



# Eva López MaxHangs Hangboard Routine For Finger Strength



Jędrzej



April 29, 2019



25 Comments

*"After 8 weeks of training, my finger strength increased by 17%! Thanks again for your wonderful site and your help selecting a plan! I can't wait to go crush!"*

**Carson (V8/7B)**

Boulderer (US)



**Like the site? Please visit my IG account for more cool training info!**



## Quick summary

[Eva López MaxHangs hangboard routine](#)

- Low-volume, high-intensity protocols for significant strength gains
- **Sh** **TOP** and high intensity lead to rapid neural adaptations



[Eva López MaxHangs fingerboard strength training routine remarks](#)

[Eva López MaxHangs finger strength training results and discussion](#)

- Scientifically proven strength gains of up to 20.6% in just four weeks and up to 28% after eight weeks of training
- Proven strength endurance gains of up to 34% after eight weeks of training
- Cycle hangboard protocols to change the training stimuli and break the plateau
- Protocols highly recommended for intermediate and advanced climbers
- Beginners had better stay away and use other methods instead

## Eva López MaxHangs hangboard routine

The Maximum Hangs (MaxHangs) protocols were developed and popularized by Eva López, a Spanish elite climber, coach, and sports scientist [1]. The training protocols are low volume and high intensity. When first introduced, the MaxHangs hangboard routine was faced with some skepticism, because of the relatively short time under tension (TUT), compared with, e.g., [Hangboard Repeaters](#) or [Steve Bechtel's 3-6-9 Ladders](#) [2][3]. However, despite the program's low volume, Eva López was able to prove the extreme effectiveness of her routines scientifically.

Since then, MaxHangs have become widely accepted in the climbing community [4]. Eva's findings are in line with the results of recent research, which show that a low volume routine can be just as effective as a high volume one while being significantly more time-efficient [5]. The protocol can be executed in two versions, the minimum edge with no added weight (MaxHangs MED) and with added weight (MaxHangs MAW). Both methods trigger neural adaptations through short TUT and high loads (75 – 103% of MVC) [6].

*Trigger neural adaptations efficiently through low volume, short time under tension, and high loads.*

## Eva López MaxHangs hangboard routine details (MED)

1. Choose an edge on which you can hang for only 6 – 20 seconds.
2. Hang for 5 – 15 seconds (leave a 1 – 5-second margin), rest for 3 – 5 minutes.
3. Complete 2 – 5 sets.

TOP



wooden hangboard [7][8]. Still, it should be reasonably easy to make your own board with different size wooden edges. The way I do it is that I insert 2 mm thick cardboard strips into the edge slots of my Zlagboard, as you can see in [Figure 1 \[9\]](#).

**Figure 1:** Cardboard strips in the edge slots of the Zlagboard, to adjust edge depth.

## Eva López MaxHangs hangboard routine details (MAW)

- 1. Choose a grip position to train.
- 2. Add enough weight to be able to hang for only 6 – 20 seconds.
- 3. Hang for 5 – 15 seconds (leave a 1 – 5-second margin), rest for 3 – 5 minutes.
- 4. Complete 2 – 5 sets.



MaxHangs	
Hang test time [s]	6 - 20
Margin [s]	1 - 5
MVC-7 load	75 - 103%
Sets	2 - 5
Hangs/set	1
Hang time [s]	5 - 15
Rest betw. sets [min]	3 - 5
TUT [s]	10 - 75
Total time [min]	3 - 21

## Eva López MaxHangs strength training protocol remarks

- Always warm up properly before doing the MaxHangs hangboard routine.
  - Perform three to four sets with increasing added weight or decreasing edge depth (50 – 90% of the previous session's load) [4].
- The number of MaxHangs sets can be varied between 2 – 5.
  - Beginners should start with two sets.
- The hang time can be varied between 5 – 15 seconds.
  - Typical hang time: 10 seconds
- The margin is also called the effort level (EL) and may be varied between 1 – 5 seconds [10].
  - Leaving a margin leads to similar results as reaching failure, but reduces the risk of injury.
  - Typical margin: 3 seconds
- The rest time between sets can be varied between 3 – 5 minutes.
  - Typical rest time between sets: 3 minutes
- For the MaxHangs MED protocol, an edge between 5 – 10 mm is usually chosen.
  - During each set try to assess the time margin you have left on the hangs.
    - If you feel like your margin exceeds 3 – 5 seconds, decrease the edge depth by 1 – 2 mm, according to the perceived effort.
    - If you feel like your margin approaches zero, increase the edge depth by 1 – 2 mm, according to the perceived effort.

TOP



for any hold.

- Typical added load: 5 – 55 kg
- During each set try to assess the time margin you have left on the hang.
  - If you feel like your margin exceeds 3 seconds, add 2 – 5 kg for the next set, depending on bodyweight.
  - If you feel like your margin approaches zero, subtract 2 – 5 kg for the next set, depending on bodyweight.

## Eva López MaxHangs finger strength training results and discussion

Since its introduction, the MaxHangs hangboard routine became widely known, and today it is the hallmark of hangboard strength training. What is interesting, in one of her studies Eva reports that an 8-week cycle of her MaxHangs program also resulted in a 34% average strength endurance improvement, apart from the apparent finger strength gains, which is a bonus and confirms that strength endurance is directly related to strength [11].

Because Eva López MaxHangs hangboard routines are characterized by low volume, they are designed to constitute only a part of a training session. In order to notice improvements, the routines should be performed from two to three times per week, depending on the amount of other training you do. To maintain a stable level of strength, it should be enough to execute the MaxHangs hangboard routine once a week. Execute the drills at the beginning of a climbing session, followed by a 15-minute rest before proceeding to the next exercise.

*Start with four weeks of MaxHangs MAW, followed by four weeks of MaxHangs MED, to complete a full 8-week cycle and maximize gains.*

The MaxHangs protocol is very effective, but owing to the relatively low volume, it does not leave you exhausted and the complete recovery time is usually as short as 48 hours [12]. According to Eva López, it is best to start an 8-week training cycle with four weeks of the MaxHangs MAW protocol and follow with four weeks of the MaxHangs MED. Such protocol combination can yield up to 28% finger strength gains [4]! I would recommend the MaxHangs protocols to intermediate and advanced climbers, but not to beginners. You need ample hangboarding experience to safely determine the loads, hang times and to avoid injury.

TOP



## References

1. Eva López Blog [\(link\)](#)↗
2. J. Banaszczyk, StrengthClimbing – Hangboard Repeaters, Apr. 8, 2019. [\(link\)](#)↗
3. J. Banaszczyk, StrengthClimbing – Steve Bechtel's 3-6-9 Ladders, May 18, 2019. [\(link\)](#)↗
4. U. Chrobak, Climber Eva López Has a PhD in Finger Strength, Outside Online, Jul. 9, 2018. [\(link\)](#)↗↗↗
5. Schoenfeld, B.J., Contreras, B., Krieger, J., Grgic, J., Delcastillo, K., Belliard, R., Alto, A., 2018. Resistance Training Volume Enhances Muscle Hypertrophy but Not Strength in Trained Men. Medicine & Science in Sports & Exercise 1. [\(link\)](#)↗
6. Eva López Blog – Maximal hangs, Intermittent Hangs (Repeaters) or a Combination. Which 8-week program is more effective for developing grip strength in rock climbers?, Mar. 14, 2018. [\(link\)](#)↗
7. TransgressionUSA.com [\(link\)](#)↗
8. Fingershinder.com [\(link\)](#)↗
9. Zlagboard.com [\(link\)](#)↗
10. González-Badillo, J.J., & Gorostiaga, E., 1993. Fundamentos del entrenamiento de la fuerza. Aplicación al alto rendimiento deportivo. [\(link\)](#)↗
11. López-Rivera, E., González-Badillo, J.J., 2019. Comparison of the Effects of Three Hangboard Strength and Endurance Training Programs on Grip Endurance in Sport Climbers. Journal of Human Kinetics 66, 183–195. [\(link\)](#)↗
12. Eva López Blog – Fingerboard Training Guide (III). Program design and Periodization of MaxHangs, IntHangs and SubHangs. Samples of MaxHangs training programs, Jul. 5, 2018. [\(link\)](#)↗

## Share this post



## About the author

### Jędrzej

A veteran hangboarder and a Moonboard fan, Jędrzej is crazy about training for climbing. There's nothing he likes more than trying out different protocols and applying the newly acquired skills on the wall. Jędrzej also enjoys playing the electric guitar, baduk, and reading articles on the science of sports training. He holds a Ph.D. in electrical engineering.



## 25 thoughts on “Eva López MaxHangs hangboard routine for finger strength”

**AARON**

MARCH 6, 2020 AT 12:17 AM

Question about the following –

“Perform three to four sets with increasing added weight or decreasing edge depth (50 – 90% of the previous session’s load)”

Is that in addition to the total sets I want to perform?

So for example if my training session is only 2 sets I would actually perform 3-4 warmup sets so that I am hanging for a total of 5-6 sets? If my target workout is BW+10kg @ 12 s then would this be my entire routine?

Set 1 : BW-10KG @ 12s

Set 2 : BW-5KG @ 12s

Set 3: BW+0KG @ 12s

Set 4: BW+5KG @ 12s

Set 5: BW+10KG @ 12s

Set 6: BW+10KG @ 12s

Thanks!

[Reply](#)

**JĘDRZEJ**

MARCH 8, 2020 AT 3:38 AM

Hi Aaron!

Yes, that’s in addition to your planned training hangs for the session. Recruitment hangs should basically be the last part of your warmup.

Let’s say that your BW is 80 kg, and your target workout is BW+10kg @ 12s. In that case, your plan could indeed look like:

Recruitment Set 1 : BW-10KG @ 12s (78% max)

Recruitment Set 2 : BW-5KG @ 12s (83% max)

Recruitment Set 3: BW+0KG @ 12s (89% max)



MaxHangs Set 1: BW+10KG @ 12s (100% max)  
MaxHangs Set 2: BW+10KG @ 12s (100% max)

That makes for the entire MaxHangs routine! You can then rest for 10 – 15 minutes, and still have a bouldering session!

Have a great time training!

[Reply](#)

**AARON**

MARCH 19, 2020 AT 9:49 PM

Hi Jedrzej,

Thanks for your answer! Another question for you – should I rest for the same 3-5 min. between recruitment sets or can I rest for a less time between recruitment sets?

Thanks,  
Aaron

[Reply](#)

**JĘDRZEJ**

MARCH 25, 2020 AT 9:35 PM

Hi Aaron, thanks for the question!

The general rule with strength training, as opposed to endurance training, is to rest as much as needed to be able to perform at your maximum. The recruitment hangs are going to be below your max, so you will likely not need to rest more than 1 – 2 minutes between the initial ones. As the intensity goes higher, you will probably have to recover for a bit longer.

If at any time you will feel that you are not able to perform at your maximum, then go ahead and rest 6, 7, or even 10 minutes. However, if you wait too long, you may start losing your muscle recruitment. Your muscle CrP stores should be theoretically fully recovered after 5 minutes, so that should generally suffice.

[Reply](#)

**AARON**

APRIL 2, 2020 AT 3:36 PM

**TOP**

Hi Jedrzej, thanks for your answers!!





One more question for you – can you comment on why I wouldn't go > 22mm edge depth for MAXV hangs?

Thanks!  
Aaron

[Reply](#)

**JĘDRZEJ**

APRIL 5, 2020 AT 2:04 AM

Hi Aaron!

I guess that above 22 mm, the hold becomes more of a jug, and it's difficult to grab it as purely half crimp or full crimp. Also, I can imagine that the loads you would be using would become very high, which could put some unnecessary strain on the shoulders. Of course, for beginner climbers, it does make sense to train with big holds, but the MaxHangs MAW technique is suitable for the more advanced, so for that reason, holds bigger than 22 mm are regarded as too large.

[Reply](#)

**AARON SURTY**

JUNE 21, 2020 AT 4:18 PM

Hi Jędrzej,

When you are referring to 'load' do you mean exogenous weight added in addition to my own bodyweight or are you referring to only weight added? So for example, if my bodyweight is 70kg and I added 20 kg for my MVC-7 and want to train later at 90% is that 90% of 90kg ~=81 kg ?

Sorry if you already answered this question. 😊

Thanks!

[Reply](#)

**JĘDRZEJ**

JUNE 30, 2020 AT 6:33 PM

Hi Aar **TOP**



Thank you for the question! It's exactly as you said, we're talking about the total loads here, so basically it's your body weight plus the weight of your clothes and gear plus the extra load that you attach to your harness.

[Reply](#)**DARKO**

JULY 1, 2020 AT 10:14 PM

Hi Jędrzej,  
Why not go with bigger edge for MED like in IntHangs?  
In that protocol MED is 10-18mm edges.  
Any specific reason for the edges being 10 and below?

[Reply](#)**JĘDRZEJ**

JULY 2, 2020 AT 6:22 AM

Hi Darko!

Thank you for the comment! For the MaxHangs MED a 5 – 10 mm edge is usually chosen because it's likely to ensure the required hang intensity. Let's assume that you boulder V6, and you want to design a proper MaxHangs MED training session with 10-second hangs and 3-second margins. To reach these training parameters, you will likely need to use an 8 – 9 mm edge. However, to use the same hang parameters, a V2 climber would need to train on a 20 mm edge (you can use the Finger Strength Analyzer to confirm this). Still, the question is, should a V2 climber train with MaxHangs, or are there better strategies to ensure progress, like Endurance Repeaters, Hangboard Moving Hangs, or simply climbing more.

[Reply](#)**DARKO**

JULY 4, 2020 AT 6:34 PM

Thank you for the explanation Jędrzej.  
I am actually within the V6 range, so your comment is spot on and the example is very helpful.

[Reply](#)



Hey Jędrze. If 5sec hangs with maximum load(near maximum with the margin) will be compared to 10sec hangs with maximum load do you think the 5sec hangs will result in better strenght gains after the same period of time(say 8weeks). My logic is based on a study for concentric exercises where it was concluded that training with 100% of your 1RM gives significantly better gains than training with 80-85%. And if that's true do you think that 3sec hangs will be better than 5secs. Thank you

[Reply](#)

**JĘDRZEJ**

FEBRUARY 5, 2021 AT 8:54 AM

Hi!

Thanks for the comment! First of all, I would need to take a look at that study because I'm not familiar with it and it sounds interesting! But anyway, concentric exercises are different from isometric exercises, so I'm not sure if you can compare them one to one. And anyway, how do you define a 1 RM for isometric exercises? I mean, you could call a 10-second max. a 10-second 1 RM, and a 5-second max. a 5-second 1RM, because in both cases, you're using a 100% load, and you hang till failure.

So, in the end, the question is, are short hangs better than long hangs? I believe that 3-second max. hangs till failure are somewhat risky, and the same goes for 5-second hangs. When it comes to my clients, I usually don't even recommend doing 7-second max., not initially. It's better to perform a 10-second max test and take 96% of the load to calculate the MVC-7. You can also see that 10-second hangs are also pretty high intensity. At 85% of your max., you could hang for at least 20 seconds.

Still, I would guess that shorter hangs at extremely high intensities are better at stimulating the CNS and longer hangs – above 7 (seconds) are more likely to promote the formation of intramuscular PCr stores. Both types of hangs are useful. Even 40-second hangs can contribute to strength gains because they target hypertrophy and strengthen tendons and ligaments.

[Reply](#)

**ALEX K.**

MAY 13, 2021 AT 8:31 PM

You mention that this approach is designed to be only part of a training session. What other exercises do you recommend? Thanks.

[Reply](#)

[TOP](#)

**JĘDRZEJ**

MAY 14, 2021 AT 12:53 PM

It depends on what you want to train for. If your focus is bouldering, you may, for example, start the training session with a series of MaxHangs, then take a short break and move on to your bouldering. If, on the other hand, you are a lead climber, you may engage in some Endurance Repeaters or work on your projects. It's also possible to have a short MaxHangs session in the morning and later climb in the evening. A well-desinged strength training session shouldn't be overly taxing, so there's a lot you can do besides that during the day.

[Reply](#)**KEVIN**

SEPTEMBER 7, 2021 AT 12:05 AM

Hi Jędrzej.

If I climb 4x per week. should I do the Maxhangs on climbing days or on my climbing rest days?

[Reply](#)**JĘDRZEJ**

SEPTEMBER 7, 2021 AT 7:22 AM

It all depends if you're a young elite climber, then I guess you could get away with a morning MaxHangs session before going to the crag. Otherwise, it would be counterproductive. For an amateur, climbing four times a week is already a tremendous training load. Adding MaxHangs on top of that seems unreasonable. And you certainly shouldn't do MaxHangs on rest days. MaxHangs are a very intensive exercise, taxing the connective tissue and the CNS, and a MaxHangs session deserves a rest day in its own right.

[Reply](#)**KEVIN**

SEPTEMBER 7, 2021 AT 9:53 PM

I'm 17 and I compete. Do you recommend it for me and if so should I climb less times during the week.

[Reply](#)

TOP

**JĘDRZEJ**



Hi Kevin!

Well, you're still very young, and if you're a competitor, then you probably have a very bright climbing future in front of you. I think you should talk to your coach. If you don't have a coach, please get one – someone with whom you can work one-on-one regularly and who can adjust your training based on your current goals. If you're serious about climbing, don't let this potential go to waste by trying to figure it all out yourself.

Cheers,  
J.

[Reply](#)

T

OCTOBER 11, 2021 AT 1:16 PM

Hello JĘDRZEJ,

sorry I need to ask you 2 things that are important to me.

The first (simpler) I am training E. Lopez's MED protocol followed by a 10 / 15min break and then move on to a Moonboard session of about 45min. Do you find it correct for strength / power training?

Can this combination also be used with the MAW protocol?

The second question concerns the possibility of not losing the Strength / Stamina gains obtained so far. In a few months I will have to undergo an operation on my knee (ACL reconstruction / meniscus transplant / ostetomy) and I will not be able to rest the operated leg on the ground for at least 45 days. 3 months for tope rope climbing. 6/8 months Lead.

Do you suggest a specific hangboard protocol (even if with one leg?) Or particular exercises?



thank you very much and see you soon

[Reply](#)

JĘDRZEJ

OCTOBER 15, 2021 AT 7:39 AM

Hi!

Question 1: Yes, it's perfectly ok to have a MaxHangs session before a Moonboard or a limit bouldering session. It's also fine to do a MaxHangs session in the morning and then go bouldering in the evening. That goes for pretty much all finger strength training methods, including MED, MAW, "7-53", CWP.

Question 2: I think that you can use any hangboard protocol, as long as it doesn't pose a risk of you dry-firing off the holds and hurting your leg. But I suppose that you'll not be inclined to try extreme protocols with heavy loads with your injury. I think you could focus on volume and go for **TOP** Endurance Repeaters or BFR based protocols. The latter, in particular, could have a



Other than that, you can use this time to do some shoulder stability work, to make sure that you're ready to get back on the rock stronger than before:)

[Reply](#)

T

OCTOBER 16, 2021 AT 7:36 PM

JĘDRZEJ, thank you very much for your availability.  
Regarding the BFR, can you tell me some resources?  
I don't know where to look.  
See you soon

[Reply](#)

JĘDRZEJ

OCTOBER 16, 2021 AT 8:46 PM

Hi!  
Here's a great [resource](#)  
J.

[Reply](#)

CYNTHIA

OCTOBER 22, 2021 AT 12:33 AM

Hi there! Excellent breakdown of the training protocols—thanks!  
Question: the article mentions 4 weeks MAW followed by 4 weeks MED...what comes after that? If I want to do another 8-week circuit, what kind of rest (if any) should I take before starting the next cycle? Should hangboard training be utilized as an ongoing thing, or should it be more for in preparation for climbing trips/competitions/etc?  
My questions ultimately stem from there being a definite climbing season in my area (Squamish), where I have from October-March to train (because it's usually too wet to climb) and April-September to send my projects. What do you think is a good way to organize my training based on this climbing schedule?

[Reply](#)

TOP JĘDRZEJ

OCTOBER 22, 2021 AT 6:20 AM



Hi Cynthia – thanks a lot!

Typically after a recruitment cycle, such as the MaxHangs MAW or MED, you take a few days of rest and measure your strength progress. Then you may decide if you repeat the recruitment cycle or take some rest, maybe up to two weeks and enter a hypertrophy cycle, such as Repeaters or Density Hangs, for example.

Yes, hangboard training can be done all year round, but you should structure your training based on how much you climb outdoors or compete. Your yearly climbing cycle will also determine if you should focus more on pure strength or endurance.

If you're interested, I can prepare a training cycle for you that's tailored to your current level and the coming climbing and training goals. For details and prices, please write me an email.

[Reply](#)

## Leave a Comment

Your email address will not be published. Required fields are marked \*

Type here..

Name\*

Email\*

Website



REVIEWS

## BETA BOARD from Escape Climbing – Hangboard Review

[READ MORE »](#)

TRAINING

## Elbow Pain – The Ultimate Guide for Rock Climbers

TOP





## REVIEWS

### Bleau Blocs – 100 Finest Boulders of Font – Review

[READ MORE »](#)

## STRENGTH TRAINING

### Eric Hörst's “7-53” finger strength training program (case study)

TOP



MY CLIMBERS

## Hangboard Training Program Results – José Antonio

[READ MORE »](#)

TRAINING

## 9 Powerful Reasons to Warm-Up for Rock Climbers (Review)

[READ MORE »](#)

TOP



Search...



**Subscribe**

[About](#) [Home](#) [Tools](#) [Training](#) [Blog](#) [Contact](#) [Privacy policy](#) [Terms of use](#)

**Get Strong - Send Quick**

**Effective training for climbing**

© Copyright 2021 StrengthClimbing All rights reserved

[contact@strengthclimbing.com](mailto:contact@strengthclimbing.com)

**TOP**