

Cheer Balance Test

In the Fall of 2023, eight University of Montana cheer athletes (4 male, 4 female) were tested for balance wearing Nike cheer shoes. The tests were conducted with and without the Cluffy Sport insoles in their cheer shoes.

The purpose of these tests was to see if there was a difference in reach, using the cheer shoe as a control, with and without the Cluffy insoles. An increase or decrease in the reach would imply that the injury risk would change accordingly.

The tests were conducted according to standards published on this test and all measurements are recorded in centimeters. The numbers recorded are the average numbers obtained from three attempts by the athletes.

“Y” balance test results (right and left side) with the Cluffy insoles.



Right Anterior **Average gains +2.1 cm.** high +6.7cm., low -1.8cm.

Left Anterior **Average gains +3.4 cm.** high +14.9cm., low -2.7cm.

Right Post lateral **Average gains +4.6cm.,** high +14.7cm., low -3.9cm.

Left Posterior Lateral **Average gains +1.0 cm.,** high +17.6 cm., low -10.3cm.

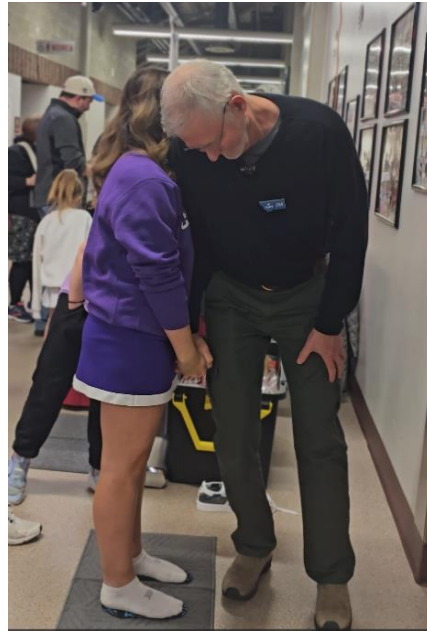
Right Posterior Medial **Average gains +2.4 cm.,** high +8.1cm., low -8.4 cm.

Left Posterior Medial **Average gains +2.0 cm.,** high +9.0cm., low -8.1 cm.

To summarize the overall “Y” test results, **the total average gain was 15.5 cm** when the athlete had the Cluffy insoles in their cheer shoes. This is **over 6 inches!** Average gain in any one test was 2.6 cm: over

one inch. Seven out of eight cheer athletes showed a net gain in overall distance with the Cluffy insoles in their shoes!

Forward pull test results



Cheer athletes who did not wear the Cluffy insoles were pulled off balance on average at 43 pounds of force for the males, and 25 pounds of force for the females.

However, when the athlete wore the Cluffy insoles, **all eight athletes, male and female could not be pulled off balance when approximately twice as much force** was applied.

Backward pull



Cheer athletes who did not wear the Cluffy insoles were pulled off balance on average at 39 pounds of force for the males, and 16 pounds of force for the females.

When the athlete wore the Cluffy insoles, **six out of eight athletes could not be pulled off balance when approximately twice as much force was applied.** The two athletes that were pulled off balance required nearly two times the amount of force required without the insoles.

Single Limb test results (right and left side)



Cheer athletes who did not wear the Cluffy insoles were pulled off balance on average of 31 pounds of force right side, and 36 pounds of force for the left side for the males, and 19 pounds of force right side and 21 pounds of force for the left side for the females.

When the athletes wore the Cluffy insoles, **all eight athletes, male and female could not be pulled out of balance with approximately twice as much force.** Four athletes were able to be pulled out of balance with nearly two and a half times more force required without the insoles.

In conclusion, there is a **significant improvement in balance and stability with the Cluffy insoles** in the cheer athletes that were tested.

