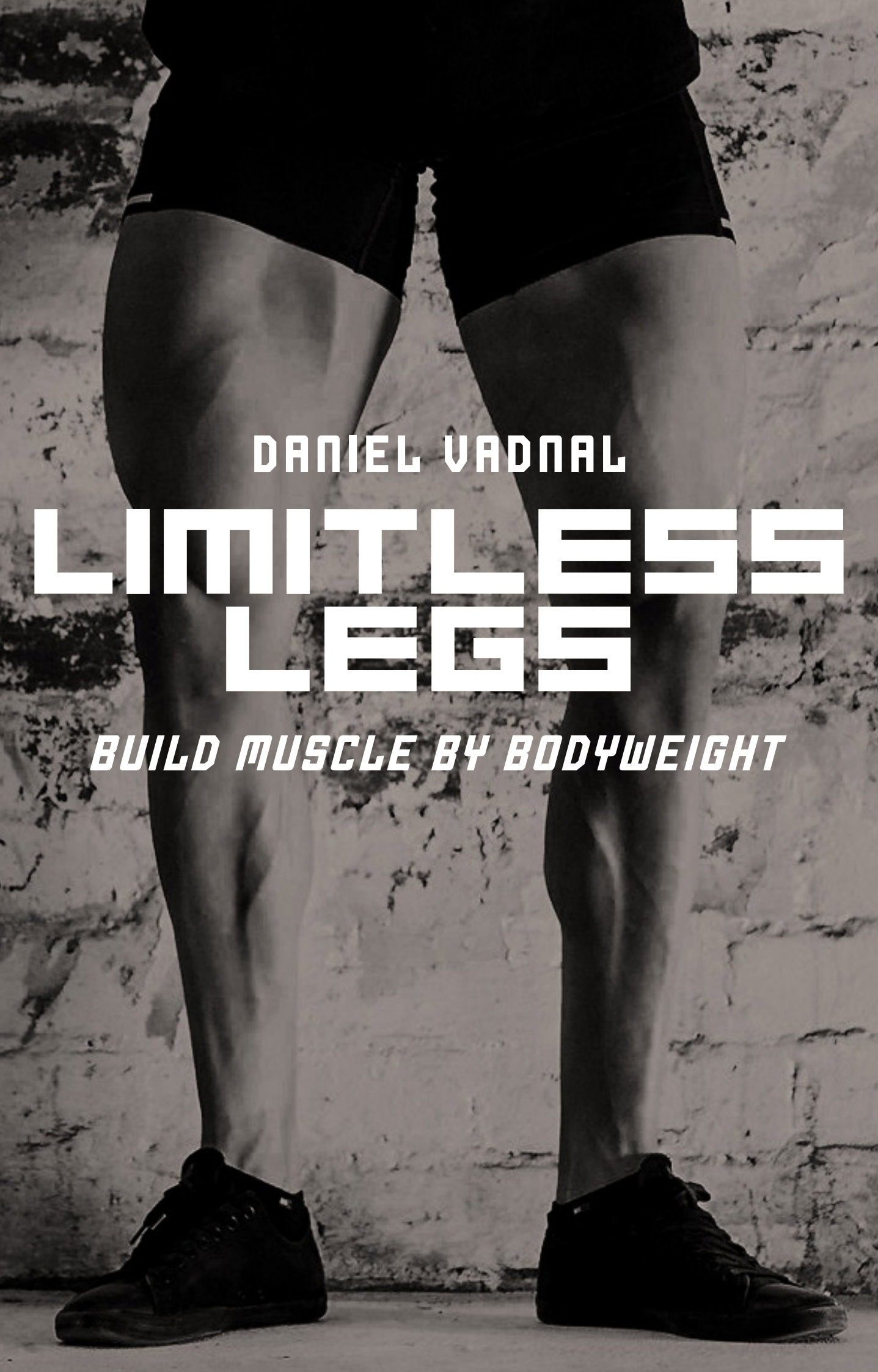

DANIEL VADNAL

LIMITLESS LEGS

BUILD MUSCLE BY BODYWEIGHT

Disclaimer

The information provided in Limitless Legs (LL) is presented with good intentions, but no warranty is given, nor results guaranteed. We have no control over physical conditions surrounding the application of information with LL and the author disclaims any liability for untoward results including any injuries or damages arising out from a person's attempt to rely upon any information contained herein. The exercises and training program are for information purposes and may be too strenuous or even dangerous for some people. Use this information at your own risk. When purchasing LL, the purchaser understands the risks associated with using this type of product and agrees not to hold its representatives responsible for injuries or damages resulting from use without proper supervision. The author is not responsible for problems related to the equipment that is used to perform the exercises described. Perform a safety check prior to each session, which includes analysing apparatuses and equipment such as resistance bands for defects. Be sure to thoroughly comprehend the instructions provided for all exercises and warm-ups. If you experience acute or chronic pain, consult a licensed health practitioner prior to initial or continued application of LL.

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Introduction

I would like to begin this book with the story of how this training system came to life. Towards the end of 2016 my training had been going steady. From a strength perspective, I was making progress towards achieving five reps on the 90 degree pushup. On maximal testing earlier in the month, four reps was the most I was capable of on the floor in one set. Five reps was my long term goal, and I was on the verge of reaching it.

My major focus from a flexibility perspective was to also improve my overhead mobility, and I had been making steady improvements in this area. I had started to experiment with more advanced bodyweight leg exercises, which would serve as accessories to my weekly barbell squat training. But for several months I had been aware of an annoying ache in my left shoulder, which had been developing when I performed pressing movements. My left shoulder was showing signs of asymmetry and instability when compared with the other side. I ignored the symptoms and continued my pursuit of constant progression. An underlying flaw I have when overseeing my own training is a lack of capacity to scale back frequency and intensity when needed. Finally, I was forced to commence a much-needed deload week. But, due to accumulated fatigue and my innate reluctance to scale back on

aggravating aspects of my training, unfortunately a more serious injury was the consequence.

Halfway into my deload week, one evening I was performing loaded overhead shoulder stretching. Towards the end of my first set I felt a sharp pain deep in my shoulder and extending to the upper arm. I performed a thorough examination on my left shoulder and concluded a grade 2 subscapularis tear. Being a physiotherapist, and having an understanding of the scope of the injury, I was shattered. I knew it was going to take several months of rehabilitation to commence even basic bodyweight exercises for the upper body.

My upper body injury was a heavy burden, emotionally and psychologically. It is a huge passion of mine to continually advance in upper body skills, flexibility and muscular development. When a major part of your being is stripped away, it is a tough hurdle to overcome. I'm sure you can empathise with the feeling. Being able to perform advanced movements to a high level whilst educating the public is the philosophy that underpins FitnessFAQs. I had to see the situation as an opportunity for growth, otherwise the circumstances would have been overwhelming. So I swallowed my pride and shifted my attention to lower body goals.

Due to the nature of my injury, when racking an empty barbell on my shoulders caused excruciating pain even weighted lower body training had to be eliminated. I needed a complete shift in mindset in order to recuperate. As I mentioned earlier, I had been achieving great results in terms of strength and muscular development by implementing bodyweight leg exercises as an adjunct to my lower body weight-training. So I needed to devise an effective routine in an attempt to preserve the strength and muscle developed after several years of resistance training.

I had convinced myself weights were a necessary tool for leg training due to the need for load in creating enough intensity. I toyed with the concept of exclusively using machines such as leg press, hack squat and various isolation machines to maintain my progress. Although this option is viable and I don't think negatively of those who follow this approach, it would not have provided the satisfaction that my normal training provides. Understandably, a slight drop in weighted squat strength would be inevitable due to being unable to specifically work the movement pattern. I considered implementing a bodyweight-only leg routine, based on existing research that indicated low load and high rep training was an effective option for hypertrophy.

I won't lie to you all – I was afraid that following a pure

bodyweight resistance leg workout would not be enough. I was under the belief my legs would shrink as time went by. This thinking instinctively came about after close to a decade of training a certain way, and changing a mindset or habit is never easy. I decided to commit my energy towards constructing a complete series of the most optimal exercises and training structure for developing muscular legs using strictly one's body weight. I followed a three-day split using level three on the LL training structure.

For 12 weeks I consistently applied progressive overload whenever humanly possible. Most exercises required only my bodyweight and the remaining exercises were easily loaded with a resistance band. It was refreshing to train at home without needing to use weights or go to the gym. I never missed a workout and poured my heart and soul into every session. To my surprise, the bodyweight-only experiment produced results that exceeded my expectations. The size of my legs increased and they became more vascular and striated. My left side became considerably more stable, after I began working on unilateral movements which addressed underlying weaknesses from years of bilateral-focused lower body exercises. When returning to barbell squats after rehabilitating my shoulder, within a few weeks I was back to squatting my previous numbers with the barbell. The

results were so good that I will continue to add exercises from LL that address my weaknesses into my regular lower body training.

Seeing the results obtained from 12 weeks of targeted, intelligent training was incredibly uplifting. I knew this style of training had to be refined for different strength levels and shared with the world. After eight months of work dedicated to formulating the training routines, exercises, film and photography, eBook and website design, LL was complete.

Warm-up

The warm-up series for LL is a non-negotiable requirement prior to training. As the exercises in the training program require high levels of mobility in the hips, knees and ankles it's essential to have enough range of motion before starting the routine. The warm-up will also prime the nervous system, preparing the body for the application of progressive overload. Spend more time on areas of individual limitation. If ankle stiffness is a limiting factor for the squatting exercises, be mindful in the quality and quantity of mobilisation performed. This doesn't mean one should just "go through the motions" on other aspects of the warm-up, since every exercise in the sequence plays an important role.

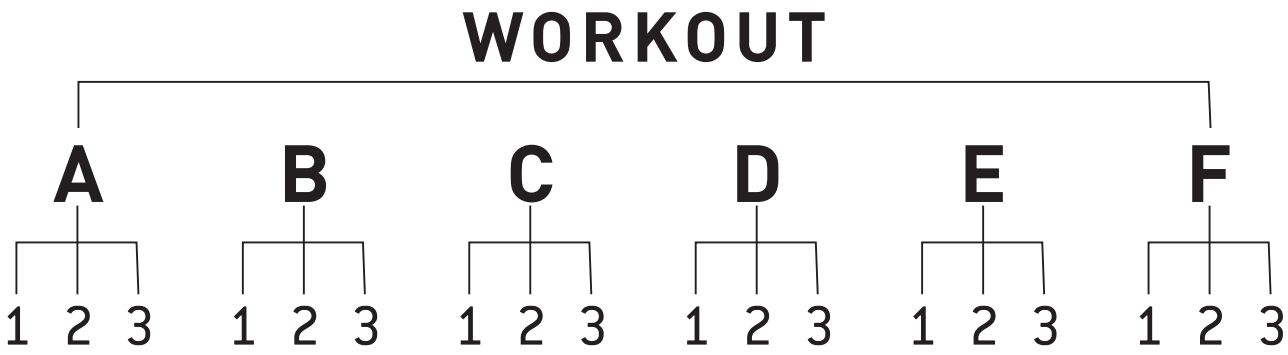
Equipment

LL is designed to be followed without needing ANY equipment. By being resourceful with the surrounding environment, everything required will be accessible. The following equipment will provide an enhanced experience. I highly recommend buying a light to heavy resistance band set. This is the cheapest and most versatile method for loading bodyweight exercises. Resistance bands allow limitless progress for all levels of strength. If you would like to buy any of the recommended items, click the titles as they are linked to products which are of high quality and affordable.

Resistance bands Yoga mat Knee pad Foam roller

Lacrosse Ball Workout timer Step up box

HOW TO FOLLOW THE LL PROGRAM



LEVEL 1 → Beginner
LEVEL 2 → Intermediate
LEVEL 3 → Advanced

Each level = 4 weeks + 1 week deload (optional)
1 cycle = 4 - 5 weeks

How many LL workouts per week to do?

To answer this question, the user needs to ask themselves what their major goals and circumstances are. Determine which of the following are most relevant to your personal circumstances, as this will decide the frequency of training sessions.

A) I want to build leg muscle at the fastest rate
B) I want to make gradual progress with leg development
C) Leg training is the main focus of my training week
D) Leg training is secondary to my upper body goals
E) My training time is limited per week
F) My training time is abundant

If you are looking to prioritise leg development, an increased amount of work should be dedicated to achieving this objective. This is reflected by a higher training frequency per week, meaning more lower body workouts per week. Two to three lower body sessions per week is the optimal amount for hypertrophy, as it allows each session to be intense with enough rest between sessions to facilitate growth and recovery. With three leg workouts per week a trainee is able to accumulate 156 workouts per year. This number is substantial and produces many episodes of elevated protein synthesis to build muscle.

For those looking to make gradual progress in leg size, the training frequency expectations are different. With one leg workout per week a trainee is able

to accumulate 52 workouts per year. This is still a decent number of total sessions and is much more than most, who frequently skip leg day. Training frequency will also be influenced by the amount of time you have available or wish to spend on lower body workouts. If lower body training is a major priority and time is abundant, the expectation should be 3 lower body sessions weekly. If time is scarce and/or lower body goals are secondary, a lower frequency of one to two lower body workouts per week is recommended

Why are there so many routines?

The reason a wide range of routines are provided is to allow exercise variety and ensure every exercise in LL can be trained. By spreading exercises over several workout routines progressive overload will be more manageable in the long term across all exercises.

There are six training phases, each with three levels. Each phase at a given level can be followed for a cycle consisting of four weeks of progressive training and an optional one-week deload. This equals 15 weeks of training per phase when working through levels one to three. The LL series is comprised of 15 weeks per phase, multiplied by 6 total phases. This means 90 total weeks of training—or two years of workouts! Consequently, when performing a higher training frequency the total number of training "weeks" will be condensed due to concurrently working through

multiple phases at once. Don't let the total number of weeks intimidate you, as training is a marathon and not a sprint; ongoing progression over many months is what produces results.

The goal with all FitnessFAQs training products is to deliver maximal value. With the LL guide you will be empowered with the knowledge to adapt basic training principles. This will allow the user to construct their own bodyweight leg workouts for muscle building indefinitely.

"Give a man a fish
you feed him for a day;
teach a man to fish
and you feed him for a lifetime."

Which workout to follow, as there are six phases (A, B, C, D, E, F) with three difficulty levels?

The workout difficulty is similar for A through to F when matched for difficulty level. For simplicity please work chronologically through the letter system by starting at A and finishing at F.

Difficulty is similar for the following

Workout A level 2
Workout D level 2

Difficulty will be easier for B compared to C

Workout B Level 1
Workout C Level 2

Difficulty will be harder for A compared to E

Workout A Level 2
Workout E Level 1

Next, are you going to train the lower body once, twice or three times per week?

How many times per week do you want to work out the lower body?

1 session per week – Workout A
2 sessions per week – Workout A & Workout B
3 sessions per week – Workout A & Workout B & Workout C

Now we have taken care of the phase(s) that will be undertaken, it's time to select the difficulty level.

Are you beginner, intermediate or advanced for bodyweight leg training?

Beginner – choose Level 1
Intermediate – choose Level 2
Advanced – choose Level 2-3

We advise to start from either level 1 or level 2 to allow each exercise to be performed correctly in addition to successfully reaching the volume outlined in the session, regardless of perceived ability level. Only choose Level 3 if you are advanced.

Weekly training structure for LL

This will be determined by how many lower body training sessions per week are chosen. Non-training related commitments such as work, school or family obligations will affect the outline of a weekly schedule. The following section will provide guidance on the recommended structure. If personal circumstances impose multiple days of consecutive workouts, this will be a necessary compromise.

To allow adequate recovery, have anywhere from 24–48 hours between LL workouts. On the days between lower body workouts, use this as an opportunity to train the upper body or work on mobility. As the LL series is specifically for the lower body, structuring the remainder of the week will be left to the user. If your major upper body goal is building muscle and mastering the basics, look into the Body By Rings (BBR) workout program, also created by Daniel Vadnal.

3 Day LL Split Sample:

Monday	LL (A)
Tuesday	Upper body or Mobility
Wednesday	Rest
Thursday	LL (B)
Friday	Upper body or Mobility
Saturday	LL (C)
Sunday	Rest

Monday	Upper body or Mobility
Tuesday	LL (A)
Wednesday	Rest
Thursday	Upper body or Mobility
Friday	LL (B)
Saturday	Rest
Sunday	LL (C)

Monday	LL (A)
Tuesday	Upper body or Mobility
Wednesday	LL (B)
Thursday	Upper body or Mobility
Friday	LL (C)
Saturday	Rest
Sunday	Rest

2 Day LL Split Sample:

Monday	LL (A)
Tuesday	Upper body or Mobility
Wednesday	Rest
Thursday	LL (B)
Friday	Upper body or Mobility
Saturday	Upper body or Mobility
Sunday	Rest

Monday	Upper body or Mobility
Tuesday	LL (A)
Wednesday	Rest
Thursday	Upper body or Mobility
Friday	LL (B)
Saturday	Upper body or Mobility
Sunday	Rest

Monday	LL (A)
Tuesday	Upper body or Mobility
Wednesday	LL (B)
Thursday	Upper body or Mobility
Friday	Upper body or Mobility
Saturday	Rest
Sunday	Rest

1 Day LL Split Sample:

The training split when completing one LL workout per week is the most simple. We recommend placing the LL workout between upper body workouts.

Monday	Upper body or Mobility
Tuesday	LL (A)
Wednesday	Rest
Thursday	Upper body or Mobility
Friday	Rest
Saturday	Upper body or Mobility
Sunday	Rest

Deloading

A deload period is one week in which training load is temporarily reduced for recovery to take place. Deloading is an absolute must to ensure continual progressive overload can consistently occur. If following the LL system with genuine passion, the sessions should be physically challenging and will lead to the accumulation of fatigue over time. If fatigue is not mitigated through rest, training progress session to session will be impossible when working at one's limits. Simply sleeping and eating more to com-

pensate for increased training load is inadequate. The central nervous system requires a reduction in stimulation through deloading to properly regenerate, to allow progress in the upcoming training cycle. Performing a deload is superior to complete rest as strength is maintained, the skill of the exercise technique is practiced and mobility is reinforced.

A complete week off training generally results in a decrease in performance due to the complete removal of training stimulus. Deloading becomes more crucial as one progresses and becomes more advanced due to the increased intensity and workload. Don't make the mistake of training for several months without a planned recovery period as progress will stall. Be intelligent and focus on long term improvements at the expense of immediate gratification. The resulting physique will be representative of one's commitment.

The following section will discuss how to deload the LL workouts. A training cycle in LL is made up of four weeks of training followed by a one-week deload.

We recommend the following deloading approach:

Decrease the amount of sets by 1–2

Keep the reps on working sets the same as the previous session

Do not reach muscular failure on any exercise

Below is an example session of Workout D - Level 2 on the final week of a cycle.

Letter	Exercise	Sets	Reps	Tempo	Rest
A1	Step up	4	14 L/R	4020	2:00
B1	Single Leg Deadlift (Band)	4	1 L/R	45s @ B	1:00-1:30
C1	Reverse Hyperex-tension - Tuck - Legs Together	3	15	1Br @ T	1:00-1:30
C2	Kneeling Quad Ex-tension	3	18	1Br @ B	
D1	Calf Raise - Single Leg	4	20 L/R	2121	1:00-1:30
E1	Calf Raise - Double Leg	3	18	2121	1:00-1:30

This is how to apply a deload with the above guidelines:

Letter	Exercise	Sets	Reps	Tempo	Rest
A1	Step up	3	14 L/R	4020	2:00
B1	Single Leg Deadlift (Band)	2	1 L/R	45s @ B	1:00-1:30
C1	Reverse Hyperex-tension - Tuck - Legs Together	2	15	1Br @ T	1:00-1:30
C2	Kneeling Quad Ex-tension	2	18	1Br @ B	
D1	Calf Raise - Single Leg	3	20 L/R	2121	1:00-1:30
E1	Calf Raise - Double Leg	2	18	2121	1:00-1:30

The objective after completing a training cycle on a workout phase is to fall within the middle to upper set and rep range for every exercise. If an exercise asks for 3–5 sets of 8–15 reps and 4 sets of 10–12 reps is reached,

the minimum requirement has been met and you can progress the next level or commence a new phase.

If the required volume is too challenging and you are only able to complete 3 sets of 6 reps for the above example, spend an additional few weeks on the current level and workout phase before moving onward.

Everyone progresses at a different rate and has their own individual strengths and weaknesses. Don't feel rushed into moving onto the next level or workout phase after a training cycle (four weeks + one week deload) if not meeting the volume recommendations.

The above section suggests the recommended frequency for deloading. If you're feeling fresh, continue progressing session to session and perform a deload workout as needed. Auto-regulation of training when appropriate will be superior to deloading too often.

I get bored easily; can the workouts be constantly changed?

Yes. If you prefer constant variety in a training program, do not follow the rigid template provided above. Instead, choose a different routine (A-F) every leg session. By finding what works best for you, the process will be more enjoyable, you will be more likely to comply with the structure, and get better in each consecutive workout. Regardless of how you follow

LL give your best effort every session. Please remember to deload when needed.

How to work through the entire LL workout plan

If training once per week:

1. Start with Workout A
2. Select either Level 1 or Level 2
3. Complete Workout A once per week for 4 weeks
4. Deload Workout A session for 1 week
5. Move onto the next Level in the workout phase
6. Repeat steps 3 to 5
7. Complete a cycle of Level 3 in the workout phase
8. Commence Workout B
9. Select either Level 1 or Level 2
10. Repeat above process for new workout phase

Although the above section shows progression from Workout A to Workout B, the exact same concept can be applied to Workouts C through F when the time comes.

If training twice per week,

follow the same progression scheme:

1. Start with Workout A and Workout B
2. Select either Level 1 or Level 2 for each
3. Complete Workout A and Workout B once per week for 4 weeks
4. Deload Workout A and Workout B for 1 week
5. Move onto the next Level for Workout A and Workout B
6. Repeat steps 3 to 5
7. Complete a cycle of Level 3 in the workout phases
8. Commence Workout C and Workout D
9. Select either Level 1 or Level 2
10. Repeat above process for new workout phases

If training three times per week,
apply the above process and adjust accordingly with three concurrent workout phases.

Here's a progression snapshot with a once per week training schedule:

Workout Phase A Level 1 (1 training cycle)
Workout Phase A Level 2 (1 training cycle)
Workout Phase A Level 3 (1 training cycle)
Workout Phase B Level 1 (1 training cycle)
Workout Phase B Level 2 (1 training cycle)
Workout Phase B Level 3 (1 training cycle)

Repeat process for remainder of training phases (C–F)

When starting a new workout phase, choose the level

which you feel most appropriate based on your experience and level of strength. The standard recommendation is either Level 1 or Level 2 to get accustomed to the new exercises in the phase. With this said, don't feel it's necessary to start at Level 1 on a new workout phase if the set and rep range in addition to exercise intensity appears too easy.

Some users will find that after completing Level 3 on a workout phase they will be able to immediately begin a training cycle on Level 2 or even Level 3 of the following workout phase. Due to the large variety of ability levels among those using LL, three workout levels are given to every phase to suit everyone's needs.

For simplicity, the following examples are applied to a 1x per week training frequency:

Example 1:

Workout B Level 3 (1 cycle)
Workout C Level 2 (1 cycle)
Workout C Level 3 (1 cycle)
Workout D Level 2 (1 cycle)
Workout D Level 3 (1 cycle)

Repeat process for remainder of training phases (E–F)

Example 2:

Workout D Level 3 (1 cycle)
Workout E Level 3 (1 cycle)
Workout F Level 3 (1 cycle)

Apply progressive overload
at one's discretion to Workouts A–F

The final option would be to complete each workout phase one level at a time and begin the next level for a workout phase when ready.

Example 1:

Workout A Level 1 (1 cycle)
Workout B Level 1 (1 cycle)
Workout C Level 1 (1 cycle)
Workout D Level 1 (1 cycle)
Workout E Level 1 (1 cycle)
Workout F Level 1 (1 cycle)

Example 2:

Workout A Level 1 (1 cycle)
Workout B Level 1 (1 cycle)
Workout C Level 1 (1 cycle)
Workout A Level 2 (1 cycle)
Workout B Level 2 (1 cycle)
Workout C Level 2 (1 cycle)

Can LL be combined with weight training for the lower body?

We recommend following the exercise routine(s) as programmed without adding other exercises. There will be ample room for increasing difficulty by ap-

plying overload principles or increasing training frequency first.

After a few training cycles of LL you will understand the impact bodyweight leg training has on recovery. Experiment with conventional weight training exercises only if desired. These include movements such as the barbell back squat and deadlift. Do not feel like adding weighted movements is a requirement, as amazing results can be obtained with pure bodyweight leg training, weighted leg training or a hybrid approach involving the two.

The structure of a routine consisting of calisthenics exercises in conjunction with weight training can be designed in two main ways. Either add one to two major barbell compound movements before the LL session or undertake a specific session dedicated entirely to weighted legs training. Keep in mind that FitnessFAQs will be unable to provide ongoing guidance once external adaptations to the training plan are integrated, as it's beyond the scope of this series.

As we discussed earlier, training and physique changes are a long term process. When considering combining lower body weight training with LL, always start with a manageable amount of work and build from there. If undergoing two LL workouts per week an intelligent approach would be adding one compound weighted leg exercise to each LL workout. This way a

realistic amount of work has been added, which will allow an opportunity to assess how the body responds.

After including weighted compounds, are you constantly feeling fatigued with symptoms of lethargy or a general disinterest in training? If yes, the extra workload may be too much applied acutely. Temporarily scale back and find a structure which yields slow and steady progress. On the other hand, are you making consistent progress week to week? The added workload is perfect as improvements are happening and recovery appears to be enough. Keep progressing with the current plan.

Expectations for higher vs lower frequency training

If a user is training legs once per week, the body is able to withstand a large amount of volume at a high intensity. Upon completing the session, you're expected to feel exhausted! The stimulated muscles and central nervous system will feel challenged. These are the type of sessions where maximum effort is given, truly pushing the boundaries of what the body is capable of on the day. You should be working on the verge of your repetition maximum for each exercise. With a frequency of once per week maxing out each set, the final session or two prior to a deload is a potent growth building technique. Training at a high

intensity is justified due to six days of recuperation where the lower body is not being stressed until the following session.

When it comes to higher frequency training, a different approach must be taken. You can not expect to train a region of the body three times per week with a true maximum intensity style, as it's not sustainable for long term progress. The bigger picture of weekly and monthly progress should be the focus. This becomes more critical when training the lower body more than once per week. Each session the focus is incremental progress, in the form of a 5–10% increase in training volume compared to the previous workout. Practically speaking, this equates to a few extra reps per set on each of the given exercises or an additional set. Although this may not seem like much, long term gradual improvements in total reps is one of the most significant training factors to be mindful of when using bodyweight as resistance. When training frequency is increased, work a few reps short of repetition maximum for each exercise.

Keep in mind that results will be proportional to the effort put forward. Following a higher frequency program with an increased workload accumulated over a weekly period will result in more rapid muscular development. Consistently completing two or three LL workouts per week will be superior to one.

As discussed before, follow a training structure which matches your individual objectives. Don't follow a three-day split if your goal is to gradually increase muscular size. Conversely, if the main objective is to maximally develop the legs, don't train them once per week and wonder why improvements are not happening at the rate desired. Match your goals with the appropriate training structure and put in the consistency needed.

Increased training frequency by doing the same workout multiple times per week?

Just say someone wants to train twice per week, and is wondering if they can follow Workout A twice instead of Workout A once and Workout B the other day. When following the LL system this is not advisable for two reasons. Firstly, when performing the exact same workout twice per week it won't be as fun due to monotony. Let's be real, who wants to perform 10 identical workouts in one training cycle. Secondly, it will be more difficult to apply progressive overload to the same phase twice weekly compared to separate workouts. Ongoing progress is more realistic with two different routines in a training week. The workouts themselves will be more enjoyable due to the novelty of variety. When enjoyment meets consistent improvements, tangible progress will result. If you

are looking to do more than one lower body workout per week, complete two different workout phases instead of one repeated twice.

What to do after completing Level 3 on all phases

The training program can theoretically be followed indefinitely after this point. Continue to apply progressive overload by performing more overall volume. The simplest way is to remain in the 3–5 set range as outlined in Level 3. From here, increase the challenge by doing more reps per set. Don't hesitate to do a high amount of reps with a challenging tempo and a full range of motion. Reps in a high amount (30… 40… 50+) can be very effective due to the large time under tension, which is useful for hypertrophy purposes. Exceeding the standard 8–12 reps is a must when looking to continue making progress without adding a significant amount of resistance. Once an exercise becomes too easy even in a higher rep range, intensify by using a heavier resistance band or increasing the weight.

HOW TO CHANGE THE DIFFICULTY OF LL

Making exercises harder – principles for applying progressive overload

Progressive overload is when the stress applied to the body is gradually increased over time. Without progressive overload you will not get stronger or build muscle. This concept holds true regardless of which form of resistance training you use. From over a decade of experience and observing the actions of others, we have observed that the majority of people do the same exercises at the same intensity, for similar sets and reps indefinitely. These people are habitually remaining in their comfort zone and their physiques do not change.

On the other hand, it's common to see people constantly switching up their exercises and training program in an attempt to "shock the body". Although calculated variety has it's place and is incorporated into LL, constantly changing the training program will not lead to growth. The fact that the exercises or workout program is being varied does not mean progressive overload is necessarily happening. Constant variety is another way of fooling the mind, but in reality substitution is happening at the expense of measurable progression.

The human body responds to an increased stimulus beyond the previous application. The best way to guarantee this is happening is progressive overload. To the majority of people reading the above section, it will sound blatantly obvious. It's information we all understand—but can you honestly say each and every session your main intention is a desire to progress? Don't mistake simple for ineffective. Being patient and consistent on a given training structure is difficult. Following a plan and aiming for progression in some capacity over the long term is the vital component underlying any successful training system. Keep this thought at the forefront of your mind and results will be optimised.

The following section will outline how to apply progressive overload to LL:

- ***Increasing sets***
- ***Increasing reps***
- ***Increasing range of motion***
- ***Altering leverage or exercise progression***
- ***Increasing time under tension***
- ***Band resistance***
- ***External load***
- ***Decreasing rest***
- ***Remaining on tension***

Increasing sets

By increasing the amount of sets it allows a larger volume of overall work to be completed, meaning more total reps. The downside of completing only one or two sets to failure is although relative intensity will be high, the total amount of work completed will be less. This is the reason it is advantageous to spread the workload over multiple sets, training near but not to failure.

Two failure sets:

Set 1: 21 reps
Set 2: 18 reps
= 39 reps

Three near failure sets:

Set 1: 18 reps
Set 2: 18 reps
Set 3: 18 reps
= 54 reps

After following the LL protocol for several months it will be difficult to make progress EVERY session. It's unrealistic to expect the body to constantly add volume and or intensity. To guarantee long term progress we must take a step backwards before moving forwards. The body is not a machine and requires acclimation to progressively harder training.

Take an exercise where 3 sets of 15 reps is a maxi-

mal amount of work and progression by adding a rep to each set is impossible. Add an additional set and reduce the reps temporarily. From here reps can be gradually increased with the increased amount of sets. The following example is a realistic way of progression over time.

Example

Week 1: 3 sets 12 reps
Week 2: 3 sets 14 reps
Week 3: 3 sets 15 reps (plateau)
Week 4: 4 sets 11 reps

Increase reps

The most basic method for applying progressive overload to bodyweight exercises while keeping exercise intensity and variation the same is increasing reps. This is a great approach to employ for as long as possible. Each session, aim to increase the number of reps performed on each set until you are unable to.

Week 1: 3 sets 10 reps
Week 2: 3 sets 11 reps
Week 3: 3 sets 13 reps
Week 4: 3 sets 14 reps

Linear progression is black and white. Were you able to perform more overall reps each set on a given exercise for the day? Yes.

An increased amount of stress has been applied for the exercise. The result will be increased strength in the movement pattern and muscular growth to the targeted muscle groups.

Increasing range of motion

With any dynamic exercise it is important to use the largest range of motion safely possible. When done correctly, the targeted muscle groups will be recruited to their full potential. When range of motion is increased for bodyweight exercises, the difficulty becomes exponentially harder. This is attributed to the length-tension relationship of muscles. To understand practically what this means, every muscle has a length whereby it can produce the most amount of force and this tends to be in the mid-range of motion. When looking to make an exercise more difficult through increased range of motion, the targeted muscle groups will be placed under a greater stretch, which decreases how much force they can create. This increased challenge is represented in more advanced progressions or postures. Now it becomes clear why a short range of motion is used when people cheat to do more reps and make the exercise easier. With the other concepts of progressive overload in mind, once an exercise becomes manageable at a given range of motion, a strategy for increasing intensity is to increase the range of motion employed. Increasing range of motion as an intensification strategy is pos-

sible on some but not all exercises in LL. If you are unable to increase the range of motion further, choose another method such as increasing reps, decreasing rest, slower tempo etc.

Altering leverage or exercise progression

The concept of decreasing leverage places the body in a mechanically disadvantaged position, as discussed in the previous section. This is one of the fundamental principles behind increasing bodyweight exercise difficulty. Due to the nature of certain leg exercises in the program, posture can't be further altered to increase the difficulty of the exercise. Take, for example, the glute bridge on a single leg. No adaptations to joint angles in the ankle, knee, hip or spinal position will increase the difficulty. As a result, increasing intensity is best achieved through resistance band loading. Anchor a heavy resistance band around the knee for a fast method of adding resistance to the single leg glute bridge. If training in a gym, anchor the resistance band on the squat rack, placing the band over the hips. This is the main drawback for several leg exercises using purely bodyweight. Therefore, ingenuity and resourcefulness must be used for progressive overload.

Conversely, when looking at the glute ham raise hybrid, a larger potential for postural modification exists. When the body is hinged at 90 degrees the

movement will be manageable for most. As the trunk is aligned closer towards upright the exercise becomes significantly more difficult due to decreasing leverage. Fortunately, there are a handful of exercises in LL that have been included with a high strength ceiling. This means exercises such as the glute ham raise, sissy squat and step ups can be progressed to a significant extent, keeping one challenged for a long period of time. The beautiful part is extra load does not need to be added for a while. This is thanks to modifying posture, range of motion and employing a strict tempo, amongst other methods. These major compound exercises just mentioned form the primary muscle builders, with subsequent exercises being more supplementary in nature.

Increasing time under tension

The term increasing time under tension (TUT) is a fancy way of stating the targeted muscles are contracting for a longer time during the set. When looking to increase TUT, two strategies can be employed: increasing the duration of the eccentric or adding in isometric holds. The following methods are useful when additional reps to increase time under tension become inefficient. Incorporating extended eccentrics or isometric holds can produce a similar effect as a high rep set.

Longer duration eccentrics are the preferred time under tension tool, as the muscle is being worked

throughout an entire range of motion. The kneeling quad extension will be used to clarify the concept of prolonged eccentrics.

A) *10 reps with a 2 second eccentric*
B) *10 reps with a 3 second eccentric*

*When looking purely at the lowering portion of the exercise, situation **A** amounts to 20 seconds compared to situation **B** with 30 seconds.*

Here is an example where using longer eccentrics equals a greater time under tension, even when reps are lower:

A) *12 reps with 2 second eccentric*
B) *8 reps with 4 second eccentric*

*Example **A** is 24 seconds whereas example **B** totals 32 seconds.*

When commencing a training program, a faster tempo will be needed during the exercise to reach the given set and rep range. However, once a faster and ultimately "easier" tempo becomes tolerable, employing longer duration eccentrics are a great method of intensification.

Another option for intensification is using isometric holds. An isometric hold is when a joint angle is maintained without any movement as the muscles

are contracting but the body remains motionless. If an exercise is too easy for the sets and reps outlined, adding isometric pauses each rep increase the challenge. There is no absolute rule for which position to include an isometric during an exercise. Hold the portion of the exercise that is most challenging, which will be at the end range of motion for most exercises. Here are some examples using exercises in LL.

Pistol squat:

When the hips are flexed to 90 degrees and the hip crease is level with the knee.

Kneeling quad extension:

When leaning back as far as possible, at the end range of motion that can be held.

Sissy squat:

At the point closest to the floor.

Bodyweight back extensions:

At maximal extension.

Step ups:

Hovering at the transition point when t he rear leg has just left the ground.

When incorporated into a set, isometrics can be used for short or long duration holds. With shorter duration

isometrics more reps will be possible in the set. With longer duration isometrics less reps will be possible in the set. When deciding to incorporate isometric holds for exercises moving through a full range of motion, a 1–3 second hold per rep in the most demanding position will work best. Shorter duration isometrics are recommended for LL as the amount of reps per set tends to be on the higher end of the spectrum.

When you try them, it will become clear why prolonged eccentrics and isometrics are valuable progression tools. The human body is always looking for the path of least resistance during exercise and this becomes obvious towards the end of a hard set. Slowing down with purposeful eccentrics force the muscles to work throughout, and isometric holds reinforce peak tension when it matters most. This means even seemingly easy bodyweight leg exercises can be humbling with tempo modification

Example: Single Leg Glute Bridge Exercise

We will pretend the trainee is able to execute a set of 15 reps with a 1 second isometric at the top of each rep. Increasing sets and reps should be the preferred progressive overload method to begin with. Another option would be increasing difficulty with isometric holds. The following is how to purely increase time under tension using isometrics for the single leg glute bridge. The isometric hold for this example refers to a pause when the

hip is fully extended, or in the top position when the glutes and hamstrings are working their hardest.

Duration of isometric is specified in number of breaths (Br)

Week 1: 3 x 15 reps (1Br @T)
Week 2: 4 x 15 reps (1Br @T)
Week 3: 3 x 15 reps (2Br @T)
Week 4: 4 x 12 reps (2Br @T)

A seemingly easy exercise can be altered to the point where it will become very difficult in the higher rep range. Because the "intensity" of the majority of bodyweight leg exercises is quite low, it's essential to increase the time in which the muscles are working to offset the lack of difficulty. By week 4, using the above example the glutes and hamstrings will be under an increased TUT at 2Br compared to 1Br.

Band resistance

When looking to increase the intensity of a leg bodyweight exercise, a resistance band is an ideal option. Resistance bands of varying strengths are a highly versatile piece of training equipment that can be taken anywhere and are inexpensive. A high degree of flexibility exists with resistance band training due to band intensity ranging from light to heavy. This allows an ongoing challenge for all ability levels. Certain exercises in the program work well with resistance bands and others do not. Inappropriate band

use is when the setup is cumbersome for the exercise or the environment is not accommodating.

External load

LL is designed as a training program to build lower body mass using only your body weight. You can progress on the program for many months on most exercises without needing to add weight or even resistance bands. As LL is a comprehensive guide geared towards long term progression, it would be incomplete not to mention adding load.

If circumstances allow and you have become proficient in the given exercise over time, adding weight is another way of progressively overloading. Don't be dogmatic when it comes to resistance training as it can limit your potential. Using weights definitely has a time and place, especially for those more advanced. On some exercises a decent amount of weight can be used, such as the pistol squat. This may require access to a heavy dumbbell. When circumstances permit, use gym facilities at your disposal to obtain the greatest effect.

When travelling or equipment is limited use other overloading tools as described earlier such as resistance bands instead. Don't make the mistake of loading up a single leg exercise with excessive weight at the expense of proper form. The objective should be

to use the minimal amount of weight to get the job done. Think of added weight as a tool for challenging the set and rep range desired.

LL incorporates a handful of the most difficult bodyweight lower body exercises, therefore minimal external weight will be required to increase difficulty. When doing pistol squats, with an added 10–15kgs the difficulty will be comparable to a barbell back squat with a significant amount of weight. While traveling or without access to specialised equipment, being resourceful is a must. Hold a piece of furniture, add books or items to a backpack or even hold a heavy rock if outdoors. Alternatively, stop being a cheapskate and buy resistance bands.

Decreasing rest periods

A rest period range has been provided in the LL workouts to allow adequate recovery between sets, which is essential for good performance in subsequent sets. Typically, with higher rep training a shorter rest period is recommended to maximise metabolic stress, which is one of the main environmental drivers behind building muscle. A truly challenging set of 5 reps on the pistol squat will require more time to recover from than a 20 rep kneeling quad extension set. To increase the difficulty of an exercise complete the same amount or more work in a shorter period of time.

Example: Kneeling Quad Extension

Week 1: 3 sets 15 reps 1:30 min rest
Week 2: 3 sets 15 reps 1:00 min rest
Week 3: 3 sets 20 reps 1:30 min rest
Week 4: 3 sets 20 reps 1:00 min rest

Remaining on tension

This concept is rarely spoken about when it comes to resistance training. Remaining on tension is an intra-exercise training principle where the working muscle groups are constantly contracting. This means doing an entire set consecutively without temporarily resting between reps. Do not passively rest at the top or bottom of an exercise. An example of this mistake would be doing a set of pistol squats and taking 5-10 seconds between reps as the set nears completion. Instead keep a slight bend in the joint so the working muscle groups don't get any rest. Correct application of remaining on tension is explained below.

Split Squat:

Keep a slight bend in the knee at the top of the movement. Continuously transition from one rep to the next; do not rest at the top of the movement between reps.

The subconscious way of resting intra-exercise is by catching one's breath for several seconds at lockout in the upright standing position.

Sissy Squat:

When returning to the standing position maintain a slight backwards lean and partial bend in the knees to remain on tension.

Resting intra-exercise with the sissy squat would be relaxed standing between reps with the knees extended straight and back in vertical alignment.

Pistol Squat:

Keep active muscular tension in the lower body at the bottom position, return to a partial knee bend stance at end range and immediately descend to the next rep.

Resting intra-exercise with the pistol squat appears when passively sitting in the bottom of the movement or relaxed standing with the leg straight for several seconds between reps.

Kneeling Quad Extension:

Start position should be with the torso leaning backwards and the quadriceps firing. Full range of motion whilst staying on tension involves returning to this partial backwards lean after each rep.

Resting intra-exercise with the kneeling quad extension is when the torso is in a vertical alignment with

the hips and knees stacked over each other between reps. The quadriceps are resting in this alignment, and it is a common mistake. An example when doing a 15 rep set would be performing 10 reps continuously followed by a five second rest and then finishing the last five reps. The goal is to complete the entire 15 reps continuously whilst remaining on tension to maximise results.

Be conscious of exercise execution at all times, especially on higher rep sets. The common mistake is taking a prolonged rest during the set which decreases the relative intensity. Embrace the discomfort on higher rep sets and do your best to perform the entire set continuously.

The amount of sets and reps is too easy for a specific exercise

LL is a series of workouts designed for beginners to advanced, and although extensive experimentation with exercise selection, volume, tempo and rest periods has been undertaken, certain exercises may still be too easy. If you are consistently able to exceed the maximum number of sets and reps whilst completing each exercise to the standards shown, adaptations to the program are needed. If the most difficult variation shown is still not difficult enough for the set and rep structure provided, do the following. Use the existing

workout template for the week by keeping the exercises and exercise order the same. Adapt the volume to suit your ability level by increasing the reps. If the skater squat for four sets of 12 is too easy do four sets of 15-20 reps. If this is still too easy choose a higher rep range which does challenge you. Use the workout routine as a guideline and apply the progressive overload principles in the above section to increase difficulty.

Making exercises easier – principles for regression

For those starting LL with a lower level of strength, some exercises may be too hard for the workout numbers outlined. The principles discussed for applying progressive overload can be reversed to account for a lack of strength, mobility or co-ordination. Progress will be slower if forcing high reps on an exercise with poor technique. Temporarily scaling back on one or more of the following will result in a better workout.

- ***Decrease the amount of reps per set***
- ***Decrease the number of sets***
- ***Use an easier tempo***
- ***Decrease range of motion***
- ***Allow intra-exercise rest by spending some time between reps "off tension"***
- ***Use the easiest exercise progression or body posture***

- *Use hand assist to lower intensity and reduce the balance demand*
- *Take a longer rest period between sets*

As soon as you feel capable, work on progressively overloading the areas which you previously regressed.

The importance of being present

When it comes to bodybuilding, being mindful of exercise form is a must. In order to do this, be present in the moment and concentrate on the muscle groups being worked. The person concentrating on intentionally squeezing the muscles involved during a movement will achieve greater results than someone going through the motions, period. For those having difficulty with making this connection try focusing on the tempo of the exercise. The concept of a mind–muscle connection is relevant to building muscle using higher rep sets. Train your mind to stay focused during an entire workout and pre-conceived limitations will be overcome.

My mobility doesn't allow me to do an exercise

Some will find exercises such as the single leg deadlift or pistol squat difficult due to the mobility requirements. A full range of motion is needed at the ankle,

knee, hip and spine in addition to co-ordination and balance. Within daily life or in previous training, it's unlikely you have needed to move in and out of such an extreme range of motion. Be diligent with performing the warm up sequence and your body will become more pliable and receptive to developing specific mobility. As this program is designed to be used by everyone, it's impossible to construct a mobility protocol optimal for each person's limitations. This is because each person will have different causes limiting their mobility. Have confidence in the warm up and strengthening exercises as they will improve the specific mobility needed for LL. Mobility improvements do not happen overnight and repeated exposure is a must. Do not worry if your mobility is limited, as the following adjustments can be made to technique:

- ***Heel elevation to increase ankle mobility***
- ***Hand assist to offset mobility and coordination requirements***

UNDERSTANDING THE TEMPLATE FOR EACH WORKOUT

Letter

The first column for each workout is called letter and shows the exercise order indicated alphabetically.

Example one:

This means perform all sets for the step up exercise A1 with the noted rest time before starting the hamstring curl B1.

Letter	Exercise	Sets	Reps	Tempo	Rest
A1	Step up	2 - 4	8 - 15 L/R	3020	2:00
B1	Hamstring Curl	2 - 3	5 - 12	20X0	1:00 - 1:30

Example two:

Letter	Exercise	Sets	Reps	Tempo	Rest
A1	Back Ex-tension	3 – 4	8 – 25	2020	1:30
A2	Split Squat - Posterior Chain	3 – 5	15 – 20	3020	

When the same letter is used on two different exercises this means a superset is needed, with one exercise immediately followed by the other. Perform one set of the back extension A1 then immediately perform the split squat A2. Once one set is finished for A1 and A2 rest for 1:30 and repeat.

Exercise

The exercise column states the exercise and variation. Each workout phase and workout level will use a variation which corresponds with the strength needed. Workout A Level 1 through to Level 3 employs this approach with the pistol squat. Level 1 is pistol squat to box, Level 2 is pistol squat - hand assist and Level 3 is pistol squat freestanding. Follow the specific exercise written in the workout with the correct tempo, rest period and form. Only modify the exercise type if too easy or difficult.

Sets

A set is the amount of "rounds" to repeat the exercise. Four sets means repeat the amount of reps written four total times before moving onto the next exercise in the workout. When an exercise is needed unilaterally, meaning both left and right sides, the amount of sets should be done for both sides. Four sets L/R means four sets of the exercise on both the left and right side.

Reps

One rep involves completing the full range of motion of an exercise. One rep of a pistol squat means descending to the bottom of the pistol and returning to the standing position by completing the squat.

Seconds

For a dynamic exercise with both a concentric and eccentric phase perform as many reps as possible in the timeframe specified. For an isometric exercise hold the position specified for the duration prescribed.

Max

Execute full range of motion reps until muscular failure is reached. If a max isometric is written, contract the working muscle in the stationary position until muscular failure is reached.

Tempo

Exercise tempo specifies how fast to do the exercise. Tempo is critical for best results with building muscle when using a pure bodyweight approach. It's not practical to perform super slow eccentrics (10 second lowering) nor is it advisable to perform an exercise rapidly with minimal muscular control. The key takeaway is to use a moderate speed when doing the

eccentric on all exercises. Be critical with yourself as when an exercise gets difficult most people do the exercise faster to complete the set sooner.

For those familiar with other training programs from FitnessFAQs, you're likely getting anxious at the very thought of a tempo prescription. A balance must be kept between maintaining consistent exercise form at a given tempo whilst at the same time aiming to progressively overload. Below is an example of the tempo format and how to interpret it.

3120

The **first** number represents
the **eccentric phase** of the exercise

The **second** number represents
the **isometric pause** after the eccentric
when the muscle has been stretched

The **third** number represents
the **concentric phase**

The **fourth** number represents
the **isometric pause** after the concentric
when the muscle is shortened.

Interpreting the tempo numbers and application:

Each digit represents the number of seconds
X means as fast as possible
0 means no pause.

Examples of tempo in the program:

2121 *for Bent Leg Calf Raise:*

Lower down with control from top position in 2 seconds

Pause at the bottom for 1 second

Lift the heels off the ground maximally plantarflexing in 2 seconds

Pause at the top of the calf raise for 1 second and squeeze hard.

4020 *for Step Up:*

When standing on the top of a box lower down until the heel touches the ground in 4 seconds

Once the foot makes contact with ground immediately transition into the next rep without pausing

Rise to a standing partial knee bend position in 2 seconds

When at the top position do not rest.

A controlled eccentric with a faster concentric will be a constant throughout LL. This tempo has been selected for bodyweight leg training as it provides ample TUT without compromising total reps. As you progress through the levels, the tempo will become more demanding. Become familiar with the specific tempo for each exercise in the program; it can be

humbling to train in a strict manner if you are used to mindlessly blasting through reps. The style of tempo will be different on an exercise where an isometric pause is the main component.

Tempo style #2:

An isometric is when a portion of the exercise is held statically to increase difficulty. This will be specified in the tempo section of the training program. Some exercises will be noted with just the isometric pause component. The other aspects of exercise tempo such as speed of concentric and eccentric are not included. When the four-number tempo format is not shown, use a controlled eccentric and concentric as appropriate. The reason for the different tempo method is because the isometric is made the most important aspect. By focusing only on the isometric, it's easier to concentrate during the set. The duration and position in which to pause is easier to follow.

Duration of isometric is specified in number of breaths (Br).
Position to pause in will be noted as follows:

Top (T)
Middle (M)
Bottom (B)
End Range (E)

Example:

Exercise	Sets	Reps	Tempo
Kneeling Quad Extension - Hand Assist	3 – 4	8 - 25	1Br @ B

Lower down to the bottom position of a kneeling quad extension. From here pause by breathing in and out once. Return to the start position and repeat for reps.

To prevent mental exhaustion by counting all aspects of tempo (eg 3121) whilst counting reps, a superior method is to count breaths as a measure of time. Mentally count the rep number you are up to with the amount of breaths written in the tempo section.

Lower down, pause #1 breath -
return to start position,
lower down, pause #2 breath -
return to start position...

Simply use a controlled tempo on the way up and down when using the breath tempo scheme.

Rest

Once a set is finished, it's important to rest before starting the next set. The recommended rest duration is written in minutes on the workout program.

Accumulation

Accumulation training is an enjoyable way to progressively increase training intensity in a given time constraint. It's a great way of breaking up the monotony of training by having the ability to adjust rep and rest quantity for the session as needed. The concept is to achieve as many full range of motion reps within a given time period. It is essential to beat the total amount of reps in the previous session to continue building muscle. Pacing yourself as maxing out within the first few sets is not a smart idea. Generally stopping ~2–3 reps short of failure will allow enough energy to complete upcoming sets. Overall volume is more important than one or two high rep sets when using the accumulation method.

Use the first session of an accumulation exercise to establish a baseline. This number must be beaten in the following sessions to come.

Example: Pistol Squat accumulation 20 mins

Session 1: 40 reps
Session 2: 43 reps
Session 3: 43 reps
Session 4: 47 reps

How to approach accumulation training:

Structure your training in a way that feels best on the given day. An example is straight sets, i.e. 4 sets of 10 reps or 5 sets of 8 reps. With straight sets the same number of reps are completed each set.

Alternatively, the number of reps each set can be adjusted based on the day and your level of fatigue. For example, 3 sets of 8 reps followed by 2 sets of 6 reps and finishing with 2 sets of 2 reps in the final few minutes. The manner in which the total reps are made up can be manipulated infinitely.

Strive to improve on the total number of reps each week through autoregulation. Get creative with the manner in which this is done. The preferred method is to increase total reps first and then begin to perform more work in fewer sets as a method of intensification.

Session 1 for 40 reps: 5 sets 8 reps
Session 2 for 43 reps: 5 sets 6 reps + 3 sets 4 reps + 1 rep
Session 3 for 46 reps: 5 sets 8 reps + 1 set 6 reps
Session 4 for 46 reps: 4 sets 10 reps + 1 set 6 reps

When it comes to lower intensity movements where a high number of reps will be accumulated, always strive for higher rep sets. With a lower intensity exercise don't do low rep sets in the aim of achieving a large total. We discussed earlier the importance of having a high relative intensity and pushing our comfort zones.

Do so by working on the verge of your limits with the goal of progressing beyond the previous week.

Session 1 for 80 reps: 4 sets 12 reps + 4 sets 8 reps
Session 2 for 81 reps: 4 sets 12 reps + 3 sets 11 reps
Session 3 for 83 reps: 6 sets 12 reps + 1 set 11 reps
Session 4 for 84 reps: 7 sets 12 reps

When capable of performing more than 12-15 reps per set for 20 minutes, consider increasing difficulty by employing one of the progressive overload methods.

PRINCIPLES FOR BODYWEIGHT LEG TRAINING

The term "intensity" defined for bodyweight leg training

Before talking about bodyweight training, we must first understand intensity and how the term is defined for weightlifting. With weight training the term intensity refers to the percentage of a one repetition maximum. If someone has a one rep max on the back squat of 100kg, they can only do one rep with 100kg. In training, the intensity for squat programming using the above example is based on a one repetition maximum of 100 kg.

Building primarily strength or primarily muscular development will dictate the basic set and rep structure – an example being 4 sets of 5 reps at 75% of one rep max for strength or 3 sets of 8 reps at 65% for size. For the above examples, this would be 4 sets of 5 reps at 75kg or 3 sets of 8 with 65kg. When training with weights a luxury is being able to adjust difficulty by increasing or decreasing weight.

With bodyweight training intensity is determined by the exercise variation being used. Keeping with the example of the pistol squat, if an individual is able to perform only one pistol squat in an all-out effort, this is their one repetition maximum. As a result an easier progression would be needed to generate enough volume for growth. However, when following LL at the appropriate level, at least several repetitions will be possible. This trend will be consistent across all exercises when using exercise modification to suit one's ability level. Therefore a 1RM isn't realistic to use as a training guide when referring to intensity for bodyweight leg training.

Instead, refer to intensity as a percentage of the repetition maximum.

Lets use the example of ten reps being possible on the pistol squat in an all-out effort. On the 11th rep the person can't complete a full range of motion. The person has a ten rep maximum.

Now we will take a look at two scenarios using the above example as a reference:

Person A: 3 sets of 6 reps
Person B: 2 sets of 9 reps

Person A is working at a low intensity 60% of their repetition maximum.
Person B is working at a higher intensity 90% of their repetition maximum.

With pure bodyweight leg training it is important to work at a high % relative to the repetition max to account for the lack of load. Practically speaking, this means training a few reps short of muscular failure each set.

Bodyweight vs weighted leg training

Bodyweight leg training is undervalued by the general population due to a lack of knowledge when it comes to exercise progression and program design. Suggesting that bodyweight exercise is inferior for developing muscular legs is a sign of ignorance. Bodyweight fitness eliminates barriers such as access to fitness equipment and associated costs with weight training. All the equipment required is readily available in the surrounding environment. This means leg training for muscular development is accessible for all.

Traveling for work or holiday?
Lack the time to commute to and from the gym?
Can't afford a gym membership?
Looking for variety of lower body exercises?

You're covered.

It's human nature to gravitate towards a style of training and become dogmatic about the superiority of one approach without accepting the benefits of another. This is very common when comparing bodyweight to weight training. Those following FitnessFAQs are mature enough to understand the merits of various modes of resistance training. Let's compare weight training to bodyweight fitness for muscular development.

Research shows low intensity resistance exercise to failure was found to be equal to high intensity training to failure for muscle hypertrophy. This means a training program using bodyweight exercises for high reps close to or reaching failure will be equal in effectiveness to using heavy weights in the same manner. The key principle with bodyweight leg training is to complete a large number of repetitions whilst on the verge of muscular failure due to training at a lower % of 1RM. When working at a low intensity (think bodyweight-only exercise) or using a higher intensity (added weight), legitimate effort is needed otherwise progress won't be made.

If performing a barbell squat at 80% of 1RM and only one rep per set is completed, exertion will be low and muscle size won't increase. Lifting weights using the lower body is more efficient from a rep perspective. Less total reps will be needed in a session to achieve comparable results. Using an example of a weighted squat which can only be performed for a handful of reps per set (say 60% 1RM) the trainee is not required to perform as many total reps to stimulate the body. For example, 3 sets of 6–8 reps is a challenging workout for an exercise when loaded at 60% 1RM performed close to failure, with 18–24 total reps needed.

The approach required to build muscle mass is different when performing a bodyweight exercise such as a pistol squat. To objectively assess intensity in the following example, 18 reps is possible on maximal testing. As higher reps are possible with bodyweight loading, work is being done at a lower % of "1RM". This means a large amount of reps and overall volume is required to force muscular growth. 3–4 sets of 15 reps on the pistol squat will reflect an appropriate relative intensity via bodyweight loading with the above example. Work is being done close to failure and a large volume of 60 reps compensates for the lower intensity. Your goals, preference and accessibility, among other factors, will decide what form of resistance training to choose.

You have purchased this training program because

you want to build muscular legs. You have also purchased this program with the intention of using only bodyweight exercises. Due to the nature of bodyweight exercises a high number of reps are needed, working on the verge of failure each set.

After a few months of training, more reps will be possible in a single set for each exercise. Simply apply progressive overload by performing more reps per set. As explained earlier, the body responds to an increased challenge, especially when working close to muscular failure, and maximal muscle fibre requirement will still take place regardless of the lower intensity. The only downside to LL is that longer duration sets and more reps are needed to produce the same effect.

With a barbell squat one can simply keep performing 3 sets of 6–8 and incrementally increase the load to force a more challenging stimulus. Most people prefer this as it's efficient, especially when it comes to looking at total time spent in each set. The principle which underpins any successful hypertrophy training program is hard work. If training is constantly comfortable the body will stay the same, regardless of a weighted or unweighted approach.

Here is an overview of some pros and cons for bodyweight compared to weight training.

Bodyweight Pros:

Can be done anywhere.

Cheap.

Minimal equipment needed.

Lower likelihood of acute injury.

Bodyweight Cons:

Certain exercises become "low intensity".

More difficult to "isolate" muscles.

Increasing absolute strength is sacrificed with higher rep training.

High rep sets are often necessary for leg training.

Weighted Pros:

Intensity on an exercise can be progressed linearly.

Objectively assessing progress is easier.

Efficient.

Weighted Cons:

Requires equipment.

Costly.

Increased risk of acute injury at higher loads.

When to rest for short duration or longer duration

When it comes to major compound movement patterns with a high technical requirement, a longer rest period is recommended. When it comes to more "isolated" movement patterns a shorter rest period is recommended. As leg bodyweight exercises are at a relatively lower intensity and the focus of the training series is on building muscle, rest times are shorter compared to traditional strength training. The logic is to create a large amount of metabolic stress to promote an anabolic environment for growth. For those interested in learning more about "the mechanisms behind hypertrophy", we recommend reading the work by Brad Schoenfeld. A direct relationship exists between intensity and rest and this principle should be obvious to those with some training experience. A neurologically taxing set with only a handful of reps require a longer rest period. A challenging set of 5 reps can take up to 3–5 minutes to recover from. As rep numbers increase the relative intensity decreases for the exercise, and the neurological impact is less by comparison. A higher rep set, such as one consisting of 15 reps, will need only one to two minutes of rest. This is because we are actively trying to increase metabolic stress for hypertrophy purposes.

A healthy mindset for building muscle naturally

Those newer to training the lower body will see more rapid visual adaptations to their legs compared to those with an extensive training history. Regardless, it will require several months of dedicated and consistent training in conjunction with appropriate nutritional support to develop impressively muscular legs through resistance training. Therefore, applying the correct mindset when approaching a training regime is essential for consistency and longevity. It's common for people to obsess over the appearance of their body through constant visual assessment in mirrors, photos or even the scale. Now, although this is important for remaining honest with yourself, it should not comprise the entirety of your thoughts and emotions. Fluctuations in appearance and weight are common as many variables will have an affect on body composition, such as nutrition, stress, sleep and much more. The key measure for building muscle is through applying progressive overload to a training program. Focus on improving on the previous workout's volume and/or exercise intensity. Adhering to a performance mindset over a physique-centric mindset will be advantageous in all aspects. Not only will personal gratification come from improving on previous training efforts, but changes in muscular size are guaranteed as a byproduct when progressively over-

loading. It's healthier and more enjoyable to adopt a performance mindset.

Advice for previous or current lower body injuries (hip, knee, ankle)

LL is designed as a generalised muscle building program for widespread application. The drawback with this type of program is the impossibility of accounting for individual injury and training history. As a result, there may be certain exercises which aggravate previous or current injuries. If this happens, scale exercise intensity down and drop the overall training load to allow recovery. Avoid exercises which cause pain and work on the exercises which do not. Unfortunately it is beyond the scope of this guide for FitnessFAQs to provide specific rehabilitation guidance for every injury condition. Get in contact with a trained rehabilitation specialist in your area, such as a physiotherapist. Have an assessment, as this will allow specific advice for adjusting LL to your needs. The most important factor in preventing injury when following a training program is a gradual increase in training load and intensity. Start each cycle of LL with a manageable amount of work. Assess how the body responds over the coming days and weeks and adjust accordingly. Experiencing a few aches and pains beyond muscular discomfort? Take things easier and allow adaptation. If no joint, ligament, tendon or other

structural discomfort is experienced, keep progressing at the current rate. Remember, building muscle is a slow process and achieving incremental progress over a long period of time whilst remaining healthy will yield far better results than pushing too hard, too soon and requiring an extended training lay-off due to injury.

The key to decreasing muscular imbalances

When it comes to bodyweight bodybuilding, the objective is to craft an aesthetically pleasing physique. The human body is prone to visual asymmetry as a result of lifelong habits, previous exercise or genetic predisposition. In some this may be obvious, while in others it may be subtle or non-existent. On average, the dominant side of the body tends to be both stronger and more muscular than the other side. In an attempt to normalise this disparity, two approaches should be applied with unilateral leg exercises. Unilateral exercises are those that require a single side to work at once.

Always begin each set on the weaker or less muscular side. By beginning on the weaker side a greater amount of effort can be applied to produce the best possible performance.

Always perform an equal amount of repetitions per set on each side. It's common for the less muscular side to be weaker and capable of fewer reps per set compared to the

other. By doing an equal amount of work it will prevent the asymmetry difference between sides from getting worse.

If a large asymmetry is present, a few more reps per set should be done on the non-dominant side in an attempt to balance the physique.

Resting between unilateral sets

Exercises such as the step up, pistol squat, single leg deadlift or single leg calf raise are examples of unilateral movements. When the spreadsheet suggests three sets for a unilateral exercise, keep in mind this is three sets left side and three sets right side, for a total of six sets. When the training is demanding, it will be difficult to maximally perform on the opposite side immediately after completing a hard set. For this reason we encourage resting for around 30 seconds between sides. After a set on both sides is finished for the given unilateral exercise, take an extended rest for the time period written on the training program.

MISCELLANEOUS EXPLANATIONS

Reverse hyperextension

Two main variations are taught for the reverse hyperextension: the straddle and the full. The straddle ver-

sion is when the legs are actively spread apart. The full version is when the legs and feet are pressed together. Entry method for the reverse hyperextension will depend on the difficulty desired.

If the training program indicates tuck, this means you will start with the knees bent and then extend to the appropriate variation. This is easier because the body shape is commencing in a short lever and ending in a long lever.

If tuck is not written, start with the legs extended. This is harder because the body shape starts in a long lever and ends in a long lever.

Why are reps lower for step ups in Level 3?

An inverse relationship exists between exercise intensity and number of reps possible. In Level 1–2 a box height will be chosen yielding a moderate intensity, allowing a larger number of reps to be performed. In Level 3 for the step up exercise, reps per set are decreased which means the trainee will have to perform the exercise on a higher box, increasing range of motion and difficulty. The goal with building strength in the lower rep range is to allow the user to perform more reps in the traditional hypertrophy rep range, on a higher box in the future.

(BONUS)
Body part isolation workouts, when to use, why included?

Our objective is to provide additional value for those following LL who want to work on their weak links. This is the reason why we created the isolation workouts to address lagging body parts. Once you have completed all LL workouts (A-F), it's a good time to re-evaluate goals and devise a new workout structure. When this time comes begin experimenting with the provided isolation routines. Do so if development is lacking in an area of the body. The best way to include these workouts into your routine is to perform them separately to your usual leg training. The workouts increase in difficulty from level 1-3. Choose the level most appropriate for your current strength level and feel free to experiment with the others when ready.

Final Words

You now have all the information that will allow you to maximise your muscle gain from our LL guide. The rest is up to you.

As mentioned throughout this guide, by applying progressive overload, investing yourself fully into the process, and performing all exercises safely, you will certainly experience positive results. Results that will not only yield the desired hypertrophic response (bigger legs!), but also leave you feeling more confident and stable through the lower body. These benefits can leave you feeling more competent performing day-to-day activities or transitioning to "weighted" legs exercises. The upside is truly limitless.

We have invested a great deal of effort over hundreds of hours into making LL the best it can be, and is representative of the high quality you have come to expect from FitnessFAQs. In short, you will not be disappointed.

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