David Johnston s 6 Stride Checkmark for Pole Vault

How to Get a Grip - Establishing a functional hand grip is the number one factor in safe and efficient Pole Vaulting. Most of us can argue successfully, and most of us have many times, that a correct pole plant/take-off makes a vault safe and a vaulter successful. But here is the real question, what comes first the chicken or the egg? In the vaulters case it s the Approach Run.

A correct and efficient pole plant/take-off is accomplished as a result of the vaulter having the proper steps leading up to the plant/take-off. We look for a run that is fast but relaxed, one with increased tempo over the last four to six steps, one that is consistent and by all means accurate. Accuracy and consistency leads to safer vaults.

The way we as coaches and athletes have been checking the accuracy of the run has been by the take-off point. This is an error. The take-off point does not tell us that the run was correct. We need to abandon the take-off point as the true indicator that a vault should or should not be safe and successful.

We need to move our focus to the mid point, the 6 Stride Mark, not four but six. Why 6? As coaches we have found that jumpers (long, triple and pole vaulters) will adjust there steps between 4 and 6 steps from the take-off. A 4 step check point could be accurate but lack the proper speed and position causing the vaulter to come up short. There is less chance of error or change if the vaulter is on 6 strides out. A term that has been used is the vaulter can relax and attack. I see it as a confidence factor.

Why is this check point on the runway so important?

First Point: The correct grip is determined by the amount of horizontal force generated at take-off. For example a low grip and a great amount of force (speed/MPS) will result in a vaulter going too deep into the pit. A higher grip with a small amount of force (speed/MPS) will result in a vaulter coming up short of the pit. To pole vault higher we know that we not only need to improve our fundamental technique but our greatest improvements have come with increased speed on the runway.

Second Point: In sprinting stride length is determined by how fast the athlete is running. To be efficient and fast we need to run like sprinters instead of over striding or chopping.

Third Point: How fast you run determines stride length which in turn determines where the 6 Stride Mark should be which determines how high you can hold based on the speed that is generated on the runway!

The chart has been tested, scrutinized and argued over from every view point for over 30 years & & these are the correct 6 Stride marks (2) translated into stride length and stride frequency and further translated into meters per second MPS (3) that all vaulters need to move the corresponding hand grip (1) to vertical.

For technically sound pole vaulting, the 6 Stride Mark and the hand grip should match on every vault attempt. If a vaulter can run a 6 Stride Mark of 48 feet with the proper MPS for that mid they are capable of gripping 14'4 and jumping 15 6 . It does not matter how tall or short they are... man or woman. If they can not run those steps and frequencies they should move their grip down to the appropriate level until they are running faster. On a more positive side a vaulter that is running the steps and frequencies properly from a 45 6 Stride Mark but is

gripping lower than 13 5 on the pole is obviously ready for a higher grip, improved plant technique and can expect to start jumping higher heights based on the horizontal velocity (MPS) being generated on the runway.

An example of how we have created poor plant/take-off technique in our vaulters by using the take-off point as a soul factor in determining the approach run start point is this: We commonly establish a mid-point based on personal physical stature, feel, or by thinking logically that the mid-mark we had on our best and fastest run has to be hit, on all vaults whether we are gripping high or low or running fast or slow, to vault successfully. What we do during our warm-up and practice by not adjusting our mid (6 Stride Mark) to the speed we are running and the grip we are holding is learning to over stride and stretch which destroys our ability to plant/take-off properly. Why??? The vaulter puts down a mid of 54 feet before they start to do their run through...because that was his mid on his best jump and when he was running his fastest.. But this vaulter is not going to hold 16 or be running as fast when they start... So what happens? They run through... hit 54 ... stretch their steps... and can t plant properly... take-off under because they stretched & & their coach has them move back because they took off under & & they stretch even more.. Take six practice runs... all wrong... can t figure out what they need to do... can t find a plant because they are running flat footed and reaching & & start the meet and no height.!

As coaches and athletes we must understand and accept that how fast the vaulter is running will determine where the 6 Stride Mark and the corresponding grip must be to promote safer and more successful pole vaulting. By the way, long jumpers do the same thing... warm-up and learn to stretch for the board, mess up their take-off technique and foul when they start the meet & &. I was a long jumper and to foul a long jump is not as scary as missing a pole plant and being tossed 15 to 18 feet in the air with no soft stuff to land in & &

Coaches and vaulters - start using this chart, use the 6 Stride Mark all the time if you want to learn to coach and vault correctly, safely and efficiently. (The take-off point is not a true indicator of a proper run and should be used less because it is determined by physical statue and not by a fast efficient approach run)

Call or e-mail if you want to know how to do this & & or just to debate the issues & & I ll also do clinics for a minimal fee..this is very important to safe and successful pole vaulting.

David F. Johnston s

LONG JUMP SIX STRIDE CHECK MARK

The same principle applies for the long jump. A certain stride length equates to a specific MPS of velocity and leads to a predictable jump length. The 6 stride Mid Mark can be used to smooth out the approach pattern, adjust during competitions, and avoid over-striding. Approach development work for both vault and long jump can be done on the track using marks corresponding to the stride length for a certain velocity, jump length, vault grip / height, etc. Speed can also be developed by learning to enhance the maximum sprint stride length without over-striding.

THE APPROACH RUN - THE KEY TO SUCCESS: THE 6 STRIDE MARK and CORRESPONDING POLE GRIP

By: David F. Johnston (e-mail davidfjohnston@aol.com / phone 941-830-0848)

BAR HEIGHT	HAND GRIP	TAKE-OFF MARK	6 STRIDE MARK	TIME	MPS	STRIDE LENGTH	PENULT STRIDE	TAKE-OFF STRIDE
8 0	9 lO	6 8	33 -0	-----	-----	4 -5	4 -8	4 -2
8- 6	10-2	7-0	34-0	-----	-----	4-6	4-9	4-3
9-0	10-6	7-4	35-0	-----	-----	4-7	4-10	4-4
9-6	10-10	7-8	36-0	-----	-----	4-9	5-0	4-6
10-0	11-1	8-0	37-0	-----	-----	4-10	5-1	4-7
10-6	11-5	8-4	38-0	-----	-----	4-11	5-2	4-8
11-0	11-8	8-8	39-0	-----	-----	5-1	5-4	4-10
11-6	12-0	9-0	40-0	-----	-----	5-2	5-5	4-11
12-0	12-3	9-4	41-0	-----	-----	5-3	5-6	5-0
12-6	12-7	9-8	42-0	-----	-----	5-4	5-7	5-1
13-0	12-10	10-0	43-0	1.49	6.7	5-6	5-9	5-3
13-6	13-2	10-4	44-0	1.48	6.9	5-7	5-10	5-4
14-0	13-5	10-8	45-0	1.47	7.1	5-9	6-1	5-5
14-6	13-9	11-0	46-0	1.46	7.3	5-10	6-2	5-6
15-0	14-0	11-4	47-0	1.45	7.5	5-11	6-3	5-7
15-6	14-4	11-8	48-0	1.44	7.7	6-1	6-4	5-8
16-0	14-7	12-0	49-0	1.43	7.9	6-2	6-6	5-10
16--6	14-11	12-4	50-0	1.42	8.1	6-3	6-7	5-11
17-0	15-2	12-8	51-0	1.41	8.3	6-5	6-9	6-1
17-6	15-6	13-0	52-0	1.40	8.5	6-6	6-10	6-2
18-0	15-9	13-4	53-0	1.39	8.7	6-7	6-11	6-3
18-6	16-1	13-8	54-0	1.38	8.9	6-9	7-1	6-5
19-0	16-4	14-0	55-0	1.37	9.1	6-10	7-2	6-6
19-6	16-8	14-4	56-0	1.36	9.3	6-11	7-3	6-7
20-0	16-11	14-8	57-0	1.35	9.5	7-1	7-5	6-9
20-6	17-1	15-0	58-0	1.34	9.7	7-3	7-7	6-11
21-0	17-4	15-4	59-0	1.33	9.9	7-4	7-8	7-0
(1)		(2)			(3)			

Long Jump 6 Stride Chart

LJ JUMP DIST	6 STRIDE MARK	STRIDE LENGTH
12'0	32'0	5'4
12'6	32'6	5'5
13'0	33'0	5'6
13'6	33'6	5'7
14'0	34'0	5'8
14'6	34'6	5'9
15'0	35'0	5'10
15'6	35'6	5'11
16'0	36'0	6'0
16'6	36'6	6'1
17'0	37'0	6'2
17'6	37'6	6'3
18'0	38'0	6'4
18'6	38'6	6'5
19'0	39'0	6'6
19'6	39'6	6'7
20'0	40'0	7'8
20'6	40'6	6'9
21'0	41'0	6'10

Long Jump 6 Stride Chart

LJ JUMP DIST	6 STRIDE MARK	STRIDE LENGTH
21'6	41'6	6'11
22'0	42'0	7'0
22'6	42'6	7'1
23'0	43'0	7'2
23'6	43'6	7'3
24'0	44'0	7'4
24'6	44'6	7'5
25'0	45'0	7'6
25'6	45'6	7'7
26'0	46'0	7'8
26'6	46'6	7'9
27'0	47'0	7'1
27'6	47'6	7'11
28'0	48'0	8'0
28'6	48'6	8'1
29'0	49'0	8'2
29'6	49'6	8'3
30'0	50'0	8'4

(Each 1" stride length = 6" MidMark and Jump Distance)