



Skating & Hockey Treadmills

This is a Back Up From Our Blog Prior to The Web Site being Hacked.
Send any questions to admin@skatingtreadmills.ca. We will respond promptly.

Skating Treadmills

35 Responses to “Skating Treadmill”

1.  [Tank2](#) says:

[February 2, 2009 at 9:36 am](#) ([Edit](#))

What is the most important thing to consider when using a skating treadmill? Is it the skating surface?

2.  [John](#) says:

[February 9, 2009 at 11:14 am](#) ([Edit](#))

From my experience, the speed of the machine's track is very important. I know of several kids who can skate faster than the machine, and they have to learn their stride by skating uphill because the coach inclines the track 5-10 degrees. The machine he is on only goes about 12 miles per hour.

The instructor says it's okay, but I think that when they go on regular ice afterwards my son straightens up and this changes his skating angle. Does anyone have an opinion on this at all?

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3.  [DangleMan](#) says:

[February 22, 2009 at 6:49 pm](#) ([Edit](#))

I wish they made these things bigger. I can't do any toe drags or puck handling. That sucks.

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4.  *admin* says:

[February 23, 2009 at 11:02 am](#) ([Edit](#))

Some manufacturers have a very large skating deck. Depending on your drill, you need width for cross-over's and length for stick handling like you want. Have a look at the spreadsheet PDF on the Products page of this site and you can see the differences between manufacturers. Again speed may be a factor as noted in other blog comments.

5.  *Hosea* says:

[February 24, 2009 at 4:36 pm](#) ([Edit](#))

How fast does the treadmill go?

6.  *admin* says:

[February 25, 2009 at 10:15 am](#) ([Edit](#))

It depends on which treadmill you are referring. The speed depends on several factors. But check to see if it is calibrated in MPH or if just a dial reflecting a % of 100. Motors with an A/C inverter provide what is referred to as a "constant torque." In other words, no matter how slow the track moves, the participant won't feel hesitation at slower speeds when their force impacts the skating surface. Motors with a servo drive, generally the lower HP types, may have this occurrence.

The fastest machine goes 20 MPH. This really should be the standard minimum unless you are only training kids under 10. All the others are a lot slower. Check our spreadsheet on the Products page to gain further insight and call the manufacturers for updates as well.

7.  *Sam* says:

[February 26, 2009 at 9:10 am](#) ([Edit](#))

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Great site. What is the best plastic to skate on? Do you need to treat them? How long do they last? Thanks, Sam

8.  *admin* says:

[February 27, 2009 at 11:08 am \(Edit\)](#)

All synthetic skating surfaces provide more resistance than real ice, generally around 15% - they don't melt under the heat of the blade.

However, that is where the similarity ends. As posted under "Synthetic Ice" on this blog, there is a big difference between polyethylene and other synthetic surfaces [regardless of middle layers, if any]. Generally "poly" requires a molasses, glycerin or silicone to protect it and to extend its lifespan. This can also make the surface too slippery at the start, then creating a mess as it gets "scrapped off" during skating. Plastics with imbedded oils seem to last much longer, some say 3-4x, and require much less maintenance and clean up. You will find some that are reversible, but caution should be given to the bending effect of worn tops when flipped.

9.  *Joey* says:

[March 7, 2009 at 11:38 am \(Edit\)](#)

What is the largest size a skating deck comes in? What should I look for with respect to future use?

10.  *admin* says:

[March 9, 2009 at 8:12 am \(Edit\)](#)

If you check under Products on this site, you will see a spec analysis that will answer this question. You should call the manufacturers directly to confirm current sizes and specs. As far as what to look for, that depends on your intended usage. It is generally accepted that about 7' in width and 6' in length is sufficient for elite skaters. Less than that can be restrictive, and perhaps dangerous.

For future use for example IF you feel you may want to offer VO2 or other monitoring support services, you must keep that in mind with a machines current

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capabilities. If you want to monitor your system over the Internet, again ensure that your skating treadmill is enabled for such.

A good rule of thumb is to buy the best machine you can afford.

11.  *Kelly T* says:

[March 13, 2009 at 12:39 pm](#) ([Edit](#))

Do you recommend a Canadian-made machine over others?

12.  *admin* says:

[March 15, 2009 at 11:01 am](#) ([Edit](#))

The country of origin is less important than the overall support, service and quality of the machine. Identify how long certain parts are under warranty, and how long service may take if a problem were to arise.

For example, if the track breaks, and it takes 2 weeks to fix, not only are you out of pocket for perhaps the repair bill [and incidentals] but you will also be losing revenue, and perhaps good clients to the competition.

13.  *Rich* says:

[April 11, 2009 at 11:35 am](#) ([Edit](#))

What do the machines cost if you wanted to purchase one?

14.  *admin* says:

[April 11, 2009 at 3:54 pm](#) ([Edit](#))

The main concern with skating treadmills is the speed at which the skating track moves. In our opinion, 16MPH or less is only good for skaters under the age of 12. You don't want to incline the deck to slow them down when you are doing stride

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mechanics training. All machine incline for cardio when necessary. Only the StrideMill goes over 20MPH and it is actually the only calibrated skating treadmill on the market, good for elite training.

From all accounts, prices vary widely. Generally speaking though [view our Analysis sheets on our Products page] Express Fitness' StrideMill offer the best overall value when considering both price and features. For about \$65kUSD it is by far the lowest price for a machine offering an incline. But things can change quickly in this market, so we recommend calling the manufactures to get a quotation.

15.  *Jon S* says:

[May 6, 2009 at 11:19 am](#) ([Edit](#))

Hello to you all,

I just read this blog today as a friend of mine sent it to me. I currently operate a hockey specific training center and own a hockey treadmill. Whoever said skating on an incline works different muscle groups and affects the stride of a player when they return to the ice is completely wrong. We have tested over 600 athletes, from novice all the way to the NHL. We currently have 30 NHLr's training with us and not one has had a bad thing to say about it. I have 300 pages of documents showing that incline training is very beneficial and that it specifically works the exact same muscles, and increases one's speed when they get back on the ice.

If anyone wants more information I have all the answers here, because I have been working with this program for more then 5 years.

I hope this helps some of you

16.  *admin* says:

[May 8, 2009 at 7:56 am](#) ([Edit](#))

We do not discourage incline training. It just is not optimum for stride mechanics, and in many cases is detrimental. NHL players generally have the disciplines of skating committed to memory and use skating treadmills for cardio and strength improvement.

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To mimic outdoor training a 3% incline is approximately what most sources will tell you that you should set a treadmill on since most trails/roads generally are not completely flat. When it comes to sprinting mechanics, some coaches like to increase the incline in order to force the body to work harder (resisted sprinting). But ice is always level.

The literature (Training for Speed, Agility, and Quickness by Brown and Ferrigno) suggests that you don't go over a 3% incline as this will be detrimental to running biomechanics. Athletes tend to "muscle through" a run if the incline is too high, thus not focusing on proper running mechanics. Some coaches suggest you can use up to a 10% incline to improve acceleration (Essentials of Strength and Conditioning by Baechle and Earle, both books are published by Human Kinetics), but again this often comes at the cost of proper mechanics. The greater the angle you are running on, the more you must alter your normal stride pattern, which can be detrimental when it comes back to normal running (skating).

Studies have shown that the use of parachutes while running generally causes too much drag, thus again altering running mechanics too much. While muscle strength and power development does play a huge role in acceleration and speed, most improvements come from better biomechanics. This is why putting athletes on too high an incline is increasing their strength but sacrificing their technique, thus proving to be overall detrimental. There are other ways to improve strength.

Running or walking on a higher incline (10-15%) would be beneficial for body composition (burning fat) as your energy requirements are low enough to utilize free fatty acids as a fuel source. The faster you go (running speed) the more total calories you will burn, but less of those calories will be coming from fat. You will improve your cardiovascular functioning (heart, lungs) with faster treadmill speeds, but again this will not necessarily elicit body composition changes. It really depends on what your overall goal is. Body composition, slower at higher incline. Improved cardiovascular, faster speed with less incline.

And again, you will burn more calories if you go at a faster speed at a higher incline, but this just isn't ideal if you're looking to improve your running speed and technique.

These same principles can be applied to skating and skating training. Earlier blog comments on incline were to suggest that as athletes get more proficient and stronger they need to be able to be continually challenged by skating flat for stride mechanics as there are many dryland programs, and even some unique hockey-centric training tools, to improve strength. In fact, higher inclines on skating treadmills tend to shorten and narrow the skating stride to more of a running one.

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17.  *Rob* says:

[May 18, 2009 at 11:27 am](#) [\(Edit\)](#)

Interesting blog. So what you are really saying is that incline training on skating treadmills is not really relevant except for cardio? Is that correct?

18.  *admin* says:

[May 21, 2009 at 7:39 am](#) [\(Edit\)](#)

The skating treadmill was originally designed to work on stride extensions. At that time, as now, there were many ways to achieve cardio and explosive starts, so this was not the core concept. Check with these manufacturers to see what other hockey-centric training tools they offer.

To your comment, what the experts say is that incline training focuses on different muscle groups. When you run uphill your gait is narrower and shorter, and you are leaning into the slope, then when running on level ground. Skating is the same. You can't extend your stride at the same time as you narrow your stance. And while it is true that you are leaning forward during true stride extensions while on a flat surface, if you do this while on an incline, your trained posture is actually further forward when hitting the ice. It is at that point that you straighten up somewhat, amending your trained posture angles. Again this is considered counter productive.

19.  *Dirk* says:

[June 3, 2009 at 3:38 pm](#) [\(Edit\)](#)

What about age limitations? How young is too young for this type of training? Watching older players, it looks like this system would put a lot of strain on the hips of a younger player.

20.  *admin* says:

[June 13, 2009 at 6:44 am](#) [\(Edit\)](#)

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There typically is no age limitation. But of course, the understanding of stride mechanics, and how it is taught rests solely with the instructor. Bad instruction may cause many issues; from ill-taught instruction playing out on-ice, to verbally abusive trainers resulting in lack of interest/focus while on the treadmill, to incompetent instructors suggesting inaccurate/inappropriate drills resulting in muscle fatigue or worse, muscle damage.

A trainer's proper knowledge on skating treadmill limitations and usage, coupled with an inherent direct correlation between applied exercise and intended result, will ensure all skaters benefit not only mechanically but physically through the use of such equipment.

Where the problems generally arise is when typically older players are forced to train stride mechanics on constant incline due to a particular skating treadmills inability to reach speeds high enough to sufficiently challenge them. In this instance, the forced incline training can damage muscles as they have no opportunity to recuperate during the lesson. Skating on the incline for 30 seconds for a quick cardio hit should be fine, provided training goes back to level skating thereafter.

For sustained cardio incline training, a regular treadmill is recommended as greater support and balance is achieved with a shoe sole versus a 1/8" skate blade. For cardio training, stride mechanics is not important.

Skating treadmills are regularly used for rehab therapy of sports injuries, implying young skaters can not only benefit, but should excel by the proper use of such machines. As a parent you have the right to understand the training regime your child is about to enter, so ask questions to remove any doubts you may have.

21.  *George P* says:

[August 1, 2009 at 9:56 am](#) ([Edit](#))

Instead of using a skating treadmill such as the ones you refer to, why wouldn't you just inline with roller blades?

22.  *admin* says:

[August 4, 2009 at 4:13 pm](#) ([Edit](#))

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Absolutely, but the resistance and stride is slightly different.

From a general training approach, inlining works fine, but some have found that hockey players, for example, wish to train with a stick in hand for dangling, and figure skaters wish to encounter more resistance for core strengthening. Using a skating treadmill provides those benefits.

This of course presumes that you are not just looking for a cardio hit, which you can get on a regular treadmill and that you are looking to improve your stride for which skating treadmills were invented. If you used a skating treadmill, and your skating level exceeds the speed at which the treadmill's track can move, and you incline the skating deck as a result, then your cardio training and stride mechanics improvement would be no greater than if you were inlining up hill.

The notable benefit of skating without fear of adults, kids and dogs jumping out of the bushes is sometimes a plus as well "and you can use these machines 24/7 without regard to weather.

23.  *Julian Fester* says:

[January 24, 2010 at 6:31 pm \(Edit\)](#)

Recently I went to a facility to use their skating treadmill and was disappointed. I am a long distance runner and get tired of doing the same thing over and over, so I thought I would add this to my fitness routine. The skating treadmill was set at 20MHP and yet I felt like I was standing still. Later, I took off my skates and RAN on the treadmill in my running shoes at what the machine said was 20MPH? Is a skating treadmill speed different than a regular treadmill?

24.  *admin* says:

[January 26, 2010 at 10:02 am \(Edit\)](#)

Since 1817 when the first treadmill was invented, the art and science of running has become nothing short of astonishing. Witness the advancements of training techniques, nutrition, apparel, and supplements; runners are now being carved out of mere mortals. The use of the running treadmill as training equipment came around 1968. Since then, the craze to shave a mere .001/second off an Olympic time has worked to ensure training equipment meets the need it was intended for, through applied manufacturing, if not ISO, standards.

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That is to all to say that 'track & field' sport speeds, and the methods used in achieving them, is science at its best. However, hockey speed and resistance training has a long way to go. But it is improving rapidly.

The advent of the skating treadmill 10 years ago, promoted stationary skating to mimic what happens on ice. It has only been in the last few years that this phenomenon has caught on. Largely due to the extreme ice-time costs in many markets and the value skaters get in less time at a lower overall investment, but also because training on such machines is getting more scientific in nature. As this evolves, even more will be asked of trainers and the equipment they use. Currently some manufactures are even developing programs specific to training on their skating treadmills.

Eventually, skating treadmills will be built to the uniform and consistent standards their running descendants are, and this should include speed calibration. In other words, a machine where a stated 20MPH, in fact, means 20MPH. Recent tests have shown that in some cases the track speeds were lower by as much as 30% than the speed shown on-screen , and this may explain your situation. There is no governing body that monitors, or forces, application of standards other than electrical, fire and structural. None of these, obviously, involve speed. The StrideMill is the only calibrated skating treadmill in the market.

Speed is important for older and more accomplished skaters, and for overspeed training. If the machine is sufficient for your stride and you benefit, then that is all you need. If, on the other hand, you are resistance training, or are looking for incremental improvements in stride and plant foot force, then accurate machine speeds are crucial. There is no real need to go faster than 20MPH these days, especially with the new skating-specific resistance training apparatus that are just now making their way into the market - and onto certain skating treadmill platforms.

25.  Sue says:

[February 10, 2010 at 9:12 pm \(Edit\)](#)

Are you able to sell products to the United States? What is the turn around time on this? I am hockey director at a facility in Texas and am very interested in a skating treadmill.

26.  admin says:

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[February 10, 2010 at 10:02 pm \(Edit\)](#)

STs.ca does not actually sell skating treadmills, but rather educates the market on them.

As such, I would encourage you to contact any of the manufacturers found by Searching “Skating Treadmill” on the internet. Most are reputable – but ask for references; the more you get the better. Additionally, reading this blog will help an enormous amount as there have been many great questions posted.

27.  *Harry G.* says:

[February 16, 2010 at 3:12 pm \(Edit\)](#)

Is this site appears to be in conjunction with a manufacturer? Does this not skew your replies and views?

28.  *admin* says:

[February 16, 2010 at 7:50 pm \(Edit\)](#)

We are well positioned to take on the challenge of educating the industry since no other manufacturer deemed it necessary to do so far. We welcome all knowledge and strive to provide arms-length and honest information.

This site is dedicated to providing arms length information to the industry at large. We feel strongly that proper technical information, as well as both conceptual and real questions/situations should have a forum in which they can be honestly answered, without having biased responses. We feel we present that voice.

However, the real strength of any presented knowledge is in the proof of the technology professed, such as that which can be found on this site under Products. Very often, the basic proof lies in trying the products yourself. Other times it is in the scientific studies behind those technical claims. It should always be challenged.

There are few true manufactures of skating treadmills. Generally skating treadmills are distributed through corporate sales people and/or manufacturer’s representatives. Most such distributors will advise they do not manufacture products. They have products made to spec for their clients, or market existing

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manufacturers products under agreement. This is not unique. This happens in almost every industry segment when a manufacturer wants to focus on what they are good at doing.

While distributors may come and go, the strength of any product, in any market, is in proof of the claims presented by the original manufacturers. We suggest all buyers do their due diligence in assessing any product before buying, especially when investing the funds required to purchase a machine as capital intensive as the skating treadmill.

29.  *Cam* says:

[March 1, 2010 at 6:32 pm \(Edit\)](#)

How much does each of these treadmills cost and would this be good for a physiotherapy clinic?

30.  *admin* says:

[March 3, 2010 at 9:02 am \(Edit\)](#)

Price is important, but overall life costs, warranty, and earning potential are paramount. If you get all of these, you have a machine that is worthy.

We are continually being advised that technology is playing a more important role in these machines than ever before. Question each manufacturer thoroughly to feel comfortable. What responses do you get? What support services do they offer? Do they have patents, new technology, and proprietary software [these reflect continual investment] - can they prove their claims, etc. Treat this no different than buying a car.

As far as the application for a “physio clinic” the short answer is yes. Many skating treadmill owners have partnered, or have cross-marketing arrangements, with clinics. The question whether a physio clinic would be able to profitably run a machine would require a business plan and perhaps the help of a peer mentoring group.

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31.  Robert says:

[September 15, 2010 at 7:53 am](#) (Edit)

The rising cost of ice time has helped the sales of skating treadmills, and these machines have their use as stride analysis tools, but because of their size, complexity, and cost, they will never be found in any local gym. If running treadmills cost tens of thousands of dollars, they would be ridiculed, not praised.

Skating treadmills were developed because engineers were unable to find a simple mechanical solution to the problem of skating replication. There are many failed attempts to accurately simulate skating in an exercise machine. So manufacturers resorted to a brute force solution. Skating treadmills - these plastic belted, energy guzzling monstrosities are the result.

Skating exercise machines should be no larger and no more expensive than any other piece of exercise equipment. They should be non-motorized and usable by anyone wearing normal athletic shoes. Then any athlete could benefit from the workout. So many sports require strength and speed of lateral movement - not just hockey, but football, tennis, squash, baseball, rugby, speed skating, cross-country skiing, wrestling, boxing... Isn't it odd that modern technology can build the space shuttle but can't build a decent skating exercise machine!

32.  admin says:

[September 15, 2010 at 6:28 pm](#) (Edit)

We are not able to render an opinion on other brands you allude to.

Skating treadmills are not a commodity, but rather a specialized piece of training apparatus. Due to the lateral movement of stride there is a need to allow the foot to arc outwards. Impossible with a standard treadmill and so the designing of something to accommodate this starts. This does not even consider the kinetic energy transfer which is so different than a regular treadmill and requires unique stabilizing systems.

Then there is the need to "feel" like you are on ice with the skate blade gripping something - but not too little and definitely not too much. So engineered oil/silicon infused UHMWPE comes in to the picture - and price climb once more.

As well, higher speeds are a requirement to allow for proper glide so heat buildup isn't an issue. Size is important to allow for a proper stride so widths and lengths

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increase and consequently so does the overall weight causing an increased footprint and structural requirements. A harness is needed for safety sake so additional engineering is demanded for various install configurations, and so on.

And energy consumption is very low on all 30AMP, single phase, 220V, 3-cycle machines; under \$40 per month for most machines.

I would suggest your comment about a multi-purpose machine to cover all sports is akin to saying that there should be one vehicle that can haul garbage, people and gasoline. Although perhaps conceptually feasible, it can and will never happen.

Manufacturers of skating treadmills have done wonders over these past 10 years and the prices have continually come down. Although the StrideMill costs as low as \$28kUSD, it wasn't long ago that machines ranged as high as \$180K. So while it isn't perhaps rocket science [and the manufacturers would argue that point I'm sure] it is an advanced technology well beyond a running treadmill and the increased popularity is driving volumes which eventually decreases pricing.

As those who are still trying to invent new and improved ways to train skaters will attest, nothing comes easy or cheap. R&D costs need to be factored into the selling price of any product. I would suppose there isn't a skating treadmill manufacturer who has invested less than mid- to low-six figures in trying to "get it right" - and they are all still working at it I am sure.

Having said all that, it is still a very unique, niche and extremely specialized market, so getting the price under \$50k seemed unrealistic 2 years ago, but times and technologies change – rapidly.

Those that operate them have found a happy medium between making a profit and saving teams and associations money. One session on a skating treadmill is equivalent to 8 power skating sessions; and you can analyze stride with available software programs like Dartfish at the same time. Those are powerful motivators for trainers and students alike - regardless of other drawbacks.
