

TRAINER TIPS | IS SPOT REDUCTION A THING?

WILL DOING CRUNCHES GIVE ME SIX PACK ABS?



SPOT REDUCTION DOESN'T WORK

The human body does not pull fat from specific areas of the body when exercising musculature of that specific area.



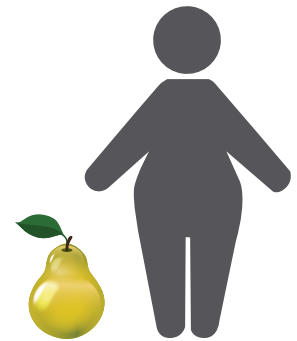
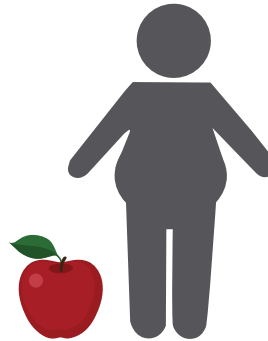
For example, doing 1,000 crunches won't shrink your stomach.



FAT DISTRIBUTION VARIES AMONG INDIVIDUALS

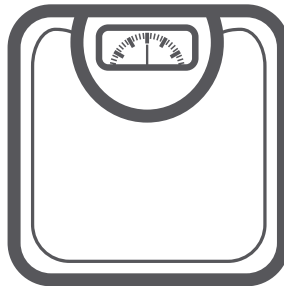
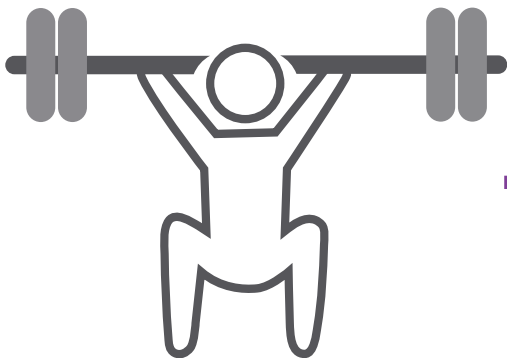
ANDROID | APPLE-SHAPED BODY

GYNOID | PEAR-SHAPED BODY



HOW TO LOSE BODY FAT?

CREATE A CALORIC DEFICIT THROUGH COMBINATION OF:



Resistance training using compound exercises (such as squats rather than leg extensions)

Diet

Cardiovascular exercise

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WHAT IS SPOT REDUCTION?

Contrary to popular belief, the human body does not pull fat from specific areas of the body when exercising the musculature of that specific area. Marketing and misinformation about “spot reduction” can be misleading. Clients looking for fat loss should focus on compound movements that involve high levels of muscle recruitment, which increases energy expenditure to a greater extent.

DISPELLING THE MYTH

While exercises that target specific areas of the body (such as crunches and the abdominal region) can utilize intramuscular fat as an energy source, they do not isolate and oxidize subcutaneous fat in that area preferentially. Intramuscular fat is a fuel source stored within muscle and, unlike subcutaneous fat, has no influence on health or appearance (Schoenfeld, 2011). A 2011 study looked at the effects of core exercises on abdominal fat for groups doing seven different abdominal exercises versus those who did not. Taking into account all other factors, there was no significant difference in abdominal subcutaneous fat at the end of those 6 weeks between the groups, showing that regional exercises do not impact the subcutaneous fat in that area (Vispute, et al., 2011). Another study performed in 2013 found that 12 weeks of training only the non-dominant leg resulted in reduced fat mass in the trunk and arms but showed no change in lean mass, fat mass, or fat percentage in either leg (Ramirez-Campillo, et al., 2013).

GENETICS AND REGIONAL FAT LOSS

An individual's bodyweight is the result of a number of factors including genetic, metabolic, behavioral, environmental, cultural, and socioeconomic influences. In addition, there are two types of fat distribution; gynoid (pear-shaped body) and android (apple-shaped body). An individual with a gynoid body type tends to store fat in the hip and thigh areas while android body types tend to store fat in the trunk and abdominal regions (Smith, et al., 2012). The take home message here is that bodyweight and fat distribution throughout the body is multi-factorial; each individual client will gain and lose body weight from various body areas despite focus on a specific region of the body during training.

MAXIMIZING FAT LOSS

A negative calorie balance is required for net weight loss, meaning an individual needs to utilize more calories than what is consumed on a daily basis. While this can be accomplished through dietary changes alone, it seems prudent to include resistance training (RT) to increase lean body mass (and subsequently increase or maintain resting metabolic rate) as well as cardiovascular training to increase caloric expenditure.

It has been well established that RT leads to favorable changes in muscle mass and body composition as well as strength, muscular endurance, bone density, cardiac risk factors, psychosocial well-being, and metabolism (Sword, 2012). Given that the greater the amount of muscle mass involved in a workout results in a greater total caloric expenditure (as well as other positive systemic hormonal responses), it

appears beneficial to emphasize total body, compound exercises (e.g., squats) over isolated exercises (e.g., leg extension) for clients seeking to improve their body composition.

The health-related benefits associated with aerobic exercise include enhanced insulin sensitivity, reduced body fat, increased bone mineral density, as well as improved cardiovascular and respiratory function (McCarthy, et al., 2012). Moderate-intensity steady state aerobic exercise utilizes a greater percentage of fat oxidation to fuel performance compared to high-intensity interval training (HIIT). However, research suggests that HIIT is superior to steady state aerobic exercise for improving body composition, VO_2 max, insulin signaling, and blood pressure (Schoenfeld, et al., 2009). Non-Exercise Activity Thermogenesis (NEAT) differs from structured physical activity and encompasses all of the energy expended from activity outside of exercise and normal bodily processes. In simple terms, it refers to how much someone is moving on a daily basis and can contribute to overall daily caloric expenditure. Examples of NEAT include everything from walking to the car and taking the stairs (instead of the elevator) to gardening and even shivering. Therefore, it may be helpful to encourage clients to increase daily caloric expenditure/lose weight to be more active throughout the day.

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