



TRAINING FOR TALL ATHLETES

THE VIKTOR AXELSEN APPROACH

Maximise your potential as a tall athlete with “Training for Tall Athletes” – a program designed to help you leverage your height for peak performance.

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INTRODUCTION

Viktor Axelsen is on his way to become the greatest badminton player ever, even surpassing the GOAT Lin Dan. Even being mentioned in the discussion along with Lin Dan and Lee Chong Wei is impressive, but actually having the opportunity to surpass Lin Dan as the GOAT, now that is crazy. With 2 olympic gold medals along with 1 bronze, 2 world championship titles he has a strong resumé. But did you know that most people and coaches thought that he was too tall to be a good player, especially a singles player? Many people doubted him. What he has done is not only take this “weakness” of not being as fast or mobile as shorter players and make it into his strength. With steep angled smashes, efficient movement, impeccable tactical awareness and a technical skill set no one can match he certainly has compensated for not being as fast as some shorter players. Viktor has done something that will change the badminton world forever and how we approach training programs and how we see and treat different talents. This program “Training for tall athletes - the Viktor Axelsen approach” is to highlight what Viktor has done together with his team in order to be the best player in the world. Even if you are not tall (over 190 cm is my definition for this program), you can still learn a lot from Viktor so don't quit reading just yet.

This document/training program will be based around different sources such as Viktors book, his vlogs from his great youtube channel and other articles, interviews, videos etc that I can find. I will add in some reflections of my own based on sport science literature, articles, studies and logic in order for you to gain more knowledge and possibly take Viktor's approach and lessons and apply them to your own training program.

Something that is really interesting and fun is that while I am writing this (I wrote this section last) Viktor is having a live premier of a video of his tips for young athletes to stay healthy during their career. He mentions things like not comparing yourself to others and about becoming great at the basics. If you haven't watched the video, make sure to check it out.

THE DANISH WAY OF CREATING WORLD CLASS PLAYERS

There is no secret that the small country in the northern part of Europe can produce some absolutely insane badminton players. From Morten Frost, Kenneth Jonassen, Peter Gade and Jan Jorgensen to Anders Antonsen, Rasmus Gemke, Hans Kristian Vittinghus and Viktor Axelsen. And this is only in the men's singles department. They have produced so many great players that it would look like reading the first pages of Lord of the Rings to make sure they are all there. Not only have they produced players at the highest levels, take a look at the top 100 ranking and you will find A LOT of Danish players. Why is that? Well, there are a few reasons. When I wrote my bachelor thesis I came across a rather interesting article written about this topic with how South Korea, Indonesia, Denmark and Spain approach player development. I will not go over details about the article but you can find it and read it for yourself (<https://development.bwfbadminton.com/wp-content/uploads/2018/09/LBU-Player-Development-in-Four-Countries-in-Badminton-FINAL.pdf>). What is adamant is that Denmark focuses a lot on individualization, has a player centered training model as well as their focus on “..tactical variation, improvisation, deception and `beautiful` shot making” (North et al., 2016, p. iii). So this explains why for instance Viktor and Anders Antonsen are focusing so much on technical excellency, deception and playing a smart game. When comparing it to Korea, Korea focuses much more on being physically strong as well as being disciplined and never giving up. This is something you will see when looking at Seo Sung Jae for instance. However, what does this have to do with Viktor and tall athletes? Well, the thing about focusing on being technically and tactically superior gives you an indication of how important the badminton practices are and to reflect and think for yourself. The player centered individualized training style can be seen in how Viktor approaches his training now. We will get into this soon. But for now I want you to remember that Denmark is focusing on the development of their players' individual traits. Some are very fast (Jan Jorgensen) and they (the coaches) find a way of making his physical abilities match with his playing style. Anders Antonsen is probably one of the smartest tacticians of the game, but has been working super hard on his physique lately and has gotten great results from being good tactically, but bringing up his weakness of physical stamina. Viktor has had a lot of work to do in order to address the weaknesses of being a tall singles player.

THE VIKTOR AXELSEN APPROACH

He writes in his book that the training programs that were given by Badminton Denmark were too general. They didn't address too many of his own needs as a tall singles player. This led him to start working with his own strength and conditioning coach, Sean Casey. Sean Casey is a well educated, experienced strength and conditioning coach as well as sports nutritionist. He was used to working with tall athletes and knew what worked and what didn't. I've said many times on my podcast that I have a tall back (I'm "only" 188 cm tall, but with short legs my upper body is as tall as someone around Viktors height (194 cm). So working with Sean, who knows the challenges as well as opportunities with tall athletes, they got to work. From his (Viktor's) book he says that doing heavy squats made him feel stiff and affected his mobility. As a tall player, it's very important to be able to move and rotate. Also, being able to get really low in the defense is where it's most important. In accordance with the Danish way they focused on the badminton player Viktor. They removed heavy squats and from several different Youtube-videos they have done together they did exercises with lighter weight that challenged his mobility as well as strength. We will get into this later but what Viktor was starting to do was setting up his own team of coaches, trainers, nutritionist, S&C coach and becoming an independent player. He made sure that everything was focused on him. No more general programs or feeding shuttles to other players when not necessary, not doing drills for anyone else but himself and his needs. He made sure to follow one of the most important principles of training: the principle of individualization. In order to reach his full potential as a player he needed things to be about his development first and foremost. And based on his successes as an independent player, we have to say that focusing on himself was well worth it. Before that you need to understand that Viktor is one of the best examples of how to be a top athlete in regards to having a warm-up routine, eating well, focusing on rest and recovery in between sessions and demanding perfection (in a positive manner). He has high demands on himself and everything he does is to maintain high performance. I would also say that not being afraid of trying new things and figuring out how to overcome certain challenges is something we have to give him credit for. But enough about this, let's get into the program with the six steps of Viktor Axelsens physical training.

6 THINGS TO OPTIMIZE FOR TALL PLAYERS

Of course this will focus on how to strength train for tall badminton players with inspiration from Viktor Axelsen. However, these steps and exercises will be great for every player.

1 Flexibility

As mentioned previously, being tall puts a lot of requirements into many parts but especially flexibility in order to defend and move smoothly around the court. For doubles players this is not as demanding as for singles players. From Viktor's Youtube channel with Sean he goes over a few stretches he does:

1. Couch stretch variations (regular, raise arms to ceiling and bending/rotating)
2. Standing calf stretch
3. Side lunge (like a cossack squat)

I think these are good and well, but would like to add a few more things to the mix and also start what flexibility is. There are so many different definitions given over the years that choosing one is not easy. I think that we could think about it in terms of being able to move fluidly and smoothly as well as to get the required range of motion (ROM) in a given position. So for instance if we need to do a deep lunge, we should be able to do it without pain or discomfort. If we can't get in position, we are in trouble and our flexibility is too low. We often see it with bad technique in the gym when someone is trying to squat. For tall athletes it's important to make sure that their muscles and joints have the appropriate amount of flexibility in order to get in the right positions. If you are an olympic weightlifter you will require insane flexibility, as a badminton player or a golfer you need a lot of mobility and as a handball player not so much (unless you are a goalkeeper). However, the kinds of flexibility differs from sports so we can't talk about it in general terms. We just need to understand that having good flexibility is based around the movements and activities we are trying to do.

Jeffreys and Moody (2016) shows that a lot of research done on flexibility has shown no real effect on stretching on injury prevention, low back pain prevention or even less delayed onset muscle soreness (DOMS). The authors instead suggest that we look at flexibility as a way of improving performance through enhanced ROM. Flexibility training could increase effective

movement. Increased flexibility could lead to reduced risk of injury as a byproduct of being able to use full ROM.

2 Becoming more athletic

This comes from Viktor's book and this is somewhat confusing since this doesn't really mean anything. What do I mean by that? Well, you can be amazing at sprinting and jumping, but really bad at kicking a football. From one perspective this would be an athletic AND from another perspective an unathletic person. If we are only focusing on the physical aspect we might say that the same person is athletic because of their speed and ability to jump high, but might be bad at doing repeated sprints or running 3 km instead of their usual 100 meter sprint. I write this just to make it clear that I am not exactly sure what Viktor meant, but in general becoming more athletic means: having strong legs and core, being fast and good at changing direction, jumps high, has an outstanding VO2max as well as ability to recover in between intervals. Some of these things will be their own sections, but for you to understand what you need the most is to start doing fitness tests.

I would recommend you to test a lot of different physical abilities to understand what you are naturally gifted at and what you need to put the most effort into doing. Below I will list some of my recommendations of tests:

1. The Cooper test
2. 1RM squat, trap bar deadlift and bench press
3. 5RM hip-thrust
4. Max reps on pull-ups
5. Standing broad jump
6. Vertical jump
7. Repeated sprint ability (20 meter sprint every 20 seconds, but google it to make sure you're doing it right)
8. Beep test
9. Yoyo-test

10. Side-plank (aim for 2 minutes per side)

However, before doing any tests you should make sure that you have practiced the technique in the exercise you are trying to perform. If you have never done a squat in your life, don't start with finding out your 1RM. Instead, start doing the exercise and make sure to perfect the technique first. The same goes for everything else as well. When you focus on perfecting technique your strength will follow.

3 Leg strength

Why is this so important for tall athletes? Well, as written previously we need to make sure that the legs are strong enough to 1) be able to endure a match and tournament at a high intensity, 2) getting in and out of demanding positions during matches and, 3) tolerate the training load without overuse injuries.

As a tall player you will carry around a lot of extra body weight which also puts a huge demand on the muscles in your legs. Not being strong enough will most likely result in some really bad results on court.

You might ask yourself "How do I know if I'm strong enough?" and this question is hard. However, there have been some guidelines lately that I like. If you are trying to become an elite men's singles player, you need to aim at doing a 1RM on squats with 2 times your bodyweight. What?! Yes, this means that a player weighing 80 kg should be able to do one repetition of 160 kg on the squat. Is this necessary? No, but also yes. I'm not sure what Viktor would be able to do now, but if you are not Viktor then it's a good aim. Just remember that you can become an elite level player without squatting two times your bodyweight. No matter if you squat, use split squats or leg presses make sure that you are getting increasingly stronger. That is the whole goal. For the hip-thrust I do think 2 times your body weight is a good aim. What we need to understand about being tall is that you will have to move the weight a lot further than someone shorter, which means that for you to be able to do the same weight and reps as someone shorter you need to be stronger since you will have to move the weight further.

4 Staying injury free through stability training

In a video on youtube, Viktor goes over what he does in order to stay injury free which he does by stability training. The exercises he uses are: Glute bridge, bird dog, band walks and different variations of the pallof-press. Why does he use these exercises? Well, they are good for the core with both abdominal muscles, lower back muscles, glutes and can be done unilaterally and bilaterally. This means that within these exercises there are many different ways of doing them in order to get a different stimulus. These exercises are also not that fatiguing as well as not imposing any real chance of injury. The critique I have is that these exercises are really hard to progress at. Glute bridge is a great exercise, but doing 20 is easy and there won't be much benefit from doing 100 reps of them. Switching to a single leg variation makes it much harder which is great, but the same problem will occur even there. Bird dogs are really hard to progress as well. I think these exercises are great for warming up and having a certain base-line of stability but not something to spend much time doing. I think that doing a loaded hip-thrust (single leg and/or both legs) is a better choice. Bird dogs are great, but we need to challenge the core some more so doing more direct work regarding the core and lower back such as hyperextensions, suitcase carry, KB suitcase carry and march, ab roller and maybe some RDLs. If you are new to strength training then I think that the simpler versions of what Viktor is doing works wonders. Band walks are actually great for glutes and getting activated before practice, but have the same issues with progressive overload as the other exercises. I would however definitely recommend you to do it. Pallof press is an amazing exercise that all players should do, but for such a tall player as Viktor this is very important for tall athletes to stay protected.

5 Warm-up and recovery

If someone asked me who people should look up to as an athlete (and person) I think Viktor would be a great answer. From following his vlogs and from what others have been saying he is so serious, dedicated, committed to being the best player he can be, but also being a great person. Not only has he achieved great sporting results, but he is great at interacting with fans and being a dad and husband. He is an expert at prioritizing rest and recovery in order to get an 0,5 percent extra during the next practice session. His diet is on point. His preparation for every practice is perfect. He has a routine of foam rolling, stretching, general warm up, specific warm up, activation exercises and probably some more mental drills. Viktor Axelsen is a perfectionist in the best way. Now, this has nothing to do with height, which is the goal of this document, but I think that understanding how Viktor approaches every aspect is worth noting because you can benefit from it. So make sure to have a routine for warming up that works for you and that primes you both mentally and physically for the training session ahead.

6 Bodyweight and body fat

As a tall player you will carry some extra weight and making sure that you don't weigh more than necessary is important. Not having too much fat and not having too much muscle mass is important when being tall. As a tall player making sure to be in a perfect state of muscle to fat ratio is important. I think that shorter players can get away with having more body fat as well as doubles players. However if Viktor was to gain 2 percent of body fat (which is not much), he might still go up 1,5 kg which would be a big difference to carry around the court. Let's say he was in a phase of doing more strength training, he might gain some muscles as well which would result in weighing 2,5 kg more when he would step out on court. This would be tough, even though the muscles will balance this out a bit. If you have ever watched Formula 1 or any racing sport they are obsessed with not weighing too much (both driver and car) in order to get the most out of the car. Being tall and moving around the court is all about efficiency. Gaining weight will change this and make decelerations and change of direction much harder. The load on the knees, back, hips, ankles will increase even more. This can lead to an increased risk of overuse injuries.

To summarize, you as a tall player need to make sure not to have an excess of both fat and muscles on your body. There might be times where this would be okay, but when trying to peak we don't want to carry around the extra weight. Some of this is genetic and will be hard to change, but make sure to eat a good, healthy and balanced diet and do strength training not with the goal of building muscle but rather being stronger, faster and more athletic.

KEY TAKEAWAYS FROM VIKTOR AXELSEN

1 Individualize everything

He is making sure to take care of himself with both training and diet, with rest and recovery but also mentally. Viktor does not leave anything to chance. He is dedicated to improving and optimizing everything. He knows his strengths and weaknesses and how to address them. By doing this he can individualize everything to reach new heights. He is not interested in doing a general fitness program. He wants a program for his needs. That is something more players need. If you have never done a strength program, then you can do something general because most often it will give results (if it's done by someone who knows training). But when you reach a certain level you need to individualize. A way of doing that with a general program is

to change some exercises, switch from strength focus to explosive focus and adding more exercises or sets for where you need more work.

2 Prioritize staying injury free and feeling good

Viktor is not an “ego-lifter”, he knows his body and knows when to back off and when to push through the pain. However, as mentioned many times previously he prioritizes his ability to perform on court. This means that not training heavy in the gym and not accumulating too much fatigue in order to perform on court. For some people this is not the right approach, because you need to focus on strength and conditioning, but what we can learn from Viktor is that he wants to stay injury free. He does not force himself to do squats when he feels bad doing them and how he feels after. Doing exercises that feel good is more important.

EXERCISES I WOULD HAVE IN MY PROGRAM

Many times in this document I have put forward some suggestions of exercises I would do, but I will write my list down below. The sets and reps will not be included because it depends on your needs. However, when choosing what to do and how to progress you will have to pick a few of each category (strength, stability, plyos, core etc) and get stronger each week. If you are new then starting with 2-3 sets of 8-10 reps is good. The goal would then be to progress with one rep each week until you reach 12, then you increase the weight and decrease reps to 6-8. Then you slowly climb back up to 12 reps. For strength you would focus more on 3-6 sets of 3-5 reps and try to increase weight each week. I have written this in other documents so read these. However, make sure to have a plan for HOW you want to progress each exercise. Choose a few of each of these exercises, not all of them.

Core/stability	Strength	Plyometrics	Cardio
Bird dog	Bulgarian split squat	Drop and hold (for beginners)	15/15 intervals x 12 x 3 (1,5 minutes of rest after 12 intervals, repeat 3 times)
Single leg glute bridge	Squat variations (front, back, goblet)	Pogo jumps	Assault bike 10/20 x 8 x 2 (rest 2 min)
Deadbugs with pilates ball	Pull-ups/chins	Box jumps	
Side plank	Hip-thrust	Broad jumps	
Pallof press	Push-ups	Tuck jumps	
Side bend followed by Suitcase carry	Dumbbell row	Med ball slams	
Suitcase carry and march	Trap-bar deadlift	Depth jumps	
Hyperextension	External & internal rotation for shoulder	Counter Movement Jump	
Reverse squat	Dumbbell incline press	Single leg box jumps	
	RDL	Skater jumps	
	Cossack squat (for mobility as well as strength)		

I will leave you with this: Develop yourself as an athlete with cardio, strength, explosiveness, power, jumping, CoD, core strength, mobility etc. If you have the opportunity to work with a PT or strength coach, make sure to learn how to clean and jerk, snatch, hang cleans etc. Olympic weightlifting is important. Being strong is important as well so make sure you at least CAN squat deep, even if you don't do it with super heavy loads. We want to make sure that we can do every exercise and movement, even though we might not do them regularly.

EXAMPLE OF A SESSION

RIR = Reps in Reserve (when you finish a set of 2 RIR you could have done two more reps, but ONLY 2 more reps)

Example of a gym session (no plyos)

Exercise	Sets x Reps	Weight/intensity	Physical quality
Bulgarian split squat	3 x 6	60 % of 1RM	Explosiveness
Trap-bar deadlift	3 x 5	85 % of 1RM	Max Strength
Hip-thrust	2 x 6	80 % of 1RM	Max Strength
Push-up	2 x max	0-1 RIR	Strength
Pull up/chins	2 x max	0-1 RIR	Strength
Cossack squat	2 x 8	4 RIR	Mobility/strength
Side plank	2 x max (aim for 2 minutes)	Max effort	Core/stability
Deadbugs with pilates ball	2 x 20 (10 per leg)	N/A	Core
Med ball slams	2 x 6	N/A	Explosiveness

Before or after badminton

Exercise	Sets x Reps	Weight/intensity
SL glute bridge	2 x 12	2 RIR
Bird dog	2 x 20	N/A
External/internal rotation rubber band	2 x 12-15	4 RIR
Side plank with rotation	2 x 8-15	2 RIR

These are only suggestions and to make a good plyometric workout you might have to add some pogo jumps, tuck jumps and broad jumps. Make sure not to make over 80-120 jumps per week so 3 x 6 (18 jumps) pogo jumps and 2 x 6 broad jumps (12 jumps) two times per week is 60 jumps, adding in a third would make it 90 jumps per week. There will be a whole document about plyometrics in a short while, but make sure to NOT OVERDO IT. You jump a lot on court so make sure not to jump too much outside of the courts. However, if you do plyos make sure to do them first in the session.

The suggestions above are just that, suggestions. Find out which exercises you prefer and do them. Make sure to have a purpose for doing squats, jumps, core etc. Everything needs a purpose. The first example above is for a tall player who wants a full body session with a bit of everything in it. This would be great for beginner to intermediate levels of strength training. Even an elite player could benefit from this if they need to work more on strength

and some explosiveness. However, you could have the exact same exercises but make them more geared towards explosiveness. Take trap-bar deadlift as an example: above you have 3 sets of 5 reps at 85% of 1RM. Do 3 sets of 5 reps with 50 % of 1RM and be really explosive. This would then shift the session's focus from strength to explosiveness. Changing push-ups to a dumbbell incline bench press and doing 3 x 6 at 60 percent would be a great way of adding more explosiveness for the upper body as well.

CONSIDERATIONS

I think that VA is showing most of his work that he is doing around tournaments where he just wants to maintain strength and focus on reducing injuries, working on mobility and priming which means that he wants to be prepared to play badminton at the highest level. I say this because he definitely trains harder than this during certain periods of the year. I think we see his maintenance program and only certain bits and pieces. AND he has already gotten a solid base in strength and conditioning during his career, so he doesn't focus on improving his deadlift with 20 kg during 2025, he follows a plan as I've said previously. This is however a good lesson for all of us that we need to have periods of easy gym work and more focus on making sure the body feels good in order to get the most out of the badminton practice.

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