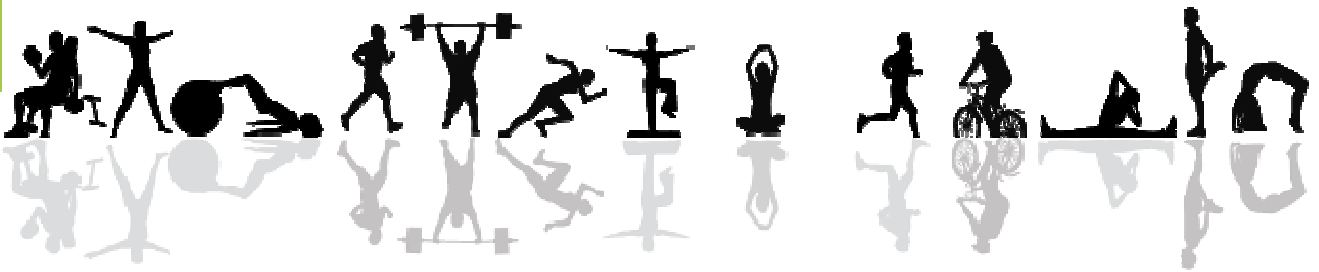


THE FULL-TIME WORKER'S GUIDE TO A GOOD PHYSIQUE

Bitesize
Oct 09



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- Learn how to train at the correct intensity using weights and find out what effect this will have on your body.

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News

DT Training Welcomes Rory to the Team

In a bid to expand our coverage of London we have recruited semi professional footballer/personal trainer Rory Manning to our team. Rory is very highly qualified with a level 3 diploma in personal training and heaps of experience working with people with various fitness goals including Premier League football clubs Everton and Watford.

Rory, previously based in Leighton Buzzard, will be covering North London and says that he is looking forward to the challenges that personal training in London will deliver.



Spin Classes 'R' Us



For those of you who live in South London and haven't visited Pedal Studio yet, what are you waiting for?!?!?

Pedal studio is a dedicated spin studio based in Putney where you can monitor your output via a heart rate monitor which displays your vital stats on a large screen in the studio. If like me, you are one of those people that looks at the rest of the group and thinks 'surely they're not trying' then this is the opportunity for you to prove it. Although Pedal Studio owner Andrew Clayton insists that other spin classes are "mostly run by instructors who have probably done one training course and they yell at people to push themselves into completely the wrong training zones, doing more damage than good" and that "a **heart rate monitor system** will encourage 'scheduled' sessions so that each person will get a training plan". Maybe it's me that's trying too hard? Either way, if you haven't yet tried Pedal Studio I thoroughly recommend you give it a go. Visit their website and check out their introductory offer.

www.pedalstudio.co.uk

Personal Training for £35 per hour!

To celebrate our expansion and the arrival of Rory we're offering an introductory rate to all new customers of £210 for their first 6 sessions.

All you have to do to claim this offer is contact us, quoting "the full time worker's introductory offer", and we will get in touch.



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A little bit of Science

Weight Training Explained

In this edition, I'll be filling you in on the specifics of weight training and the effect the varying techniques will have on your body.

Ladies, don't be put off. Weight training is not just for guys! It is extremely difficult for females to gain significant muscle mass, so you're unlikely to get 'big', however weight training burns a large amount of calories, most interestingly after you have finished training. You can even sit at your desk post-workout and think, "I'm still burning extra calories!"

Now, before we discuss the techniques and approaches we must clarify some of the terms:

Repetition: A complete movement from start to finish.

Set: A sequence of Repetitions without rest between them.

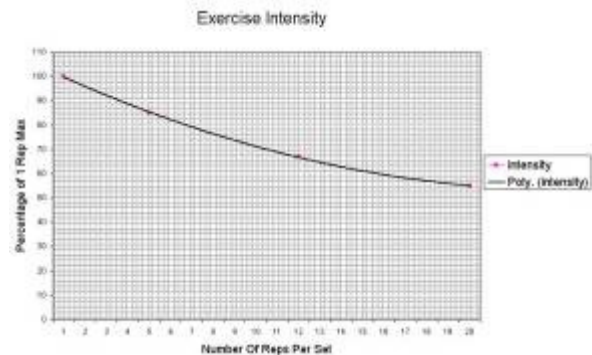
Recovery: The time spent resting in between sets.

1 Rep Max: The maximum possible weight you can lift for 1 repetition.

Intensity: The resistance or weight measured as a percentage of your 1 Rep max.

The first thing to mention when we're discussing weight training is your output level. As with all types of fitness training, weight training should challenge you, in order for your body to make the necessary changes and improvements. By this I mean that what ever the weight you lift, you should be working at a level where you struggle to complete the recommended amount. An example would be, if you were performing 3 sets of 10 repetitions (reps) then you should be able to complete the first two sets but struggle to complete the 3rd. Once you can comfortably complete the 3rd you must increase the weight. We call this "introducing new stimulus".

Fortunately for us, the scientists of the fitness world have spent many years researching the correct intensities so that we can use a spreadsheet to find our recommended intensity. In order to do this we need to know our 1 rep max for a given exercise. The simplest but most dangerous way to find this out is to try and lift as much weight as you can in one go. However if you have not done much previous training this is likely to cause injury so we choose a different method instead. Below is a graph which displays the appropriate intensities for any given number of repetitions.



For a large version skip to page 5.

Now, let's assume that we are performing a bench press and our 1 Rep Max is 100kg. We can expect to lift that once before needing a rest. However if we went down to 80kg (80% of our 1Rep Max) we can draw a line horizontally on the graph spurring from 80 on the Y axis and at the point which it meets the curve on the graph we draw a vertical line down towards the X axis. The point at which this vertical line crosses the X axis demonstrates the number of reps we should be doing with that weight. The graph above would suggest around 7 reps for 80% intensity.

As you can see the graph begins to plateau as we get towards the 40% mark suggesting that we can do an infinite amount of reps at this intensity. This is the point at which the activity becomes almost entirely aerobic therefore we can sustain the activity for an ongoing amount of time until our body runs out of fuel. At that point we need food and rest.

A little bit of Science

continued

Now, back to our safe method of finding the 1 Rep Max. If we pick up a moderate weight and lift it as many times as we can, we can use this information to determine our 1 Rep Max. For example, I pick up a 15 kg dumbbell and curl it until failure, which turns out to be 12 reps. If I plot this on the graph in the same manner as before but in reverse I can see that my line up from 12 reps and across to the Y axis bisects it at around 67% suggesting that 15kg is 67% of my 1 Rep Max for a dumbbell curl. Now get ready for the maths!!!

If 15kg is 67% of my 1 rep max then $15/67 = 1\%$ of my 1 Rep Max.

$$15/67 = 0.2239\text{kg}$$

Therefore we can multiply this by 100 in order to work out 100% of my 1 Rep Max

$$0.2239\text{kg} \times 100 = 22.39\text{kg}$$

I now know my 1 rep max and can therefore estimate the appropriate weight to curl for any given number of reps using the graph - without injuring myself!

So now we know how many reps we should be doing for a given weight we can look at the effects that this training will have on our body. Broadly speaking there are 3 aspects of fitness that can be targeted with weight training:

- Strength
- Hypertrophy (muscle growth)
- Endurance (toning)

The table to the right shows us the reps and intensity ranges for each aspect of fitness. There is an overlap effect on all of these methods e.g. if we are performing 6 reps at 82% intensity we will be in the hypertrophy range building muscle however there will be some strength gain benefits also.

The number of recommended sets to perform varies however, a loose rule is the higher the resistance, the more sets. For example, someone performing strength training using 100% intensity should perform around 5-6 sets of 1 rep. At the other end of the scale we have someone training for endurance who should be doing 1-2 sets at the lower intensity, with 19 or 20 reps.

Now, all you need to do is identify your personal goals, use this information to devise your weight training plan and "Go For It!".

Training Type	No. of Reps	%age of 1 Rep Max
Strength	1	100
	2	96
	3	92
	4	88
	5	85
Hypertrophy	6	82
	7	79
	8	76
	9	73
	10	71
	11	69
	12	67
Endurance	13	65
	14	63
	15	61
	16	59
	17	58
	18	57
	19	56
	20	55

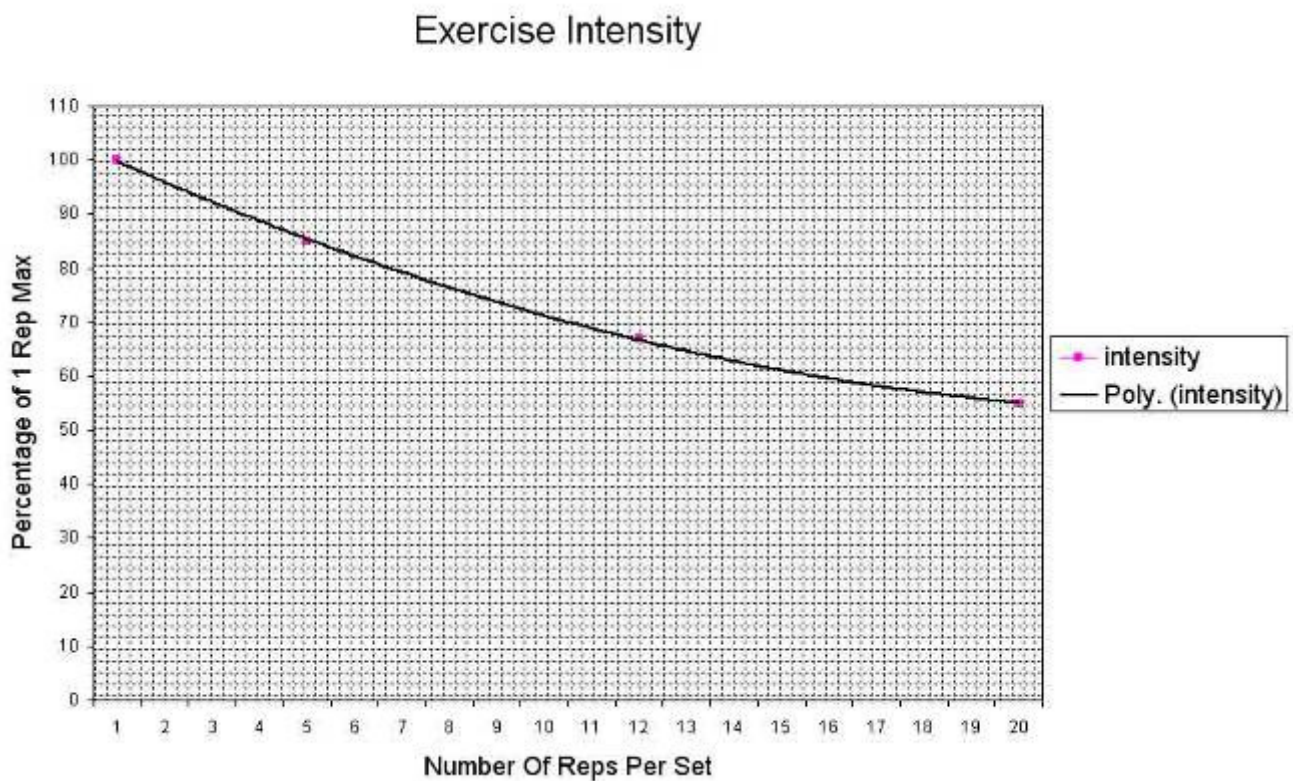
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A little bit of Science

Exercise intensity Graph



To determine the correct number of reps to do for a specific intensity draw a horizontal line from the point on the y axis which represents your intensity until it bisects the curve. At this point draw a vertical line down towards the x axis where the point at which it bisects the axis shows the appropriate number of reps to carry out.

Alternatively carry out the process in reverse to find the appropriate intensity for a given number of reps.

If you have any questions about the benefits of weight training, would like some more advice, are unsure of how to train with an injury, or would like a personal programme drawn up for you, don't hesitate to contact Dom at DT Training via the contact page of our website www.dt-training.co.uk, by email at dom@dt-training.co.uk or by phone on 07972 672379.

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DT Training

What we do... and what's in it for you!



Credit Crunch?!

Check out our offers to see how we can help you look fine in 2009, *without breaking the bank...*

Try before you buy...

At DT Training we'll give you a personal training session for free before you decide to make your purchase.

Two (or more) train for the price of one!

At DT Training we charge our standard hourly rate, no matter how many there are of you. How generous is that?



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Personal Training the way YOU want it.

Free Sessions!

When buying in bulk we'll reward you with **a free session for every 5 sessions purchased**. After all, you should have some kind of reward for your efforts, don't you think?

Extra Services

Personal Programmes

At DT Training we'll provide a 12 week personalised programme which targets your goals by varying considerably over the 12 weeks and containing 2 to 3 weekly session cards. We'll also spend an hour with you going through the programme to ensure that you carry out the techniques in the correct manner.

...after that it's up to you!

Circuits on the Common

Why not compliment your 1 on 1 session with one of our weekly circuit training sessions. They're fun, sociable and they'll get you really fit!

The sessions are £5 each week, no monthly fee and they suit every level of fitness – it really is the taking part that counts!

Tuesdays 7.30pm – 8.30pm, Wandsworth Common

