

How does stretching change the X-Factor and X-Factor Stretch?

In the early 1990's Jim McLean of the #1 Golf School in the USA, coined a term called the X-Factor, which he defined as the difference in the amount of hip (pelvic rotation) and shoulder (upper torso rotation) turns at the top of the backswing. He noted that good golfers seemed to get a large X-Factor whereas poor golfers had only a small one.

Whilst McLean defined the X-Factor at the top of the backswing alone, it can be calculated continuously throughout the swing. In fact, it has been shown that whilst the X-Factor at the top of the backswing is important, the amount it increases or "stretches" at the start of the downswing, as the pelvis begins its motion toward the target and the upper torso lag behind, is even more important. This stretch allows the muscles of trunk to produce higher forces and create more power than if they are not stretched. Those golfers with a high X-Factor Stretch hit the ball further than golfers who do not increase their X-Factor during transition.

Recently we completed two case studies, one involving a 46 year-old male and the other with a 24 year-old male. The 46 year-old, let's call him Mike, completed a stretching program (see pictures of exercises below) over a six-week period. His swing mechanics were measured using the Golf BioDynamics 3D system (www.golfbiodynamics.com) prior to and at the end of the six weeks. The results were quite amazing! Mike's results are shown below:

Table of results showing Mike's change in X-Factor and Stretch

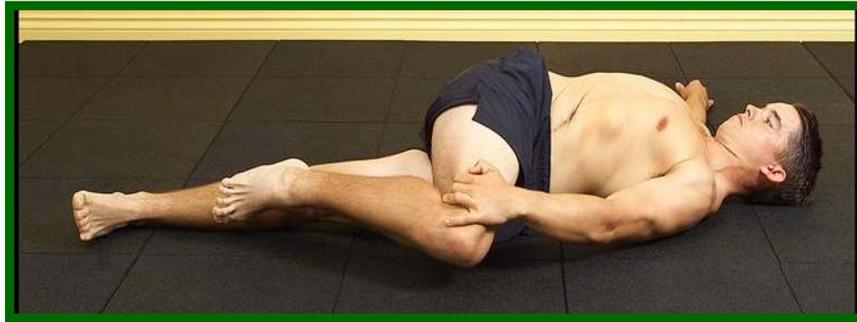
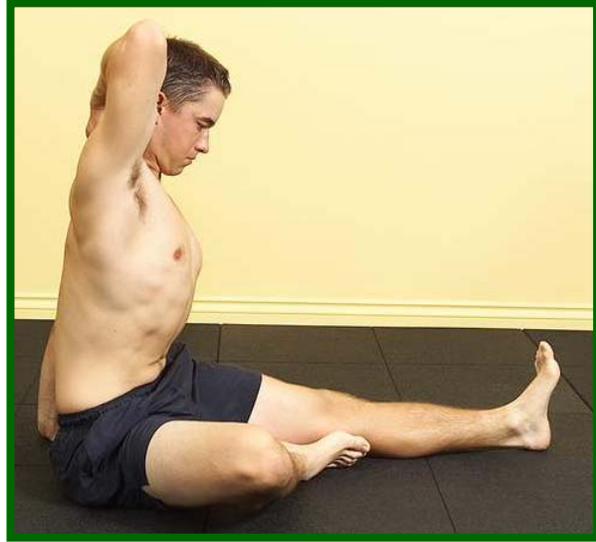
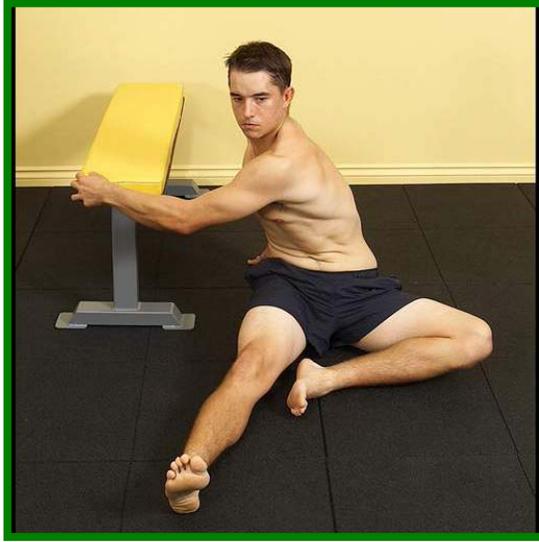
Variable	Before Stretching Program	After Stretching Program
X-Factor (@ top of backswing)	-50°	-53°
X-Factor Stretch (during transition)	-6°	-17°
X-Factor maximum	-56°	-70°

In the case of the 24 year-old golfer (Ryan), we measured him on the system, put him through a intensive stretching session and then immediately measured his swing mechanics post stretching. His data were surprising too, with significant increases in his X-Factor Stretch and maximum value!

Table showing Ryan's data

Variable	Before Stretching Program	After Stretching Program
X-Factor (@ top of backswing)	-45°	-47°
X-Factor Stretch (during transition)	-6°	-13°
X-Factor maximum	-51°	-60°

The pictures below show the three different stretches used in both case studies.



For more information on improving your golf through physical interventions, our double CD “Better Body...Better Golf” will give you all the answers you need. We take you through the 10 most common swing faults and teach you how to assess yourself and which exercises are right to fix your individual faults. You can read more about this sensational product at www.thegolfathlete.com

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