nardia norman
live life freely

WAFIC 2014: THE ABC'S OF FAT LOSS

PRESENTED BY NARDIA NORMAN
BPhEd, Dip MT, Certified Health Coach

The main building blocks for an effective fat loss program are:

A = Activity (FITT Principle)
- Frequency of training/activity
- Intensity: High vs Low intensity
- Time: Duration
- Type: Steady aerobics, intervals, resistance training
- Daily Movement

B = Bedtime
- Hormones and Hormonal Health
- Rest and Repair
- Sleep Hygiene

C = Calories
- What is a Calorie?
- Are calories important?
- Calorie Deficit
- Type of Calories
- Calorie Timing

CALORIES

- Many still rely on the ELEM (Eat Less, Exercise More) model of weight loss. Whilst this may work initially it does not last long term.
- Calorie deficit is vital for weight loss, however it must be in conjunction with Hormonal Balance – solely relying on a long term 'calorie deficit' approach will lead to problems. We must encourage people to think beyond the ELEM model!
- You must understand the basics of Metabolism and its function and how everyone's energy requirement is unique to them
- A Calorie is a Calorie; however the quality of the calorie is important and this will have a differing effect on an individual's physiology.
- Nutrient density of food is important
- Do the calculations:

nardia norman
live life freely

Working it out...

1 Determine BMR

*Use the Mifflin-St Jeor Formula (slightly more accurate than Harris-Benedict)
Men: RMR= (10 x weight in kg) + (6.25 x height in cm) – (5 x age) + 5
Women: RMR = (10 x weight in kg) + (6.25 x height in cm) – (5 x age) – 161
If you know body fat percentage them use the McKardle-Katch formula (this uses lean mass and therefore is more accurate.
Lean mass is calculated as body fat% x weight = X. Weight – X = lean mass)
RMR = 370 + (21.6 x lean mass in kg)

2 Determine TDEE (total daily energy expenditure) by applying Harris Benedict Formula

RMR x appropriate activity level = X Calories/day

Sedentary (little or no exercise): BMR x 1.2
Lightly active (light exercise/sports 1-3 days/week): BMR x 1.375
Moderately active (moderate exercise/sports 3-5 days/week): BMR x 1.55
Very active (hard exercise/sports 6-7 days a week): BMR x 1.725
Extra active (very hard exercise/sports & physical jobs): BMR x 1.9

3 Determine Calorie Deficit

Look at current Calorie requirement and their goal. Determine what calorie deficit will be needed (note: The bigger the person, and the more weight they have to lose the greater the calorie deficit; the more lean the person is, the lesser the calorie deficit)

4 Calculate the Macronutrient splits

Protein Fats Carbohydrate: Use a macro calculator to determine this based on percentages that seem appropriate for the individual.

Why Calculate?

Taking the time to do this exercise allows you to understand the calorie requirements of your client and will allow the both of you to make suitable choices for their nutrition and training. It allows for more accurate monitoring of their body composition whilst simultaneously educates the client about portion control.

As the client becomes more advanced they will get a better 'gage' on how to manipulate their body composition without having to overly rely on calorie counting and will eventually be able to use other methods such as 'eyeballing' or 'palm method' to determine their calories.

BEDTIME

- There is convincing evidence that getting less than ideal amounts of sleep are associated with weight gain and obesity
- This is due to a few things:
    1. Disruption of hormones (particularly appetite H's Ghrelin and Leptin, and HGH)
    2. Increase energy consumption due to change in appetite
    3. Decrease energy expenditure due to fatigue and lack of motivation
    4. Inability for body to repair and recover
- Improve sleep hygiene (provide strategies to clients if needed)

Hormone Imbalance:

Need to ensure that the following areas are also addressed

===>Gut Health
===>Thyroid Function
===>Adrenal Function
===>Inflammation
===>Stress

Dysfunction in any or all of these areas will impair a person's health and therefore their ability to achieve their body composition goals!

ACTIVITY

- Low intensity steady state (LISS) aerobic exercise versus High intensity intermittent exercise (HIIE)
- The role of resistance training in Fat Loss
- You cannot 'out exercise' poor nutrition or hormonal imbalance!

- Schedule in recovery or restorative sessions
- Incidental or 'accidental' activity counts!

1. LISS versus HIIE

Generally speaking, most people will gravitate towards 'cardio' oriented workouts when wanting to lose weight. This perception is well ingrained in general population.

In the ELEM (eat less, exercise more) of *chronic calorie restriction and over exercising*, traditional steady state aerobic workouts (*in the absence of any other type of training*) are detrimental to overall health and body composition.

Possible negative outcomes include:

- Increased cortisol levels (leading to fat gain, depressed immunity and increased appetite)
- Increased catabolism (break down of muscle)
- Decrease RMR
- Adrenal and Thryoid dysfunction

However is saying that, should steady state training be removed from a fat loss program? The answer is NO!

Benefits of SS and HIIE:

Steady State/LISS	HIIE
Increased calories burned (aids calorie deficit)	Improves both aerobic and anaerobic fitness
Sub max intensities (physically and mentally easier to perform)	Time efficient
Increased mitochondrial number and density	EPOC
Suitable for any one to perform	Aids in muscle retention/preservation
	Increase catecholamine response
	Increased skeletal muscle fatty acid oxidation
	Possible reduction in appetite

2. The role of Resistance Training (RT) in fat loss:

Research indicates that RT produces negligible fat loss results. Whilst it may not be great for fat loss per se, it has multiple other benefits.

Benefits of Resistance Training:

- ✓ Increased glucose control and insulin sensitivity

- ✓ Increased strength
- ✓ Increase lean muscle mass/preservation of muscle tissue
- ✓ Increases RMR
- ✓ Improves blood lipid profiles
- ✓ Decreases risk factors for metabolic syndrome
- ✓ Positive hormonal response (e.g Testosterone, Growth Hormone, iGF-1, Cortisol)

Types of RT:

- ✓ Full body workouts
- ✓ Compound exercises such as Deadlifts, Squats, Bench Press, Step Ups, Split Squats, Chins, etc.… (Need volume and intensity – multiple sets/reps and use weights above 70% 1RM)
- ✓ Can include Modified Strongman style training
- ✓ Use 'finishers' or other high intensity resistance methodologies

3. The importance of Recovery Sessions

Schedule into their program specific recovery sessions that address stretching, mobilization, yoga or massage.

4. Encourage Incidental Activity

Improve their overall movement throughout the day. Identify areas in their life where they can create more time for activity for example, walking to work instead of bus.

What should a Fat Loss program include?

A carefully designed program that incorporates *both* LISS and HIIE, in conjunction with RT will be effective. Therefore each week of training should include:

1. Steady state training (50 – 75% MHR)
2. High intensity interval training (75% + MHR)
3. Resistance Training
4. Restorative sessions eg yoga, mobilization session, stretching

Fat loss strategies for clients:

1. Explain metabolism to client and take them through the process of finding their BMR, TDEE, Calorie deficit and Macronutrient splits
2. Use a HR strap to monitor calories expended during sessions
3. Encourage use of tracking and logging of calories
4. Encourage recording of all training sessions, including energy levels and how their general wellbeing

5. Cycle periods of calorie deficits with 'off' periods, for example conduct 12 weeks of focused training and modified eating, then give them a break for a couple of weeks then repeat until goal is obtained
6. Educate them about appropriate foods – ones that are nutrient dense and energy sparse. Coach them how to prepare food, eat out, cook and organize their own nutrition
7. Create improved sleep hygiene by providing them with tips to improve their sleep
8. Closely monitor body composition changes by a DEXA scan, body fat %, girths and photos – be prepared to tweak dietary and training if needed

SELECTED REFERENCES:

Barbara Strasser and Wolfgang Schobersberger, "Evidence for Resistance Training as a Treatment Therapy in Obesity," Journal of Obesity, vol. 2011, Article ID 482564, 9 pages, 2011. doi:10.1155/2011/482564

International Journal of Obesity (2008) **32,** 684–691. *The effects of high-intensity intermittent exercise training on fat loss and fasting insulin levels of young women*. E G Trapp1, D J Chisholm2, J Freund1 and S H Boutcher1

J Strength Cond Res. 2012 Aug ;26(8): *Concurrent training: a meta-analysis examining interference of aerobic and resistance exercises*. Wilson JM1, Marin PJ, Rhea MR, Wilson SM, Loenneke JP, Anderson JC

Journal of Obesity. 2012; 2012(). *The Effect of High-Intensity Intermittent Exercise on Body Composition of Overweight Young Males.* M. Heydari, J. Freund, and S. H. Boutcher

Journal of Obesity, vol. 2011, "High-Intensity Intermittent Exercise and Fat Loss," Stephen H. Boutcher.

Sports Med. 2005;35(4):339-61. *Hormonal responses and adaptations to resistance exercise and training***.** Kraemer WJ1, Ratamess NA.

Notes:

A copy of the power points can be downloaded from: www.nardianorman.com/wafic2014

For any questions or enquiries please contact Nardia at Nardia@nardianorman.com or www.facebook.com/pages/Nardia-Norman-Coach

Thank you ☺

nardia norman
live life freely