AN INTRODUCTION TO RESISTANCE TRAINING

Why Resistance Training?

- **Resistance training is important for maintaining or increasing lean muscle tissue**
- **Lean muscle tissue is important as it gives our physiques shape and gives us strength to use in our day to day lives**
- **Lean body tissue contributes to our metabolic rate so losing muscle will negatively impact our metabolism**
- **Resistance training can contribute towards good posture**
- **Resistance training enhances insulin sensitivity**

Resistance Training can have a positive impact on the following...

- Shape
- Posture
- Strength
- Metabolism
- Insulin sensitivity

Transformation Programme Outline

WEEK 0 (Preparation Week)

- 3 full body training sessions per week

WEEK 1-12

- The whole body is trained twice per week
- The body is split into upper and lower
- A total of 4 weight training sessions per week

Programme Outline

Week 0	
Monday	Full Body
Tuesday	Rest or Cardio only
Wednesday	Full Body
Thursday	Rest or Cardio only
Friday	Rest or Cardio only
Saturday	Full Body
Sunday	Rest or Cardio only

Weeks 1-12	
Monday	Upper Body
Tuesday	Lower Body & Core
Wednesday	Rest or Cardio only
Thursday	Upper Body
Friday	Lower Body & Core
Saturday	Rest or Cardio only
Sunday	Rest or Cardio only

Terminology

- **Rep is short for repetition**

  1 repetition is one complete movement e.g. in the bench press 1 rep is lowering the bar to the chest and pressing the bar up again

- **One set might be 8-10 repetitions of that movement**

  So 4 sets of 8-10 on the bench press would involve performing 8-10 presses x 4, with a rest in between each set to allow the muscles to recover

- **The rest interval is the time between sets e.g. 60, 75 or 90 seconds**

  It is important to follow the rest periods accurately because not taking enough rest will limit your strength on the next set and taking too much rest will lower the intensity of your sessions and make your workouts too long

- **Progressive overload**

  Progressive overload is a principle referring to the continual increase in load over time

  For example when someone learns to squat, they might just be squatting an empty bar at first. Over time they will keep adding a small amount of weight to the bar. After a year they could be squatting 100kg

  If we don't aim for progressive overload, our bodies will have little reason to change

  That's why it is important to strive for progress on every lift over time but never at the expense of good form!

Tracking Workouts

Because we are aiming for progression in the gym it is vital that we track what we are lifting.

This is because it is very unlikely that we are going to be able to remember the exact weights we lift each time.

If we don't know what we've been lifting previously it is impossible to know if we are progressing.

Picking up random weights is not going to help us progress so use the programme card to record your sessions.

For example, you might lift 25kg for 10 reps on your first set and 25kg for 8 reps on your second set. You decide to drop to 22.5kg for your third set on which you get 9 reps.

It's highly unlikely that you'll remember that in 7 days time so record this on the programme card as follows...

25kg x 10 / 25kg x 8 / 22.5kg x 9

Progression next week might be...

25kg x 10 / 25kg x 9 / 22.5kg x 10

Warming up

It's important to warm up before you start on your working sets

There are 2 main components of a warm up

- Increasing the heart rate, breathing rate and blood flow around the body
- Preparing the joints and muscles for the working sets

Cardiovascular Warm Up

- To increase the heart & breathing rate and blood flow around the body you can perform 5-10 minutes of cardiovascular activity e.g. bike, x-trainer, stairmaster, treadmill, rowing machine, skipping, jogging etc
- If it's the height of summer and you took a brisk walk to the gym, you can perhaps skip this step
- If it's the middle of winter and you drove to the gym and are pretty cold, you definitely need to complete this part of the warm up
- Use common sense

Preparing For The Lifts

- The best way to prepare your body for each exercise is to perform some dynamic stretching followed by 1 or more progressively heavier sets of the first exercise for that body part
- The heavier you can lift, the more warm up sets you should take to work up to your working sets
- There is no need to do warm up sets for every exercise on that body part, just the first exercise

Example Warm Up

- 5 minutes X-trainer, gradually bringing heart rate up over the 5 minutes
- Warm up for Bench Press:

  - Dynamic chest stretch + 2 warm up sets

  - 1 set of 10 at 30kg, rest 30 seconds

  - 1 set of 8 at 45kg, rest 60 seconds

  - Begin first working set of 55kg

There is no need to do specific warm up sets on the other pressing exercises (chest, shoulders and triceps) but you will need to do a warm up on your first back exercise

Lifting With Good Form

Lifting weights with good form is vital for two main reasons...

1. To get the most benefit from the exercise

2. To minimise the risk of injury

See the exercise videos- if in doubt or consult your coach for guidance on form and technique

What Is Good Form?

Good form means lifting the weights correctly in a smooth and steady manner.

The negative or eccentric part of the lift is slower than the concentric part of the lift.

For example on the bench press you will lower the weight to your chest over 2 seconds and then press the weight back up over 1 second.

Never jerk weights around - people that do this are asking for injuries and it's only their ego that cares about how much weight they are lifting.

You should therefore never lift heavier weights at the expense of good form. With that said when pushing heavier weights, you might be slightly more shaky at first.

Should I Train To Failure?

This is a controversial topic! Training to failure means working the muscles to the point where you are physically unable to complete another repetition.

If you hit failure on every single set of every exercise there is a high risk that you will not progress as well as you will overload your central nervous system too much.

Therefore take only the last set of each exercise to complete failure

All other sets should be finished with "one in the tank"

"Stimulate not annihilate" the saying goes!

This doesn't mean you shouldn't push yourself, all of your sets should be hard, it's just that you don't need to destroy yourself to get results!

What Size Weights Should I Lift?

Getting started...

With any exercise which uses a **barbell**, your first workout should not go any heavier than just the bar.

Once you are comfortable with the movement, you can progress.

A standard barbell weighs 20kg so rest assured, you will still be getting a workout!

What if the barbell feels too heavy?

Have a look around and see if you can find a lighter straight bar. Most gyms have a shorter barbell which will be suitable. Alternatively, use dumbbells for now. Your movement may not be exactly the same, but it will still enable you to progress. Start out with 2-5 kg while you get a feel for things.

An alternative to dumbbells is to focus purely on using your bodyweight until you feel ready to handle the bar.

Squats, lunges, push-ups, pull-ups can all be performed with bodyweight.

What is the barbell feels too light?

We would still recommend you focus on using the bar for now, even if it's just for your first 1-2 workouts. It's not worth risking injury.

Progressing onwards...

Once you are comfortable with the bar, you can start to add some weight to it.

Depending on how heavy the bar felt on it's own, you can start with anything from 1-5kg each side.

Or if you're using a dumbbell, just increase the weight slightly from before.

As long as you can complete the exercise with good form, and without the speed of the movement slowing too much, then you can continue to add more weight as you progress through the sessions.

If the last set felt really light, add some extra weight so that the sets become a challenge.

If it feels too heavy so that either you don't achieve the prescribed repetitions or that you feel your form is compromised, then reduce the weight slightly.

Remember, it is always better to start too light than too heavy.

The aim is to get a solid set in with good form. Not to find your max.

If you prefer, train with a partner so that they can spot you (i.e. watch your form and assist you with the movements if necessary).

Substituting Exercises

If your gym does not have the equipment for an exercise specified on the programme, it's fine to substitute it with the next best alternative exercise that also works the same body part.

Another reason you might substitute an exercise if if the equipment you need is being used and you don't have time to wait around, again just find the next best alternative and make a note of what you did on your programme card.

If you find that a particular exercise is giving you pain then you may also want to find an alternative for the same body part, which doesn't cause you pain.

The main thing is that you complete the specified number of sets for that body part. If you train at a busy gym and it's common for the equipment you need to use to be busy, don't sweat it, just perform another exercise.

On the folllowing page are some substituted exercises you can refer to.

BODY PART:	EXERCISE:	ALTERNATIVE EXERCISE:
CHEST	BB Bench Press	Machine chest press Seated cable chest press Press ups
	BB Incline Bench Press	Incline smith machine press Incline chest press machine
	DB Chest Press	Machine chest press Seated cable chest press
	DB Incline Fly	Pec Fly Machine Cable Fly
	DB Fly	Pec Fly Machine Cable Fly
	DB Incline Chest Press	Incline smith machine press Incline chest press machine

BODY PART:	EXERCISE:	ALTERNATIVE EXERCISE:
BACK	BB Deadlift	DB deadlift Trap bar deadlift
	Seated Row	Machine row Seated cable machine row
	DB Bent Over Row	Incline bench chest supported row T bar row
	BB Bent Over Row	Wide grip machine row with seat high Smith machine bent over row
	BB Reverse-Grip Bent Over Row	Machine row with palms facing up
	Close Grip Lat Pulldown	Assisted chin ups, palms facing lat pulldown (with A-bar attachment)
	BB Bench Press	Machine chest press Seated cable chest press Press ups
	Wide-Grip Pull Up	Wide grip lat pulldown Assisted wide grip pull up. Vary grip if too wide a grip is uncomfortable
	DB 1 Arm Row	Incline bench chest supported row Standing one arm cable row
	Face Pull	DB high pull Wide grip upright row
	Reverse Grip Lat Pulldown	Palms facing lat pulldown (with A-bar attachment) Assisted chin ups

BODY PART:	EXERCISE:	ALTERNATIVE EXERCISE:
SHOULDERS	DB Seated Shoulder Press	Machine shoulder press Smith machine shoulder press BB shoulder press
	BB Standing Shoulder Press	Machine shoulder press Smith machine shoulder press BB seated shoulder press
	DB Lateral Raise	Cable lateral raise Kettle Bell lateral raise

BODY PART:	EXERCISE:	ALTERNATIVE EXERCISE:
LEGS	BB Back Squat	DB squat KB Goblet squat Smith machine squat Leg press Trap bar deadlift
	DB / BB Alternating Reverse Lunge	DB Forward Lunge BB forward Lunge DB Step up DB Static Lunge
	Machine Leg Press	Single leg press, vary foot position for comfort / avoid niggles
	Single Leg Standing Calf Raise	Machine calf raise Donkey calf raise
	Leg curl	Stiff leg deadlifts (ensure proper form!) DB leg curl Cable leg curl with ankle attachment
	Seated Calf Raise	Seated machine calf raise Seated DB calf raise Seated BB calf raise Seated Smith machine calf raise (use pad across thighs)

CONTINUED >>>

BODY PART:	EXERCISE:	ALTERNATIVE EXERCISE:
LEGS	BB Deadlift	Trap Bar deadlift DB deadlift Machine deadlift
	DB Bulgarian Split Squat	DB static lunge DB step up
	DB Squat	BB squat KB goblet squat Smith machine squat Leg press Trap bar deadlift
	Leg Extension	Sissy squat

BODY PART:	EXERCISE:	ALTERNATIVE EXERCISE:
ARMS	BB Bicep Curl	DB alternating curl Bicep machine curl Cable curl DB incline curl EZ bar curl
	Rope Tricep Pushdown	Dips Close grip press up DB lying triceps extension DB kick back
	DB Hammer Curl	DB alternating curl Bicep machine curl Cable curl DB incline curl EZ bar curl
	Rope Overhead Tricep Extension	Dips Close grip press up DB lying triceps extension DB kick back
	DB Overhead Tricep Extension	Dips Close grip press up DB lying triceps extension DB kick back
	Hammer Curl	DB alternating curl Bicep machine curl Cable curl DB incline curl EZ bar curl

BODY PART:	EXERCISE:	ALTERNATIVE EXERCISE:
ARMS	DB Incline Curl	DB alternating curl Bicep machine curl Cable curl DB incline curl EZ bar curl
	Cable Tricep Pushdown	Dips Close grip press up DB lying triceps extension DB kick back
	DB Concentration Curl	DB alternating curl Bicep machine curl Cable curl DB incline curl EZ bar curl
	Close-Grip Bench Press	Dips Close grip press up DB lying triceps extension DB kick back

Cardio

Cardiovascular training is a controversial topic at the moment as it has fallen out of favour with many trainers in recent years.

The simple fact is that many people benefit from doing cardiovascular training in addition to their weight training and find that without cardio they don't get as good results.

The hierarchy of importance for a body transformation

1. Nutrition & Weight Training

2. Cardio (not always necessary)

Always prioritise weight training and fit your cardio in on your rest days and/or after your weights sessions.

Types of Cardio

There are two main types of cardio

1. Low intensity steady state (LISS)

2. High intensity interval training (HIIT)

Both have their benefits and drawbacks.

LISS is typically performed for 30-60+ minutes at between 60-70% of your maximum heart rate e.g. x-trainer, treadmill, brisk walk, stairmaster etc.

This is potentially boring and time consuming but it's not uncomfortable when compared with HIIT.

You can just about hold a conversation with someone at this pace.

HIIT involves bursts of short but intense effort e.g. rowing or sprinting on a stationary bike as fast as you can for 30 seconds followed by a period of active rest that can vary in length depending on fitness levels.

A typical HIIT session might take 20 minutes including a warm up and while it takes less time to complete than a typical LISS session, when done correctly it's extremely uncomfortable.

If you can hold a conversation during a HIIT session, you're not doing it right!

There is interval training music included in this programme. There are 3 tracks with different rest periods ranging from 30 to 60 seconds rest.

How Much Cardio?

Assuming that you are looking to increase your fitness and burn as much fat as possible, it is recommended that you aim for 2-3 cardio sessions per week.

That might include 2 x 45 minute LISS sessions and 1 x 20 minute HIIT session.

You can do up to 5 cardio sessions per week e.g. 3 x 20 minute HIIT sessions and 2 x 45 minute LISS sessions.

Example

Monday	**Upper Body**
Tuesday	**Lower Body & Core**
Wednesday	**45 minutes LISS (brisk walking)**
Thursday	**Upper Body**
Friday	**Lower Body & Core**
Saturday	**20 minutes HIIT**
Sunday	**45 minutes LISS (brisk walking)**

Action Steps

- **Print out your training programme**
- **Familiarise yourself with the exercises**
- **Train smart and hard!**