age groups.

Chart 4.



What Is Next?

The amount of strength lost across all age groups between 2019 and 2021 compared to normative outcomes is very concerning since we have learned so much over the past 15-years on the role muscle plays not only in terms of preventing musculo-skeletal (MSK) injuries but also certain lifestyles diseases.

The loss of strength presented in this paper is going to be hard to make up. Muscular strength can be increased across all adult age groups. But a 6% loss in strength will take considerable time to make up assuming the worker has the time to devote to a strength training program. Until that happens, the worker will be at greater risk for injury especially MSK's. Add to this, our research shows the worker continues to lose on average each year 0.6% of muscle strength. And keep in mind, the aging worker besides having an increase risk for MSK's injuries will also be at greater risk for slips and falls due to the loss in strength.

Both Charts 1 and 3 show the loss of strength irrespective of COVID with age. We tend to accept that this is a natural phenomenon tied into aging. But research has shown that it is possible to maintain a healthy and strong muscle mass as aging occurs. There is still a loss of strength but at a much slower rate.

The research shows a strong connection between a healthy muscle mass and managing diseases such as hypertension, Type II diabetes, certain cancers cardiovascular disease, delaying the onset of dementia and keeping joints healthy and protected. Further, the research is clear that a healthy muscle mass also reduces the risk in contracting many of these lifestyle diseases.

We know physical activity and muscular strength training have numerous benefits toward safety and performance. But it also has a critical role in maintaining the body's immune system which helps to fight off certain viruses and infections.

Promoting physical activity and muscular strength training among your workforce contributes greatly to the overall health of the worker and enhances any safety program in terms of reducing musculo-skeletal injuries.

IPCS can work with you to establish a comprehensive muscular health screening program linked to personal trainers to enhance the health of the workforce.