

TESTING GREAT ATHLETES!

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What if testing athleticism and fitness was useless? In this article we will explore how traditional testing misses key elements that can help protect against injury and dramatically improve performance.

I should start by saying that testing is the first step of any program and of course it's not useless. I just wanted to spark some interest and to show how we must rethink the way we evaluate our athletes.

Common testing protocols in the NFL, NHL, NBA and many amateur sport organizations do an excellent job at selecting tests to measure key athletic / fitness attributes - see Table 1: ACA Standard Fitness Testing Protocol Target Levels.

ACA Standard Fitness Testing Protocol Target Levels													
CORE TESTING	K1		K2		J1		J2		PSO		CAST		
	Men	Girls	Men	Girls	Men	Girls	Men	Girls	Men	Girls	Men	Girls	
Body Weight	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
Standing Height	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
Sit and Reach (cm)	40+	40+	40+	40+	40+	40+	40+	40+	40+	40+	40+	40+	40+
Vertical Jump (cm)	35+	35+	50+	42+	55+	45+	55+	47+	60+	50+	60+	50+	50+
Broad Jump (m)	2.0+	1.8+	2.5+	2.15+	2.65+	2.25+	2.75+	2.5+	2.75+	2.5+	2.9+	2.65+	
Penta Jump (m)													
Both Legs	9.5+	9.0+	11.0+	10.5+	12.5+	10.75+	13+	11+	13.5+	11.25+	14.75+	11.5+	
Right Leg	8.0+	7.5+	9.5+	9.5+	11.5+	9.75+	11.75+	9.75	12.0+	10.0+	12.5+	10.25+	
Left Leg	8.0+	7.5+	9.5+	9.5+	11.5+	9.75+	11.75+	9.75	12.0+	10.0+	12.5+	10.25+	
40m Sprint (s)	<6.7	<6.8	<6.3	<6.7	<6.1	<6.5	<5.9	<6.3	<5.7	<6.2	<5.5	<6.0	
60 - 90s Box Jump	20cm		30cm		40cm		40cm		40cm		40cm		
0-30s	30	30	35	35	35	35	35	35	35	30	35	31	
30 - 60s	30	30	35	30	28	25	28	25	28	24	34	26	
60 - 90s	-	-	-	-	17	15	17	15	22	21	25	23	
Total	60+	60+	70+	65+	80+	70+	80+	70+	85+	75+	90+	80+	
20 m shuttle run													
Level	9.1+	8.1+	11.0+	9.6+	12.0+	10.8+	12.0+	10.8+	12.0+	10.8+	12.0+	10.8+	
Predicted VO2max	40.2+	43.6	50.2+	45.2+	54.3+	49.3+	54.3+	49.3+	54.3+	49.3+	54.3+	49.3+	

Table 1: ACA Standard Fitness Testing Protocol Target Levels

The purpose in professional testing is to help determine success. Millions of dollars are being invested in athletic contracts, so professional organizations want a positive return on their investment. They don't want an athlete to become injured and be unable to perform because of their fitness or because they don't have enough athleticism to compete. Likewise, extensive information is gathered through psychological evaluations, interviews with their families, coaches and teammates, competition statistics, etc to help determine if this athlete will contribute.

But I believe that traditional testing fails in one important regard. I call this problem the black box effect.

Most testing is performed to measure an outcome - either the distance reached, the time taken to perform a task, or the amount lifted. In more sophisticated testing force produced, power, and other physiological parameters are measured. But there is a huge problem. It is as if there was a huge black box surrounding the athlete.



Figure 1: Black Box Effect

That black box represents the movement that produces the outcome. Failure to assess the movement neglects the cause, where the effect is the outcome. For example, a basketball athlete jumps 34 inches, which is great considering an average NBA basketball player jumps 28

inches. Everyone is happy. The athlete is happy, as are those evaluating the athlete because this score places him in the 95th percentile. Great???

I work with this athlete and he has patella femoral pain and patellar tendinosis of the knee that collapses inwards when he jumps. This movement dysfunction (inward movement of the knee, called dynamic valgus) is present during all his movements, when he accelerates and quickly changes direction, when he jumps off one foot and during most single leg movements. In fact, a recent MRI, revealed moderate degeneration of the patella femoral joint. This athlete is in pain. You can imagine how this impacts his performance. He is unable to perform to his potential. He walks around in constant discomfort.

NOT GREAT!

The truth is this could have been prevented. This athlete has been tested many times. He is an elite athlete that has received training by professionals at college, and as a professional. He has also received care by the best health care professionals. The problem is most are dealing with a problem that needed to be addressed years ago, as the athlete was developing.

The source of his problem is a very common movement dysfunction – dynamic valgus. I must remind you to read the report on AOA Fall Fitness testing, where over 90 percent of the athletes tested display this problem. We must stop this from happening. The impact on their athletic development, and more importantly the impact on their quality of life is too large to ignore.

On a good note, at Alpine Ontario we are changing our testing approach to include movement. At Fall Fitness testing we screened many athletes and will be adding more movement testing during Spring AOA testing. In the next article we will explain the key qualities we are testing. If you've been reading this section regularly you will also be pleased to know we are including our "trunk" testing approach – see the four part series on core development.

Thanks for reading!

If you would like to ask me a question email me at thomaslam@fitstoronto.com or if you want more information you can visit our newly designed website www.fitstoronto.com. There you will find more information about how to develop athleticism, methods to improve performance, common sport medicine injuries, and our exercise database (coming shortly) where you will be exposed to exercises that you've probably never seen before. Our effort with this site is to be a portal for athletic development. Check the site regularly or subscribe because content will be added several times a week. Take a look – it's worth it!