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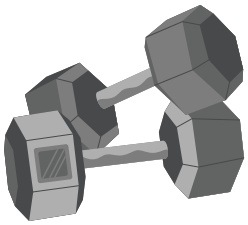
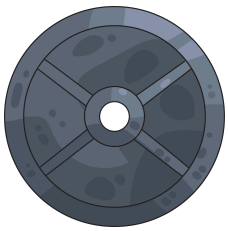
Different pieces of equipment you see at the gym



DB = dumbbell (single weights you hold in either hand).

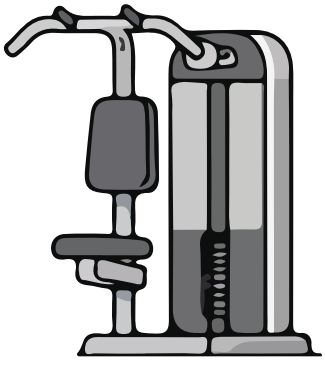
BB = barbell. Long, thin bar. Body pump bars are small and <1kg. Olympic barbells, the ones in most gyms, are usually 15-20kg. The 15kg bars are shorter and thinner than 20kg. The weight may be written on the end (but not always).

Plate = the circular discs you put onto a barbell. When adding up how much weight you are lifting, you need to add the weight of the barbell to the weight of the plates. E.g. 20kg barbell + 2x 10kg plates = 40kg.

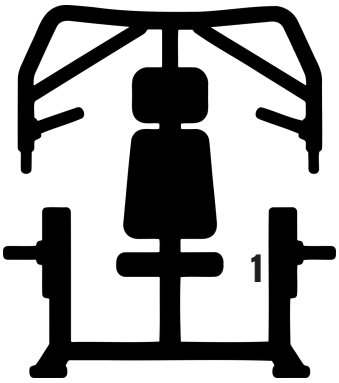


KB = kettlebell.

Machine weights (pinned) = When using machines at the gym, bear in mind that due to different designs, different machines will feel heavier/lighter, even if doing the same weight. As such, it is best to keep track of what weight you are lifting for each specific machine you use.



Machine weights (plates) = only add the weight of the plates you are adding to the machine, not the machine weight, but again know this can be different between machines (e.g. sled, leg press, often vary significantly between brands).



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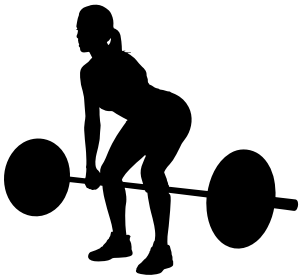
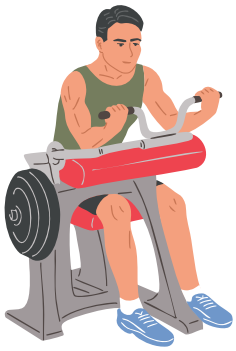
Components of a strength workout

Compound vs isolated exercises



Compound exercises are those that involve lots of muscle groups at once. They are big, tiring movements, and are done early on in the workout when you are fresh to make sure you can do them well. These are things such as deadlifts, squats and bench presses.

Exercises such as rows and leg press are also compound exercises but they are slightly less effortful, in that some body parts are more fixed. I.e. doing a barbell deadlift, you are pushing with your legs, loading your hips and lower back, controlling through your upper body, and lifting very heavy weights. Doing a leg press, you are using your large hip and knee muscles, but your upper body and back are fixed and supported by the machine.



A knee extension or bicep curl is isolated, in that it is only using one joint at once - the knee extension simply loads one side of the knee joint muscles (quads), a bicep curl loads one side of the elbow joint muscles (biceps).

Compound barbell exercises, squats, deadlifts, and bench press, are often referred to as primary lifts or main lifts on a given day. The other exercises are known as accessories.

Structuring a session

Generally it is best to start with larger compound exercises when you are fresh, as they require the most energy and technique. You will then move onto compound exercises that are less intense (eg leg press) that still require lots of power and energy but a little less than the unsupported movements.

It can make sense to combine exercises into groups to maximise time efficiency, e.g. an upper body exercise with a lower body exercise, so one body part works while the other body part rests. This enables shorter overall rest beaks (discussed in more detail later).

The final components of a strength training session are isolated exercises which do not require as much technical focus and are not as fatiguing. It is ok to do these exercises when the muscles have already been used in the workout elsewhere. In our classes this is often when we add core and impact exercises, again which can be done with a degree of fatigue without it compromising performance.

Understanding a strength training program

What are sets?

Sets are how many rounds you do of an exercise. So if you are prescribed 3 sets of 10 squats, it means you do 10 squats, 3 separate times. It does not mean that you do 3x10 i.e. 30 reps in one go. This is really important - if you are exercising at the right intensity, by the end of the reps given, you shouldn't be able to do the exercise more than 1-2 more times. If you do your 10 reps... then immediately go into your second 10... and third 10.. you are essentially doing 30 reps (& that shouldn't be possible).

There needs to be rests in between your sets to give your muscles time to recover before you repeat the exercise. There is no hard and fast rule about how long this should be, but it does depend a bit on the intensity of the exercise. We go into detail in this in the rest breaks section.

One set is complete when you have done the desired number of reps. The next set starts when you have had your rest break. If you are doing supersets, i.e. two or more exercises grouped together, you do all exercises in the superset for the given reps before re-starting. There is likely to be a rest break after the superset, which will depend on the program.

So for example if it says:

Superset A: 3 x 10 squats, 3 x 10 push ups, 1 minute rest

It means: 10 squats, 10 push ups, 1 minute rest; 10 squats, 10 push ups, 1 minute rest; 10 squats, 10 push ups, 1 minute rest. Move on to next superset.

Understanding a strength training program

What are reps?

Exercises are separated into groups within your workout. You will be prescribed a given number of repetitions, or reps, of a particular exercise.

When you are newer, you are likely to be given fairly high repetitions (10-15) of a given exercise. This is because it is likely to be fairly light and the point is to give you practice at performing a new movement.

As you become more experienced, the number of repetitions will dictate what weight you choose for an exercise. Essentially, we want to make sure that at least some of the reps you do are really hard for you. If you are prescribed 15 reps of an exercise, it probably won't start feeling hard until rep 8 or 9, and those last 5-6 reps will be really challenging. If you are prescribed just 5 reps, every one of those 5 reps should be hard.

It takes skill to be able to lift a weight that is heavy from the first rep; as such, for beginners, it often is more logical to do high reps (10-15) to build confidence with a movement and allow it to become hard towards the end of the reps.

Understanding a strength training program

Why do different exercises have different repetitions?

A common pattern that you will see in strength training programs is to do lower reps of the compound exercises at the start, and higher reps of the more isolated exercises afterwards. There are a few reasons for this.

Compound exercises can be made very heavy, and it is easier to make them hard for low reps once you develop skill. They are often tiring, as they are technical and require lots of muscles at once. It can be hard to perform higher reps and maintain technique on these exercises. It is common to see <8 reps for things such as bench press, barbell squats, and barbell deadlifts.

Exercises that are unable to be loaded up very heavy while having good technique (say, a prone W lift, a lateral raise, a rear delt fly) make more sense to be done at higher reps.

Lower rep exercises may need more sets to provide an adequate training load. E.g. if you are doing 5 deadlifts, you might do 4-5 sets so you are totalling 20 lifts for that exercise. If you are doing 12-15 repetitions of something like a bicep curl, 3 sets might be enough, as this is 36-45 repetitions.

Understanding a strength training program

Why we rarely do more than 15 reps in our programs

In my opinion, doing more than 15 reps generally feels like a bit of a waste of time. There is no clear benefit that I can see from doing that many reps of an exercise. Additionally, the research suggests that exercises of moderate to high intensity (i.e. that can only be done for lower reps) are likely to be more effective for bone density improvement.

A 2025 systematic review confirmed that resistance training performed at > 70% 1RM (~12 reps) (this concept is explained below) is most likely the most effective for bones (REF). As such, you will rarely see >12 reps in an FKB program, but we do put up to 15 reps at times for a different stimulus and to encourage them to really feel what those hard reps are like - building up to them in this way is often useful for people who are a bit less confident lifting heavy weights.

Personally, I like to do most of my compound lifts <6 reps and the rest of my accessories at 8-10 reps. This is my preference because it feels more time efficient and I am very confident picking up heavy weights straight away. I also have a very good idea of what weights I can lift and know what to choose to have those reps be hard from the start.

Training intensity explained

A lot of the time you will see how heavy a weight is written represented as something like this: > 70% 1RM. What does this actually mean? 1 RM refers to 1 repetition maximum, which is a weight you can lift literally just ONE time. Not twice. Once. Obviously, most people have no idea what their 1RM is. You can test it, and people do, however this takes a lot of skill and isnt without risk - most people never test their true 1RM (and we don't at FKB).

However, you can use a calculation to figure out your estimated 1RM based on what you can lift for for a given number of repetitions. This calculator is provided on the next page.

In the research, you will see how heavy weights are described in this manner. High intensity lifting is generally indicated to mean weight that is >80% of 1RM, or a weight you could lift 5-6 times. Moderate intensity lifting is weights 60-80% 1RM, so a weight you could lift 7-15 times. Low intensity is considered anything below this (15+ reps).

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1RM/ 1 rep max calculator

Number of repetitions performed (assuming you are unable to perform any more than this number)	Percentage of 1RM / %1RM (1 repetition maximum, i.e. a weight you can ONLY lift ONE time)	To figure out approximately what your estimated 1 rep max is, you can multiply the weight you lifted by this number...
1	100	1.00
2	95	1.05
3	93	1.08
4	90	1.11
5	87	1.15
6	85	1.18
7	83	1.2
8	80	1.25
9	77	1.3
10	75	1.33

For example, if you can lift 100kg, one time, this means that the weight you are likely to be able to lift for 5 repetitions will be approximately 85kg.
If you are currently lifting 50kg for 5 repetitions, it is likely if you did this for just one rep, you could do about 57.5kgs.

Rest breaks

Rest breaks in weight lifting are there to help you to continue to lift heavy enough. You may not feel out of breath after lifting weights, particularly if you are fit, but your muscles should feel temporarily fatigued. If you are lifting heavy enough, i.e. to 2 reps in reserve, you wouldnt be able to do another set of the prescribed reps immediately after finishing the first set.

The higher the intensity of the lifts, the longer the rest break is likely to need to be to be able to repeat the effort. For high intensity lifts, e.g. your compound lifts done at low reps, you need the longest break. For people doing 1RM lifts, for example, they may take 5 minutes rest before trying again.

In our FKB programs, as we do not lift to this intensity, the maximum rest required is probably closer to 2-3 minutes. We often program a lighter accessory exercise with our compound lifts at the start of the workout that wont compromise the performance on the compound lift. This is because most people find total rest boring (!) and it also means you get more total exercise in a given timeframe. As we are not going for max, max efforts, we find this doesn't compromise performance on the main lift.

Warm up

Warming up for weight lifting should be specific to the task at hand. In general, it is enough to warm up by doing the intended exercise at a lower intensity before progressively adding weight.

As stated, you will usually do compound lifts first. For example, a squat or a deadlift. How light you need to go in your warm up will depend on how heavy you are going in your workout, as well as your experience level, preference, and personal requirements.

The goal is effectively warm up to doing an exercise without getting so fatigued warming up that you impact your performance at it. When you do a big compound lift, you need to recruit lots of muscle fibres. Warming up helps your body to fire up these pathways and get your muscles primed and ready.

Even the most experienced lifter cannot turn up cold to lift their heaviest ever weight without warming up first. However, you dont want to warm up so much that you actually start building fatigue that then prevents you performing at your best. So, it is a bit of a balancing act that takes practice.

In our programs, we refer to ‘warm up weight’ and ‘working weight’. We usually only list warm up weights for the primary compound lifts (barbell squats, deadlifts, and bench press). Lower reps will require more warm up sets, as it means you are lifting to a higher intensity. Again, experience level will dictate how much warm up you need to do.

Warm up

For example, if you are currently lifting 40kg deadlift for 5 reps, but are still learning, while this may be the heaviest you have lifted so far, it may not actually all that hard for you. In this case, you might do just one warm up set at 30kg, before progressing to 40kg.

For someone who is going for a very heavy 1 or 2 reps, lets say at 60kg, and this weight is very hard and near maximal for them, they might need to do warm ups at 40k, 50kg, and 55kg to prepare properly. To avoid getting too tired doing these warm ups, it can be useful to do decreasing reps as the weight gets heavier. For example, 5 reps at 40kg, 3 reps at 50kg, 1 rep at 55kg - the point of this last rep to give them a 'feel' of the heavier weight so they are not shocked by how heavy the top weight feels. Again this comes down to experience and how confident you are lifting different weights.

As time goes on, generally the warm up weight can become heavier, the jumps to heavier weights larger, and the number of reps less. However, even the strongest, most experienced lifter will need to start at a much lighter weight than their maximum for their warm up.

In general, you don't need to rest between warm up sets, unless you have done quite a few, or gone close to working weight, and can feel you are fatigued - especially if you are lifting the weights to change them, that in itself can be tiring! Remember that the main goal is to lift as much as you can, and perform at your best in your working sets, particularly in your first working exercise.

Warm up

For accessory exercises, you might use your first set of an accessory exercise as a kind of warm up, going slightly lighter and then working towards your working weight in the 2nd set. For e.g. if you are able to do 10 reps of chest press at 6kg and just managed to get to 7kg last week, it can be good to do 6kgs for your first set then progress to the 7kgs for the second.

If you are starting at a moderate intensity, I.e. doing 10-12 reps, you may not need much of a warm up, as the exercise itself at that intensity may count as a warm up. You might find you need to work up to your working weight still, for example if you are doing the leg press, 100kgs, for 12 reps, you might do 6 reps at 50kgs before increasing to 100kgs and doing 12. If the exercise is later in the workout, you might find you don't need to warm up at all and can go straight to your working weight (if your legs are already warmed up).

Again - it depends a bit, and comes down to personal preference and experience. You will figure out what works over time. You might find you work better doing some cardio first as a bit of a warm up, but again avoid getting too fatigued before starting - keep it short and light (5-10 minutes).

Relative heaviness

The amount of weight you can lift will vary between different exercises. People newer to lifting tend to consider the weights they are using uniformly across all exercises. For example, they use the same 3kg dumbbells for every exercise they perform.

The amount of weight you can actually lift for different exercises will vary dramatically. Having an idea of an exercise that might always use a lighter weight compared to one that could progress to a heavy weight is important.

On the next page is a 'heaviness scale' with some examples of different exercises to start to give you an idea about relative weights of different exercises, to help guide your choices over time.

Generally speaking, exercises that use exclusively the lower body will be able to be much heavier than anyting you can do with your upper body. Compound exercises, meaning exercises that use lots of muscles at once, will be able to be progressed more than those that are more isolated.

This is not just because more muscle mass in total is involved, but also because lifting more weight on these exercises can be achieved by improving technique and efficiency, which there is more capacity to do on a compound lift than on an isolated one.

For example, the deadlift is a compound lift that can be progressed continually over time, compared to a bicep curl, which is likely to reach a ceiling much sooner.

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Relative heaviness

Lightest | Light | Moderate | Heavy | Heaviest

DB lateral raise

DB bicep curl

DB rear delt fly

DB chest press

DB lunges

Barbell deadlifts

Leg press

DB overhead press

DB upright row

Barbell back squats

Barbell bench press

BB lunges

BB bent over row

DB bench row

Barbell hip thrust

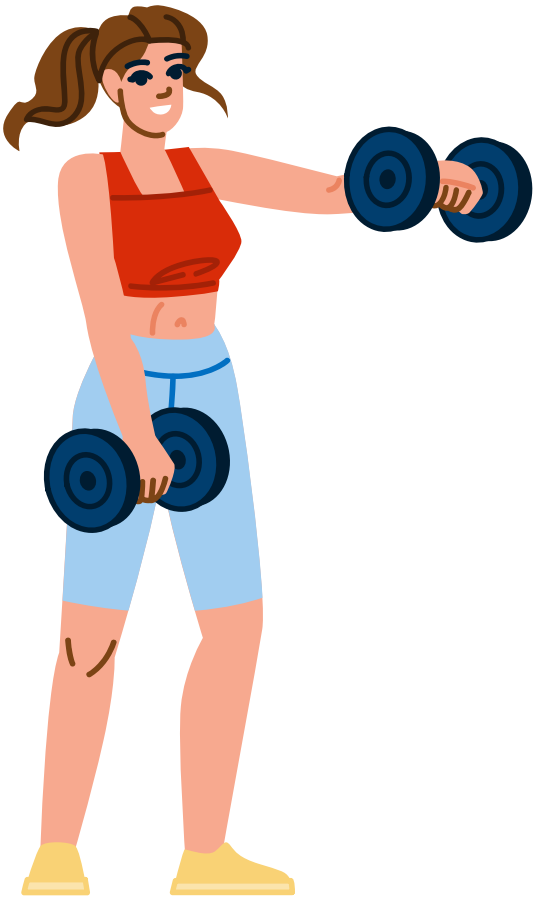
Barbell RDLs

DB stagger stance RDL

Relative scale of total kgs able to be lifted

Although it will vary between people, this is a general guide to which exercises are likely to be able to be progressed to heavier weights, and which will most likely remain lighter.

How to know if you are lifting heavy enough



Reps in reserve is a way to measure how heavy you are lifting. A good goal is to aim for 1-2 reps in reserve. This means how many more reps you could do than the number lifted.

If you are lifting a weight for 10 reps, if you tried to keep going, you would only be able to lift it 11 or 12 times, not 13 or 14.

A way to check if you are lifting heavy enough is to give this a go: try lifting the weight as many times as you can until you truly cant any more. This is called going to failure (and it isn't recommended to do regularly, or when you are new).
If you can do significantly more reps than the number listed, then you need to increase your weights next time.

How to increase your weights over time

The reps listed in your program are a guide rather than a rule. If you want to go heavier, but can't do it for as many reps as listed, that's ok.

For your higher rep exercises, if you can get to anything more than about 6 reps, it's worthwhile doing a set at that weight. You might do 10 reps of the first set at your old weight, 6 reps of the middle set at the new weight, and repeat in the third set. Or, go back down and try again next time. If you cant get to 6 reps, increase the reps to 12 or 15 at the lower weight for a few weeks, then try again.

For your compound exercises, it makes sense to cycle between lower (1-3) and higher (4-6) reps every few months. This can help you to make progress over time and you can use the calculator to figure out what weight you may be able to lift for different repetitions.

Sometimes you may find you can go heavier for lower reps than you expected and can use the calculator to update your weights when you return to higher reps. In FKB programs we still stick to 1-2 reps in reserve, even at these lower reps, as we dont recommend doing 'true' 1RM efforts without careful supervision and coaching, particularly in this population.

How to fit training into your week

Figure out when you like exercising and what fits with your schedule. There is no right or wrong. It is important, however, to book it into your schedule, like you would a work meeting, or social meeting with a friend, so that it is non-negotiable. Waiting until you feel like it almost never works.

Ideally, you should try to do a full body resistance workout at least twice per week. Have at least one day between strength training sessions.

For those of you that are more active, it is possible to resistance train 4 or even 5 days per week, however the structure of your workouts is likely to be different. This is outside the scope of FKB programs, which are a maximum of 3 days per week.

If you do other forms of exercise too, like pilates or yoga or cardio, the priority is maximising your performance in the exercise you care most about, or are prioritising results from. For example if you are trying to get a 5k PB, it would not make sense to lift weights before going for a run on the same day, or doing a heavy legs session the day before a fast run. If you are doing two exercise sessions in one day, you should do the priority exercise first.

For some types of exercise you may need to have a few hours recovery in between same-day sessions.

How to fit training into your week

For example, if you are doing a heavy strength training session, you might be able to do something like pilates straight afterwards without too much difficulty. On the other hand, doing a pilates session directly before lifting weights might compromise your strength performance. Splitting the sessions up with multiple hours in between will likely help improve performance (though might not be practical).

Figure out what causes fatigue that runs into the next day and structure your week accordingly, e.g. you may prefer to allow 48 hours in between a heavy squat session and a long run.

It is important to have at least one complete rest day per week (light forms of exercise like walking and yoga are ok to do on rest days). If you are finding it hard to find time to have a rest day around the type of training you need to do, try to put two sessions on one day, to allow one full rest day.

Some suggest doing high intensity sessions on the same day, having a few 'very hard' days in a week, so you can have some very easy days in a week, instead of having lots of 'moderately to pretty hard' most days of the week.

Rest days and recovery are important to reduce risk of injury & can require careful tinkering to get right!

Note: it is recommended to do both strength training and cardiovascular training for bone health as well as general health.