

### What it Takes for your Clients to Lose Fat and Keep it Off



#### FitCalgary 2018

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canfitpro

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### My Story



11 years of personal training at World Health.

6 years of nutrition coaching.

Presenting and educating for 6 years.

Online coach.

Sponsored athlete.

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It's no secret that most people in industrialized countries are unhappy with their weight.

Would you agree?



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Why are people having trouble losing weight?



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When people lose weight why do they struggle to keep it off?



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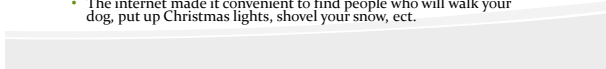
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### Labour Changes in the Last Century

- Invention of the personal automobile. (North American cities were designed for the industry.)
- Food manufacturing (No one needs to hunt, forage or garden anymore)
- Home appliances (Virtually no one washes their clothes by hand, the majority of people use a dish washer, and some of us have robots that are cleaning our homes.)
- Less than 20% of jobs in North America involve physical exertion.
- Teens spend up to 9 hours a day on social media. Adults spend approximately 2 on average.
- The internet made it convenient to find people who will walk your dog, put up Christmas lights, shovel your snow, ect.



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## Dietary Changes in the Last Century

- In the early part of the century the average person consumed 40kg of sugar per year. That has doubled since. In the 1700's the average person consumed about 2kg.
- The majority of food eaten today is processed.
- Evolving media and psychological research has allowed marketers to make food companies a lot of money selling their products.
- Our food contains less micro-nutrients due to industrial farming and quick turn over of fruits and vegetables.
- People generally ate less because they didn't have access to as many calories as we do today.

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## Stats

|                                     | All (Men and Women) | Men  | Women |
|-------------------------------------|---------------------|------|-------|
| Overweight or Obesity               | 70.4                | 73.7 | 66.9  |
| Overweight                          | 34.5                | 38.7 | 26.5  |
| Obesity (including extreme obesity) | 35.7                | 35   | 40.4  |
| Extreme obesity                     | 1.7                 | 5.5  | 9.9   |

2013-2014 Data US.

50% of the US is expected to be obese by 2025.

20% Worldwide or 1 in 5 adults. Many more will be considered overweight.

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## Stats

Downtown Calgary  
July 2016 -2018

220 Men  
BMI Average: 27  
BF Average: 22.9%

239 Women  
BMI Average: 26  
BF Average: 36%




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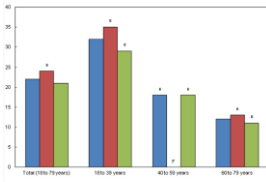
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**Chart 2**  
Proportion of adults aged 18 to 79 meeting the Canadian Physical Activity Guidelines, by age group and sex, Canada, 2012 and 2013



Notes: 18 to 79 years (data with a coefficient of variation of 10.0% to 13.7%).  
 \* Data are adjusted for population (data with a coefficient of variation (CV) greater than 33.3%, suppressed due to extreme sampling variability).  
 † According to the Canadian Physical Activity Guidelines, adults should accumulate at least 150 minutes of moderate-to-vigorous intensity physical activity of at least 10 minutes per week.  
 Source: Canadian Health Measures Survey, 2012 and 2013.

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## Canadian Physical Activity Guidelines

FOR ADULTS - 18 - 64 YEARS

**Guidelines**

- To achieve health benefits, adults aged 18-64 years should accumulate at least 150 minutes of moderate- to vigorous-intensity aerobic physical activity per week, in bouts of 10 minutes or more.
- It is also beneficial to add muscle and bone strengthening activities using major muscle groups, at least 2 days per week.
- More physical activity provides greater health benefits.

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## Importance of Consuming Quality Food

↑ food intake + ↓ physical activity = ↑ metabolic stress

This is what is driving the current obesity epidemic.

But when it comes to nutrition, it is not simply a process of calories in vs. calories out.

We now know that the body has regulatory mechanisms in place that maintain an appropriate nutrient balance.

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**Importance of Consuming Quality Food**

Adipose tissue not only stores fat, but when adipocyte (fat cells) nutrient stores are full, they release a hormone called leptin which signal to the brain (hypothalamus) that fat cell nutrient stores are full, and that satiety has been reached. This signals the body to stop eating.

The problem with highly processed foods is that nutrients are absorbed into the blood stream at an accelerated rate because the stomach does not need to break the nutrients down.

The fast absorption of nutrients into the blood stream out paces the bodies physiological ability (i.e leptin) to tell the brain satiety has been reached, resulting in the chronic over consumption of food at each meal.

This is also the reason why it is always recommended to eat slowly and chew your foods!

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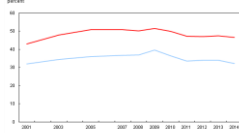
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**Importance of Consuming Quality Food**

Chart 1  
Percentage reporting that they consumed fruit and vegetables at least five times daily, by sex, household population aged 12 and older, Canada, 2001 to 2014



Source: Canadian Community Health Survey, 2001, 2003, 2005, 2007 to 2014

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If so many concentrated calories didn't exist. And Life was harder again. This wouldn't be an issue.




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### Overall Health - The Good and Bad News

You can be considered overweight and still have a lower risk of mortality as long as you are storing fat primarily in subcutaneous adipose deposits, and provided you have a good cardio-respiratory fitness and muscle mass.

However, any visceral fat will increase risk of cardiovascular disease and type 2 diabetes.

Waist circumference is the best predictor as it is a good measure of visceral adiposity.

Overall movement is more influential on your health than long periods of sedentary behaviour followed by intense exercise.

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### Weight Loss



Can occur through: body water, body fat, muscles, bones, tendons, ligaments, and organ tissue.

Most people want body weight loss through fat. However that is not always the case.

Why is that?

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### Water Loss

Occurs because of: dehydration, A reduction in carbohydrates, removal of inflammatory foods, changes in cortisol levels, a injury that has healed, a woman's cycle, change in climate or elevation, and a reduction in red meat or creatine supplementation.

These changes happen rapidly and can be quite significant in some people. Most of the time when a client says they lost 5lbs last week. You can bet the majority is water.

This weight loss is often the main driving factor over the draw to low carbohydrate diets.

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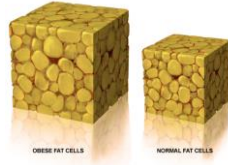
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Before we understand fat loss we must first understand the mechanisms behind it.



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### Fat Loss

Fat losses is driven by a decrease in caloric intake, but hormones dictate your appetite (i.e. ghrelin [hunger hormone] and leptin [satiety hormone] and where fat will be deposited (i.e. insulin, cortisol, estrogen).

Your body creates triglycerides from carbohydrates and fat eaten in the diet. If these triglycerides are not used as energy they are stored in fat cells (adipocytes) for future use. Remember your body is built for survival not aesthetics!

Adipose tissue expansion occurs in two ways:

- Adipocyte Hypertrophy (increase in fat cell size)
- Adipocyte Hyperplasia (increase in fat cell number)

The hypertrophy of fat cells following excess nutrient consumption (often resulting from the consumption of processed foods) indicates that the body needs to increase nutrient storage, resulting in hyperplasia.

The bad news about hyperplasia is that once you create a new fat cell it is not easy to lose it, as the average life of a fat cell is 10 yrs. So the large majority of fat loss is the result of a decrease in fat cell size.

This can bring about hormonal complications as a decrease in fat cell size causes a decrease in leptin levels (i.e. satiety hormone) increasing an individual's desire to consume nutrients.

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### The Fat Highway

The development of new fat cells is directly linked to the development of vasculature to supply the cell.

If you were all of a sudden to lose body fat through a healthier lifestyle you are now at risk to put this fat back on more rapidly, not only because leptin levels are decreased (i.e. satiety hormone), but because the (i.e. vascular, fat cell) required to store fat infrastructure has already been built.

Furthermore, if someone starts to overfeed and under exercise (e.g. liquid calories and processed food with a sedentary lifestyle), they may fill up their subcutaneous fat stores, requiring the body to direct the storage of excess nutrient visceraally. Which happens very easy if the highway has already been built. (In other terms, if you had a belly before your more likely to get it back.)

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### The Fat Highway

Genetics, environment, and hormones help to determine where fat is stored.

A genetic example would be lipodystrophy where individuals are unable to produce subcutaneous fat

A hormonal example would be when some females store more glenohumeral fat.

- This is driven by estrogen and why women have elevated glenohumeral stores. It is a healthy way for the body to store fat and is used for milk production when breast feeding.

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### What's the Solution?




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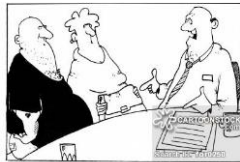
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### The solution is definitely not liposuction!

Liposuction will remove fat cells, but only subcutaneous fat cells (i.e. fat cells associated with metabolic health) forcing any excess nutrients consumed to be stored viscerally (i.e. fat cells associated with POOR metabolic health) increasing ones risk of developing insulin resistance, elevated cholesterol levels, and cardiovascular disease



"The liposuction will help, Mrs. Miggins...but it won't make him disappear completely!"

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The Simple Answer

Don't put the fat on in the first place. Just allow a little to accumulate through age. But of course it is often too late by the time someone makes a healthier lifestyle a priority.



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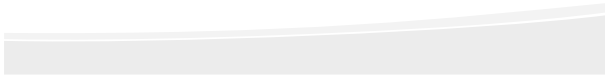
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The Next Best Thing

Stop the cycle of weight fluctuations now as the more you continue to encourage it the worst it gets with time.



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How many of you have clients who have been yo-yo'ing their whole life?



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### The Typical Cycle

Individuals does not prioritize their health.

They eat refined foods because its easy and addicting.

They drink too much liquid calories.

They take advantage of all the modern day convenience and expend minimal energy.

Life is too complicated and full of unnecessary stressors. This leads to high cortisol which is anabolic to fat and catabolic to muscle. As well, food often becomes a form of stress relief.

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### The Typical Cycle

Individual aims to lose weight quickly because of an upcoming trip or event.

Individual under eats and over exercise.

Weight is loss from all areas of the body including muscle.

Basal metabolic rate is reduced and leptin levels are reduced due to the rapid weight loss. (Individual is hungrier than before)

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### The Typical Cycle

Individuals return to how they ate or drank before as well as return to reduced activity.

They overfeed themselves filling up the fat cells again and potentially creating new ones.

When individual tries to lose weight the next time they will have to work even harder and reduce calories even more as their basal metabolic rate is reduced.

With time this becomes more difficult on the system and weight increases rapidly as it becomes a insurmountable feet to reduce weight even further.

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What Works?



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Game Theory

Definitive and infinite games. With weight loss definitive games are benchmarks in workouts or events that you participate in. Weight loss is the infinite game that never ends. (The train has no destination!!!)

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Fitness Professionals

As a fitness professional your duty is to listen and talk to your clients on a regular basis. Help them with strategies outside the gym to keep their ship pointing in the right direction.

Accountability and support.

Don't allow them to ever believe this will be easy. Empower them to have the strength to follow it through.

Just like most people brush their teeth, they can make time for other habits that is going to lead to healthier body.



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## The Practical Advise

Slow weight loss overtime.

Changing your relationship with food. (Is this really a reward? Are there some deep rooted issues that need to be explored?)

Manipulating your home and office environment for success.

Eat slowly, and eat quality foods (think leptin)

A focus on protein and the intake of mostly real food.

Outlet for stress non food, alcohol, drug or social media related.

A regular strength training program in conjunction with steady and interval based cardio. (Why could too much HIIT be bad?)

Avoid training in the grey zone. (deceased results + increased risk of injury)

Regular daily movement.

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Thank You!

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On Instagram @strydeperformance

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