

12 Week Stair Jumping Program



by: Michael Reid, B.HE

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- Before following this program you should have prior approval of your physician.
- If you choose to use this exercise program without the approval of your physician, you are agreeing to accept full responsibility for your actions and are agreeing to hold www.michaelreid.ca, its agents, officers, and employers and any affiliated companies from any liability with respect to injury to you or your property arising out of or connected with your use of the information discussed in this exercise program.
- By accepting this exercise program, you agree to defend, indemnify, and hold harmless www.michaelreid.ca and its subsidiary and other affiliated companies, and their employees, contractors, officers, and directors from all liabilities, claims, and expenses, including attorney's fees, that arise from your use or misuse of this exercise program.

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For inquires, you can contact the author through the website www.michaelreid.ca

Congratulations!

You are on your way to becoming a better Jumper.

Please read through the entire program, watch the videos on my website and if you have any questions please do not hesitate to contact me.

You can always send me an email through my website at www.michaelreid.ca or leave a comment.

Be Well,

Michael Reid

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Introduction – Got Hops?

I currently work in a Basketball club and the number one question I get asked on a weekly basis is:

"what can I do to jump higher?"

Almost always, the athlete is looking for a quick fix or some secret exercise that is going to make them jump through the roof in a few short sessions.

If there was a "secret" exercise or program do they not think I would have them doing it?

There are no quick fixes or special exercises although there are many bad exercises and absolutely no secrets.

With out getting to technical, jumping high is all about power which is a function of strength and speed. Improve either one and your jumping will more then likely improve, improve both qualities and your jumping will improve for sure.

"what do I need to do?" the athlete will ask. I respond by outlining my "4 step guide to jumping high".

My 4 step guide to jumping high:

1. Get in the weight room and get strong with a focus on squats. This is a very powerful exercise and when done right your physical performance will go through the roof, done wrong it could destroy your athletic career in one session! Always master the body weight squat first. Have a professional coach teach you and to make sure you are doing it right. Leave your ego at the door, a good coach will not allow serious external load to be used till you have mastered the body weight version. To be able to squat efficiently you may also need to work on your flexibility.

Check out the videos at www.michaelreid.ca.

2. When playing your sport take time to practice your jumps. If your sport is Basketball, then during water breaks or at the end of practice practice jumping for the rim or higher. You should practice jumping off two feet and both left and right foot to develop balance in your body.

3. Work hard and be consistent. Training hard for 1-2 weeks then slacking off for 1-2 weeks is not going to cut it. If you are serious about improving then you must train on a weekly basis.

4. Get good sleep every night and eat good food to nourish your training.

Program Outline

- ✓ This program will aid in improving your vertical jump. It is a beginner to intermediate level program. If you have never done specific jump training then this is a great place to start.
- ✓ This program is designed to be a supplement to normal sport training and a well designed strength program.

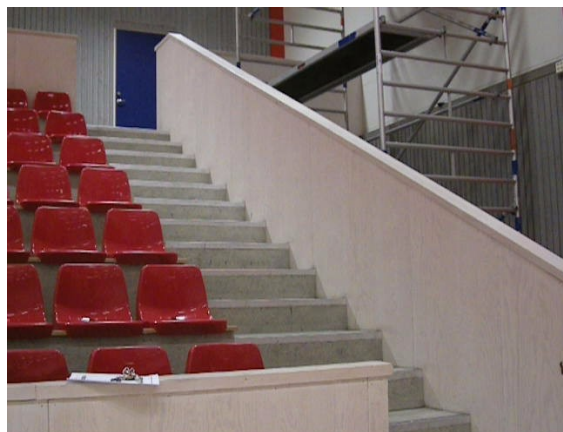
- ✓ Why do you need to be doing strength training?

Adams et al. found that a strength program based on squats plus jump exercises improved vertical jump more than doing just the strength or jump programs on their own.

- Strength Only Program improved vertical jump by 3.3 cm.
- Jump Training Only Program improved vertical jump by 3.81 cm.
- Combined Strength & Jump Program improved vertical jump by **10.67 cm!**

Adams K, O'Shea JP, O'Shea KL, Climstein M. The Effects of 6-Weeks of Squat, Plyometric and Squat-Plyometric Training on Power Production. *Journal of Applied Sports Science Research*. 1992 vol 6 issue 1 p36-41.

- ✓ The program is based on progressive overload; you gradually do more and more jumps as you go through the program, although you have an easy week at the half way point and at the end. It is very important that you follow the schedule to get full benefits.
- ✓ For best results the program needs to be performed 3x/week on non-consecutive days & should be done before sports practice, before any strength training or as a separate training session.
- ✓ You will need to measure your vertical jump at the beginning, middle & at the end of the program (I show you how to do this in the next section).
- ✓ You will need a flight of "regular" sized stairs that have 16 steps in a row.



Vertical Jump Testing

- ✓ You will need to measure your vertical jump. This is very important so that you can track your progress.
- ✓ Testing will occur at the beginning of Week 1, 7 & at the end of week 12.
- ✓ You will test two kinds of jumping:
 1. **Squat Jump (non-counter movement jump)** – squat down to jump but pause for 1-2s before jumping.
 2. **Counter movement jump** – quickly squat down & with out pausing jump.
- ✓ To calculate your vertical jump you will need some kind of testing device. I have included below a simple procedure of testing with a tape measure attached to a wall which is commonly referred to as the “Jump and Reach Test”. You can see a video of how it is done on my website www.michaelreid.ca

Test Procedure

- ✓ The vertical jump test involves measuring the difference between your standing reach and the height reached at the peak of a vertical jump.

Steps:

1. Warm up and review jumping technique.
2. Chalk the middle finger of the hand you want to jump with.
3. Stand with your side against the wall and reach up as high as possible keeping the feet flat on the ground. Make sure to that you leave a chalk mark.
4. Measure your standing reach and record it in the log provided.
5. Stand beside the wall with you hand on your side and your elbow touching the wall. This is done to ensure that you have enough clearance with the wall when you jump but not too much that it will affect your vertical jump score.
6. Make sure your middle finger is chalked and jump up as high as possible touching the wall at the highest point of the jump.
7. You will perform 3 trials of each style of jump resting ~30 seconds between trials or as needed.
8. Measure and record all of your jumps.
9. Calculate your vertical jump by subtracting your standing reach from your highest jump.

$$\text{Vertical Jump} = \text{Highest Jump} - \text{Standing Reach}$$

Testing Beginning of Week 1					Date: _____	
Trials >>>	1	2	3	Standing Reach	Vertical Jump = highest jump - standing reach	
1. squat jump						
2. counter movement jump						

Testing Beginning of Week 7					Date: _____	
Trials >>>	1	2	3	Standing Reach	Vertical Jump = highest jump - standing reach	
1. squat jump						
2. counter movement jump						

Testing End of Week 12					Date: _____	
Trials >>>	1	2	3	Standing Reach	Vertical Jump = highest jump - standing reach	
1. squat jump						
2. counter movement jump						

Summary of test Results				
	Week 1	Week 7	Week 12	I improved my vertical jump by
1. squat jump				
2. counter movement jump				

Compare Your Score

- ✓ Here are some numbers from some of the best jumpers in the world of sport.
- ✓ How do you match up?

athlete	Vertical jump
Kadour Ziani	61" / 155 cm
Michael Jordan	48" / 122 cm
Allen Iverson	41" / 104 cm
Leonel Marshall	50" / 127 cm

Reference: www.topendsports.com/testing/results-vertical-jump.htm

- ✓ Rate your Vertical Jump

rating	female	male
excellent	>71 cm	>81 cm
very good	56 - 70 cm	66 - 80 cm
good	46 - 55 cm	56 - 65 cm
average	36 - 45 cm	46 - 55 cm
poor	<35 cm	<45 cm

Table adapted from: D.A. Chu; Explosive Power and Strength; Human Kinetics; 1996

- ✓ Are you a beginner or advanced? This program will work best for the beginner or an athlete who has a "good" or lower vertical jump score.
- ✓ Also, if your counter movement jump is not appreciably higher than your squat jump then regardless of your vertical jump score this program will be very effective for you.
- ✓ Just another reason to test your vertical jump.

Training Schedule

- ✓ On the following pages are the program charts outlining the exercises you will perform & the weekly schedule, like how many jumps to perform.
- ✓ Remember you will need to do 3 training sessions/week. Each time you complete a session, simply check the training session off in the chart. You will have a total of 36 sessions to check off through out the program.
- ✓ Rest ~30-60s after each set, although on the easier exercises you can take shorter rests while on the more challenging exercises like single leg hops you can take a longer rest.
- ✓ All the jumps need to be done quickly, try to stay on the balls of your feet on all jumps.
- ✓ Warm up as needed for 10-15 minutes before you start the program.

A sample warm up:

1. Body Weight Squats 20-30 reps
2. Body Weight Split Squats 2-3 x 5/side
3. Ankle Hops 100-200 in a row
or skip rope for 1-2 minutes
4. 3-5 build up sprints of ~30m in length
- start at ~70% & build up to ~90% effort

Week & Training Session #	Week 1			Week 2			Week 3		
	1*	2	3	4	5	6	7	8	9
1. Run Up – Every Stair	3x	3x	3x	3x	3x	3x	3x	3x	3x
2. Run Up Every 2 nd Stair	3x	3x	3x	3x	3x	3x	3x	3x	3x
3. 2 Foot Jump Every Stair	3x	3x	3x	3x	3x	3x	3x	3x	3x
4. 2 Foot Jump Every 2 nd Stair	1x	1x	1x	2x	1x	2x	3x	1x	3x
5. 2 Foot Zig-Zag Jump Every Stair	1x	1x	1x	2x	1x	2x	1x	1x	3x
6. Single Leg Jumps Every Stair	1x	1x	1x	1x	1x	2x	3x	1x	3x
7. 2 Foot Jump to 2 nd Stair + hop down both Steps & repeat 5x	null	null	null	null	null	null	null	null	null
<i>Total Foot Contacts (excluding exercises #1 & 2)</i>	<i>88</i>	<i>88</i>	<i>88</i>	<i>112</i>	<i>88</i>	<i>128</i>	<i>144</i>	<i>88</i>	<i>176</i>

*remember to test your vertical jump at the beginning of this training session.

Program Notes:

Week & Training Session #	Week 4			Week 5			Week 6		
	10	11	12	13	14	15	16	17	18
1. Run Up – Every Stair	3x	3x	3x	3x	3x	3x	3x	3x	OFF
2. Run Up Every 2 nd Stair	3x	3x	3x	3x	3x	3x	3x	3x	
3. 2 Foot Jump Every Stair	3x	3x	3x	3x	3x	3x	3x	3x	
4. 2 Foot Jump Every 2 nd Stair	1x	3x	1x	3x	1x	3x	1x	2x	
5. 2 Foot Zig-Zag Jump Every Stair	1x	3x	1x	3x	1x	3x	1x	2x	
6. Single Leg Jumps Every Stair	1x	3x	1x	3x	1x	3x	1x	2x	
7. 2 Foot Jump to 2 nd Stair + hop down both Steps & repeat 5x	null	null	null	null	null	null	null	null	
<i>Total Foot Contacts (excluding exercises #1 & 2)</i>	88	176	88	176	88	176	88	128	0

Program Notes:

Week & Training Session #	Week 7			Week 8			Week 9		
	19**	20	21	22	23	24	25	26	27
1. Run Up – Every Stair	3x	3x	3x	3x	3x	3x	3x	3x	3x
2. Run Up Every 2 nd Stair	3x	3x	3x	3x	3x	3x	3x	3x	3x
3. 2 Foot Jump Every Stair	3x	3x	3x	2x	3x	2x	3x	2x	3x
4. 2 Foot Jump Every 2 nd Stair	1x	1x	1x	2x	1x	2x	1x	3x	1x
5. 2 Foot Zig-Zag Jump Every Stair	1x	1x	1x	2x	1x	2x	1x	1x	1x
6. Single Leg Jumps Every Stair	1x	1x	1x	2x	1x	2x	1x	3x	1x
7. 2 Foot Jump to 2 nd Stair + hop down both Steps & repeat 5x	1x	1x	1x	2x	null	2x	null	3x	null
<i>Total Foot Contacts (excluding exercises #1 & 2)</i>	<i>103</i>	<i>103</i>	<i>103</i>	<i>142</i>	<i>88</i>	<i>142</i>	<i>88</i>	<i>173</i>	<i>88</i>

**remember to test your vertical jump at the beginning of this training session.

Program Notes:

Week & Training Session #	Week 10			Week 11			Week 12***		
	28	29	30	31	32	33	34	35	36
1. Run Up – Every Stair	3x	3x	3x	3x	3x	3x	OFF	OFF	OFF
2. Run Up Every 2 nd Stair	3x	3x	3x	3x	3x	3x			
3. 2 Foot Jump Every Stair	2x	3x	2x	2x	3x	2x			
4. 2 Foot Jump Every 2 nd Stair	3x	1x	3x	3x	1x	3x			
5. 2 Foot Zig-Zag Jump Every Stair	1x	1x	1x	1x	1x	1x			
6. Single Leg Jumps Every Stair	3x	1x	3x	3x	1x	3x			
7. 2 Foot Jump to 2 nd Stair + hop down both Steps & repeat 5x	3x	null	3x	3x	null	3x			
<i>Total Foot Contacts (excluding exercises #1 & 2)</i>	<i>173</i>	<i>88</i>	<i>173</i>	<i>173</i>	<i>88</i>	<i>173</i>	<i>0</i>	<i>0</i>	<i>0</i>

***remember to test your vertical jump at the end of this week.

Program Notes:

Important Links

- ✓ How to measure your vertical jump video.

<http://tinyurl.com/measureVJ>

(This is a safe link, you will be redirected to www.michaelreid.ca)

- ✓ Video demonstration of all the stair jumping exercises in the program.

<http://tinyurl.com/StairJumpingExercises>

(This is a safe link, you will be redirected to www.michaelreid.ca)

- ✓ Lower Body Flexibility video.

<http://tinyurl.com/lowerbodyflexibility>

(This is a safe link, you will be redirected to www.michaelreid.ca)

- ✓ Vertical Jump Calculator

- calculate your power based on your body weight and vertical jump.

www.exrx.net/Calculators/VerticalJump.html

FAQ's

Q: This program is too easy, can I add extra jumps to make it harder?

A: Short answer NO!

This program utilizes progressive overload so follow the plan and let your body gradually adapt to the extra jumping.

Remember, you still need to be doing your regular sports practice and strength training to get full benefit of this program.

Q: I have a knee injury, is this a good program to do?

A: If you have an injury then you should consult with your physician before starting this program. This program is designed for healthy athletes.

Q: When I do the single leg hops I notice it is much easier on my left leg, is this normal?

A: It is very common to have a dominant jumping leg. Usually if you are right handed it will be your left leg while left handed will be the opposite. This is something that long term you will want to try to correct or at least limit the difference between the two legs. This is one reason why in the introduction of this program I recommend to practice jumping off both the left and right foot during your sports practice to create balance in the body.

Q: I play basketball and twisted my ankle during my last game and won't be able to do this program for at least a couple of weeks. When I come back should I just start where I left off?

A: I would recommend that you start the program from the start, but before you start up again you need to be pain free and fully functional on that injured ankle. Consult with your physician before resuming this program.

About Michael Reid



Michael is a professional physical trainer (strength coach) from Canada who is currently working in Europe. Michael has extensive experience working with amateur and professional athletes participating in a variety of sports such as Basketball, Volleyball, Water Polo, Golf and Hockey to name a few. He also has experience working with people with metabolic disorders (e.g. diabetes), back pain and other orthopaedic conditions. He continually seeks more education and improved understanding of research, training techniques and approaches in the realm of athletic training, nutrition and lifestyle coaching.

You can read more about his insights on training, nutrition and health at www.michaelreid.ca.

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