

Thursday, November 06, 2008

Federal Trade Commission
Consumer Response Center
600 Pennsylvania Avenue, NW
Washington, DC 20580

To Whom It May Concern,

I read FTC's September 14, 2007 release entitled "FTC: Marketer Kevin Trudeau Violated Prior Court Order - Charges Him with Misrepresenting Contents of Book." ¹

"FTC works for the consumer to prevent fraudulent, deceptive, and unfair business practices and to provide information to help spot, stop, and avoid them." ²

In the above-referenced release, FTC cited several issues, some of which had to do with the diet scheme contained in Mr. Trudeau's book. Among them:

- it describes a complex, grueling plan that requires severe dieting
- According to the FTC, when consumers buy and read the book, they find it actually describes a complicated, expensive system involving daily injections, specialized cleanses and supplements, and severe food restrictions
- this phase also requires a 500 calorie/day diet for 21 to 45 days
- The FTC first sued Trudeau in 1998, alleging that he made false and unsubstantiated claims

The bullet points are quotes taken from the release. They are portions of sentences relevant to the matters I am raising with FTC.

It is my good faith opinion that even more "mainstream" diet schemes are "severe" to the point that they are essentially impossible for most to follow and that other advice/"information" they offer is tantamount to "false and unsubstantiated claims."

I am calling my concerns to the attention of the FTC.

As examples upon which I base my opinions, I will refer to diet plans presented in Jorge Cruise's and David Katz's *The 3-Hour Diet: How Low-Carb Diets Make You Fat and Timing Makes You Thin*, ³ Bob Greene's and Oprah Winfrey's *The Best Life Diet* ⁴ and Mehmet Oz's and Michael Roizen's *YOU: On A Diet: The Owner's Manual for Waist Management*. ⁵

¹ <http://www.ftc.gov/opa/2007/09/trudeau.shtm>

² *Id.*

³ Cruise, J. *The 3-Hour Diet: How Low-Carb Diets Make You Fat and Timing Makes You Thin*. New York, NY: HarperCollins 2005. Foreword by David L. Katz, MD.

⁴ Greene, B. *The Best Life Diet*. New York, NY: Simon & Schuster 2006. Foreword by Oprah Winfrey.

⁵ Oz, M. and Roizen, M. *You: On A Diet: The Owner's Manual for Waist Management*. New York, NY: Free Press 2006.

These schemes are popular and bestsellers.^{6 7 8}

Each is endorsed, one way or another, by Ms. Winfrey.^{9 10 11}

In addition to the information that follows, I opine that Ms. Winfrey and the others have engaged in:

- "unfair or deceptive advertising and marketing practices that raise health and safety concerns, as well as those that cause economic injury" and
- "fraudulent advertising practices."

These include "deceptive Internet marketing practices that develop in response to public health issues," specifically in the realm of weight loss and likely in response to the oft-reported overweight/obesity epidemic that results in compromised health.

I refer FTC to its "FTC Guides Concerning Use Of Endorsements And Testimonials In Advertising" and its "FTC Policy Statement On Deception" dated October 14, 1983, and currently available at the FTC website.

Please note this is not an exhaustive analysis of these diet books/programs and their exercise and caloric intake recommendations or the alleged "science" behind them.

1. Daily Caloric Intake Recommendations

To compare the recommendations found in these books, I direct FTC to *The Biology of Human Starvation* by Keys, et al.¹² For FTC's convenience, I am including data in Appendix A which were compiled from this source.¹³

Here are some values for daily caloric intakes excerpted from the referenced text:

Wartime Diets And Rations		Kcal/day
Dachau, Germany Concentration Camp	April 1945	533
Canadian POWs in Japanese POW Camp Near Hong Kong	January 1942	898
Dachau, Germany Concentration Camp	September 1944	1017

⁶ <http://www.nytimes.com/2005/04/17/fashion/sundaystyles/17diet.html>

⁷ <http://www.nytimes.com/2008/01/27/books/bestseller/0127besthardadvice.html>

⁸ <http://query.nytimes.com/gst/fullpage.html?res=9D0DE1D6123AF933A25751C0A96E9C8B63>

⁹ *The Best Life Diet*: <http://www.thebestlife.com/> and http://www.thebestlife.com/success_non.asp

¹⁰ *The 3-Hour Diet*: http://www.oprah.com/article/omagazine/health_omag_200608_craze/3 and <http://www.threehourdiet.plazadiscounts.com/page11.html>

¹¹ *YOU: On A Diet*: <http://www.oprah.com/contributor/health/droz> and

http://www.oprah.com/slideshow/health/weightloss/slideshow2_ss_yourbody_20061102/1

¹² Keys A, Brozek J, Henschel A, Mickelsen O, Taylor HL. *The Biology of Human Starvation*. Minneapolis, MN: The University of Minnesota Press 1950.

¹³ *Id.*, at 1239-1246.

Paris Insane Asylum – Vichy Government	April 1941	1436
Food Distributed in Netherlands - sedentary individuals	1944 III	1529
Food Distributed in Netherlands - sedentary individuals	1944 II	1585
Russian and British POWs in Tost, Germany	WW II	1611
Central Prison in Louvain, Belgium	July 1941	1647

The following are daily caloric intake recommendations from some of the representative experts, pre-exercise, as I understand them.¹⁴ All of the representative books appear to suggest that exercise is activity in addition to that in which consumers are presumed to normally engage. The pages from the diet expert's books providing caloric intake values are referenced below.

Diets ¹⁵	Kcal/day
Oz/Roizen YOU: On A Diet (to weigh 150 pounds, 2 pounds weight loss/wk)	400
Oz/Roizen YOU: On A Diet (to weigh 150 pounds, 1 pound weight loss/wk)	900
Cruise/Katz 3-Hour Diet (for males and females up to 199 pounds)	1450
Cruise/Katz 3-Hour Diet (for males and females 200 to 249 pounds)	1650

Integrating the two, yields the following:

“Wartime Diets And Rations” and “Diets”	Kcal/day
Oz/Roizen YOU: On A Diet (to weigh 150 pounds, 2 pounds weight loss/wk)	400
Dachau, Germany Concentration Camp	April 1945 533
Canadian POWs in Japanese POW Camp Near Hong Kong	January 1942 898
Oz/Roizen YOU: On A Diet (to weigh 150 pounds, 1 pound weight loss/wk)	900
Dachau, Germany Concentration Camp	September 1944 1017
Paris Insane Asylum – Vichy Government	April 1941 1436
Cruise/Katz 3-Hour Diet (male and female up to 199 pounds)	1450
Food Distributed in Netherlands - sedentary individuals	1944 III 1529
Food Distributed in Netherlands - sedentary individuals	1944 II 1585
Russian and British POWs in Tost, Germany	WW II 1611
Central Prison in Louvain, Belgium	July 1941 1647
Cruise/Katz 3-Hour Diet (male and female up to 249 pounds)	1650

Exercise recommendations are, in general, for about 300 Calories per day expenditure.¹⁶ Subtracting these from the diet scheme of Jorge Cruise and David Katz, results in the following

¹⁴ For Katz and Cruise only. Explained below in the body of the text.

¹⁵ Diet data from: Cruise, J. *The 3-Hour Diet: How Low-Carb Diets Make You Fat and Timing Makes You Thin*. New York, NY: HarperCollins 2005:85. Foreword by David L. Katz, MD; Oz, M. and Roizen, M. *You: On A Diet: The Owner's Manual for Waist Management*. New York, NY: Free Press 2006:238-239.

¹⁶ 2005 Dietary Guidelines Advisory Committee Report. Nutrition and Your Health: Dietary Guidelines for Americans. PART D: SCIENCE BASE. Section 2: Energy at http://www.health.gov/dietaryguidelines/dga2005/report/HTML/D2_Energy.htm; Steps to Healthier Women – Physical Activity, citing Ainsworth, B.E.; Haskell, W.L.; Whitt, M.C.; et al. Compendium of physical activities: An update of activity codes and MET intensities. *Medical Science and Sports Exercise* 32(9 Suppl):S498-504, 2000 at

daily caloric intakes to maintain/repair the body plus fuel activities of daily living and emergency needs:

“Wartime Diets And Rations” and “Diets”	Kcal/day
Oz/Roizen YOU: On A Diet (to weigh 150 pounds, 2 pounds weight loss/wk)	400
Dachau, Germany Concentration Camp	April 1945 533
Canadian POWs in Japanese POW Camp Near Hong Kong	January 1942 898
Oz/Roizen YOU: On A Diet (to weigh 150 pounds, 1 pound weight loss/wk)	900
Dachau, Germany Concentration Camp	September 1944 1017
Cruise/Katz 3-Hour Diet (male and female up to 199 pounds)	1150
Cruise/Katz 3-Hour Diet (male and female up to 249 pounds)	1350
Paris Insane Asylum – Vichy Government	April 1941 1436
Food Distributed in Netherlands - sedentary individuals	1944 III 1529
Food Distributed in Netherlands - sedentary individuals	1944 II 1585
Russian and British POWs in Tost, Germany	WW II 1611
Central Prison in Louvain, Belgium	July 1941 1647

I did not subtract an additional 300 exercise Calories from Oz’s and Roizen’s as they are included in their original calculations and were discounted earlier. (In distinction, Jorge and David did not include a number for exercise Calories in their recommendations.) Here is what Oz and Roizen say at pp. 238-239 of the hardcover edition:

So let’s see how it works.

Say you want to weigh 150 pounds and do an average of 300 physical activity calories (sic) per day – about what you do on our plan (more on some days and fewer on others). That means:

Your basic calories (sic) used are $8 \times 150 = 1,200$
 $+ 200 = 1,400$ ¹⁷
 $+ 300$ in activity = 1,700

So to maintain your desired weight, you’d need about 1,700 calories (sic) per day. To lose a pound a week, you’d need to decrease that by about 500 calories (sic) per day, or increase your physical activity by 500 calories (sic) a day, or a combination of the two.

Thus, to maintain/repair the body of someone who “want(s) to weigh 150 pounds,” (and starting from an unknown weight which could be 155, 255 or 355 pounds for example) and fuel their activities of daily living plus unanticipated needs, Oz/Roizen recommend 900 Calories per day if

<http://www.4woman.gov/Pub/steps/Physical%20Activity.htm>; Brooks GA, Fahey TD, Baldwin KM. *Exercise Physiology: Human Bioenergetics and Its Applications* (4th ed). New York, NY: McGraw-Hill 2005:633. Exercise recommendations vary by opining entity; see Brooks GA, Fahey TD, Baldwin KM. *Exercise Physiology: Human Bioenergetics and Its Applications* (4th ed). New York, NY: McGraw-Hill 2005:590.

¹⁷ The $((8 \times 150) + 200)$ Calories equation is from page 238 and is their way of calculating the resting metabolic rate. (discussed in more detail below)

one pound per week of weight loss¹⁸ is desired, and 400 Calories per day, by extension, if 2 pounds per week of weight loss¹⁹ are desired.²⁰ This seems to affirm that they consider it “safe”/“best” to lose weight at the rate of 1-2 pounds per week.²¹

That the prior excerpt from the book is intended to apply to those weighing more than 150 pounds and who “want to weigh 150 pounds” is clear from a preceding paragraph:²²

We’ve designed this diet and its serving sizes based on a person with a metabolic rate of 1,700 calories (sic). That is, the person who burns 1,700 calories (sic) a day through normal processes and activities can eat this to maintain his or her weight. To lose weight, the person would have to have a slightly smaller portion for dinner, for instance. If you burn 2,000 calories (sic) a day, you’ll lose weight using these portion sizes...To find your no-waist-loss point, find your resting metabolic rate and add your physical activities.

An easy way to estimate your resting metabolic rate is to multiply *your desired weight* in pounds by 8 and add 200...(italics added)

The real “resting metabolic rate” is based on one’s current state and not some hoped for future condition. (discussed in more detail below) By referring to the “desired weight,” Oz and Roizen make it clear that their prescription for caloric intake applies equally to persons weighing 175 or 200 or 275 or any weight greater than 150 pounds. The same could be said for a “desired weight” of 140 pounds, instructing a person who currently weighs 175 or 200 or 275 or any weight greater than 140 pounds to reduce their caloric intake to the “resting metabolic rate” of their “desired weight” in calculating caloric intake per this scheme. This, I submit, will result in a remarkable reduction in caloric intake as a starting point from which to further reduce Calories which they recommend. (“To lose a pound a week, you’d need to decrease that by about 500 calories (sic) per day, or increase your physical activity by 500 calories (sic) a day, or a combination of the two.”)

However, even if one starts at 150 pounds (which gives Mehmet and Michael the benefit of any possible doubt) and wants to lose weight, it appears as if their recommendations make Dachau lavish.²³ And their 400 Calories per day scheme needs to add a full 25% more Calories to equal Trudeau’s “500 calorie/day diet.” A dieter would require this 400 Calorie/day diet for fewer, the same as or more than “21 – 45 days.” This would depend on the starting weight.

¹⁸ 1700 Calories – 300 (exercise Calories burned) – 500 = 900 Calories.

¹⁹ 1700 Calories – 300 (exercise Calories burned) – 1000 = 400 Calories.

²⁰ Conventional thinking holds: “One pound of fat contains approximately 3,500 calories, so to lose one pound a week, a person should consume approximately 3,500 fewer calories per week. This can be done by reducing the daily intake by 500 calories per day (500 x 7 days will provide a deficit of 3,500 calories per week). To lose 2 pounds per week, a deficit of 1,000 calories per day is required.”

<http://www.nlm.nih.gov/MEDLINEPLUS/ency/article/001940.htm>

²¹ “A slow weight loss of 1 or 2 pounds a week, until the desirable body weight is reached, is best.” From:

<http://www.nlm.nih.gov/MEDLINEPLUS/ency/article/001940.htm>

²² Oz, M. and Roizen, M. *You: On A Diet: The Owner’s Manual for Waist Management*. New York, NY: Free Press 2006:238.

²³ Dachau’s 1017 Calories per day in September, 1944 is 113% of Oz’s and Roizen’s 900 Calories per day and Dachau’s 533 Calories per day in April, 1945 is 133.25% of Oz’s and Roizen’s 400 Calories per day.

For a heavier individual, following their advice and “estimat(ing) (his/her) resting metabolic rate” according to the “desired weight” equation above, the reduction in Calories is likely to be proportionately greater.

It is my good faith belief, that a look at the tables above suggests that the caloric reductions advocated by Katz and Cruise are, likewise, quite severe when compared to the referenced instances of intentional attempts to cause illness, suffering, discomfort and death during times of strife, i.e., “Wartime Diets And Rations.”

Bob Greene’s and Oprah Winfrey’s book,²⁴ offers a different approach to, what I contend is “severe dieting” (at least when compared to the data of Keys, et al.), through a complex set of exercise and caloric intake recommendations.

The following is a table of the exercise recommendations found on pages 44-46 of their book:

Activity Level	Minimum Number of Steps	Maximum Number of Steps	Strength Exercises
Level 0	0	3499	
Level 1	3500	5999	
Level 2	6000	9999	
Level 3	10000	13999	12 exercises
Level 4	14000	17999	24 exercises
Level 5	18000 or above	21999 ²⁵	30 exercises or more

Exercise is divided into 6 levels by the number of steps taken per day together with some unspecified strength activities which are added in Levels 3-5. They are unspecified in that no number of repetitions or sets or even descriptions of the exercises to be performed are provided – only the number of exercises per day and number of days per week are offered (e.g., for Level 5, “at least 3 times a week, a minimum of 10 exercises” from page 46). However, Bob and Oprah do extend readers the opportunity to “see (the Best Life Diet) website for some good options.”²⁶ The consumer can also find upsell options there, too.²⁷

The following is a table of their recommended daily caloric intakes:²⁸

Activity Level	Female Kcal/day	Male Kcal/day
Level 0	1500	1600

²⁴ Greene, B. *The Best Life Diet*. New York, NY: Simon & Schuster 2006. Foreword by Oprah Winfrey.

²⁵ Projected based on the other step ranges.

²⁶ *Id.*, at 50.

²⁷ <https://www.thebestlife.com>

²⁸ Greene, B. *The Best Life Diet*. New York, NY: Simon & Schuster 2006. Foreword by Oprah Winfrey:123.

Level 1	1600	1700
Level 2	1700	1800
Level 3	1800	2000
Level 4	2000	2000
Level 5	2000	2500-2550

These values include so-called “Anything Goes calories (sic)” which are apparently “caloric rewards” for engaging in physical activity.²⁹

Of interest, no caloric intake distinctions are made for people of different weights, i.e., apparently a 150-pounder at Activity Level 0 is to consume the same number of Calories as a 250-pounder at Activity Level 0 who is to consume the same number of Calories as a 350-pounder at Activity Level 0.

What is also of some interest re: their daily caloric intake recommendations, is the number of Calories available to the body once the exercise Calories are expended. It could be argued that these represent an approximation of the BMR/RMR (BMR = Basal Metabolic Rate; RMR = Resting Metabolic Rate; discussed in more detail below), but this would be grossly mistaken, in my opinion. These remaining Calories actually are the Calories allocated to all of the body’s other metabolic needs: the BMR/RMR + maintenance/repair + ((all activities of daily living + any unpredictable daily activities, e.g., emergencies) not recordable on a pedometer).

To calculate these remaining Calories, it is necessary to introduce a couple of assumptions which appear generally accepted.

First, there is a rule of thumb that 2000 steps approximate the number of steps one takes to walk a mile.³⁰ This appears to have some scientific research basis that at least gets it in the ballpark.³¹

Second, on average, a person burns about 100 Calories per mile traveled on foot. Clearly, no one number is precisely predictable for any given individual. However, for the sake of conversation, this number has gained popularity^{32 33 34 35} and even when factoring in body weight, pace and other considerations, as an average, 100 Calories per mile appears to be in the ballpark.³⁶

Using these assumptions, the following table provides the number of Calories Mr. Greene and Ms. Winfrey allocate to all of the body’s metabolic activities except those measurable with a pedometer. For females:

²⁹ *Id.*, at 116-117.

³⁰ <http://www.thewalkingsite.com/10000steps.html>

³¹ http://www.uthouston.edu/worklife/walking_program.html

³² <http://www.lipid.org/clinical/tlc/1000002.php>

³³ <http://www.collegian.psu.edu/archive/1998/03/03-04-98tdc/03-04-98d01-012.asp>

³⁴ <http://www.runnersworld.com/article/0,7120,s6-242-304-311-5903-0,00.html>

³⁵ <http://www.thewalkingsite.com/faq.html>

³⁶ See, e.g., McArdle WD, Katch FI, Katch VL. *Exercise Physiology: Energy, Nutrition and Human Performance* (5th Ed.). Baltimore: Lippincott, Williams & Wilkins (2001):214 (marathon runners burn between 2300 and 2400 Kcal) and Appendix C:1111-1112 and 1114; Brooks GA, Fahey TD, Baldwin KM. *Exercise Physiology: Human Bioenergetics and Its Applications* (4th ed). New York, NY: McGraw-Hill 2005:54.

Activity Level ³⁷	Kcal /day Females ³⁸	Kcal Expended Minimum Steps/Level ³⁹	Kcal /day After Minimum Steps ⁴⁰	Kcal Expended Maximum Steps/Level ⁴¹	Kcal /day After Maximum Steps ⁴²
Level 0	1500	0	1500	174.95	1325.05
Level 1	1600	175	1425	299.95	1300.05
Level 2	1700	300	1400	499.95	1200.05
Level 3	1800	500	1300	699.95	1100.05
Level 4	2000	700	1300	899.95	1100.05
Level 5	2000	900	1100	1099.95	900.05

Applying these calculations to males, using the same procedures as described for females, yields these results:

Activity Level ⁴³	Kcal /day Males ⁴⁴	Kcal Expended Minimum Steps/Level ⁴⁵	Kcal /day After Minimum Steps ⁴⁶	Kcal Expended Maximum Steps/Level ⁴⁷	Kcal /day After Maximum Steps ⁴⁸
Level 0	1600	0	1600	174.95	1425.05
Level 1	1700	175	1525	299.95	1400.05
Level 2	1800	300	1500	499.95	1300.05
Level 3	2000	500	1500	699.95	1300.05
Level 4	2000	700	1300	899.95	1100.05
Level 5	2525 ⁴⁹	900	1625	1099.95	1425.05

³⁷ Refers to the Activity Level classification on pages 44-46 of the book and *vide supra*.

³⁸ Daily caloric intake recommendations differ between the genders.

³⁹ Calculated by dividing the recommended minimum number of daily steps by 2000 to get miles per day, then multiplying the result by 100 Calories.

⁴⁰ Calculated by subtracting the number of Calories expended performing the minimum number of steps for the given Activity Level from the recommended daily caloric intake for that Level.

⁴¹ Calculated by dividing the recommended maximum number of daily steps by 2000 to get miles per day, then multiplying the result by 100 Calories.

⁴² Calculated by subtracting the number of Calories expended performing the maximum number of steps for the given Activity Level from the recommended daily caloric intake for that Level.

⁴³ Refers to the Activity Level classification on pages 44-46 of the book and *vide supra*.

⁴⁴ Daily caloric intake recommendations differ between the genders.

⁴⁵ Calculated by dividing the recommended minimum number of daily steps by 2000 to get miles per day, then multiplying the result by 100 Calories.

⁴⁶ Calculated by subtracting the number of Calories expended performing the minimum number of steps for the given Activity Level from the recommended daily caloric intake for that Level.

⁴⁷ Calculated by dividing the recommended maximum number of daily steps by 2000 to get miles per day, then multiplying the result by 100 Calories.

⁴⁸ Calculated by subtracting the number of Calories expended performing the maximum number of steps for the given Activity Level from the recommended daily caloric intake for that Level.

⁴⁹ The average of 2500-2550 Calories per day for this Activity Level found on page 123 and *vide supra*

Not included in the energy calculations are Calories expended performing Bob's and Oprah's alleged strength activities. (There is no certainty that the strength activities are actually performed anaerobically, i.e., properly and productively. In fact, the opposite appears likely from the text.) These would further diminish the Calories available to the body for maintenance, etc., as no added replenishment plan is either offered or proposed.⁵⁰

I suggest it is noteworthy that the almost certainly overestimated amount of Calories recommended by these experts,⁵¹ Oprah and Bob, falls between 2 more Calories than Canadian POWs in a Japanese POW Camp Near Hong Kong were fed (at the low end) and 14 Calories more than the Calories fed to Russian and British POWs in Tost, Germany during WWII (at the high end).⁵² The more accurate numbers incorporating the Calories burned in performing their "strength" exercises, must be lower.

Further, I submit it is of some interest that as one increases their Activity Level following this scheme, the actual number of Calories remaining for the body following exercise generally decreases.⁵³ There are fewer Calories remaining for the body's needs of those who are most active.⁵⁴

As the goal of a proper anaerobic (strength) training program is lasting increase in strength⁵⁵ and as increasing strength lastingly demands increasing muscle mass⁵⁶ and as increased muscle mass adds weight to the body and cannot be accomplished when one is in a negative caloric balance, i.e., losing weight, their scheme seems not only semi-starvation severe but the claims of effective strength exercise appear false and unsubstantiated. This motif of accreting muscle mass while losing body weight is found in all the representative schemes and is discussed in more detail below.

Perhaps another comparison would be helpful.

In the Warsaw Ghetto, "according to the data obtained from the department of supply," the diet was 800 Calories daily⁵⁷ with per diem intakes of 785-1665 Calories reported.⁵⁸ Per the source

⁵⁰ Beyond the so-called "Anything Goes calories (sic)" which have already been factored in.

⁵¹ The calculated caloric intakes for, at least, Levels 3-5 must be overestimated as the strength exercise Calories were not subtracted since they are unknowable from their book. Also, as no distinctions for caloric intake recommendations are based on starting weight, the heavier the consumer, the generally greater the reduction in Calories. Thus a 250 pound person suffers a larger caloric deprivation than a 175 pound person at the same Activity Level.

⁵² See above and Appendix A. The range mentioned combines caloric intakes post-activity for females and males.

⁵³ The exception is for males at Level 5.

⁵⁴ Men at Level 5 are an exception, except, even at that Level, men who exercise more have fewer Calories available than men who exercise less.

⁵⁵ McArdle WD, Katch FI, Katch VL. *Exercise Physiology: Energy, Nutrition and Human Performance* (5th Ed.). Baltimore: Lippincott, Williams & Wilkins (2001):500.

⁵⁶ *Id.*, at 505. There is a "near-linear relation between strength and muscle size..." and "the initial gains in muscular strength with resistance training result largely from neural factors instead of actual structural changes within muscle fibers."

⁵⁷ Winick, M. Translated by Osnos, M. *Hunger Disease: Studies By The Jewish Physicians In The Warsaw Ghetto...* New York, John Wiley & Sons. 1979:13. Originally published in French and Polish in 1946 by JDC as *Maladie De Famine*.

of these latter values, the Calories were occasionally “supplemented” by “soup kitchens and the black market.” Death was expected to occur in 3 months and “during the first 18 months of the Warsaw ghetto’s existence, 15-18% died of starvation.”⁵⁹

It appears from the cited data that the mainstream diet schemes of Oz, Roizen, Cruise, Katz, Greene and Winfrey, arguably require “severe dieting” and may contain “false and unsubstantiated claims,” a la Kevin Trudeau.

Some consumers may even find pursuing dieting the way of these experts, “grueling.”

Possibly, for example, Oz and Roizen’s assertions that their program “make(s) eating so easy and automatic that you never realize that you’re dieting” and that the consumer will “never feel hungry” and Bob/Oprah’s assertions that their program “make(s) it simple to meet your daily energy and nutrient requirements” are also misleading, false and unsubstantiated. (from the dust jackets of the respective books)

I have been unable to find any references suggesting that the people in Dachau or the Warsaw Ghetto, for example, felt as good about their fare or were unaware of hunger.

2. Daily Caloric Restrictions

Although I am concerned that the daily caloric intake recommendations of the representative experts are insufficient for the average overweight/obese customer to voluntarily maintain sufficiently long to lose the desired amount of weight, despite the assurances of the representative experts to the contrary, I further my contention by asking the FTC to also consider these recommendations in light of the daily caloric restrictions they impose.

I submit that this has value in evaluating weight reduction programs because the magnitude of reduction in energy (Calories) can have an effect on a person’s ability to follow the recommendations.

It is known that energy deficits of 15 – 20% are met with resistance, discomfort and negative behavioral changes.⁶⁰

Determining the severity of the caloric intake reduction, therefore, may relate to a person’s ability to succeed.

To do this, from one perspective, it is necessary to discuss the Basal Metabolic Rate or BMR.

The basal metabolic rate is the:

⁵⁸ Sandler AJ, Wellman NS, Stier OB. Holocaust Survivors Report Long-Term Effects on Attitudes Toward Food. *Journal of Nutrition Education and Behavior*, Vol. 36, Issue 04, April, 2004:189.

⁵⁹ *Id.*

⁶⁰ Drummond J. Foreword in Keys A, Brozek J, Henschel A, Mickelsen O, Taylor HL. *The Biology of Human Starvation*. Minneapolis, MN: The University of Minnesota Press 1950:xiv.

minimum level of energy to sustain vital functions in the waking state...Knowledge of BMR establishes the important energy baseline for constructing a sound program of weight control through food restriction, exercise or a combination of both. In most instances, so-called basal values measured under controlled laboratory conditions fall only slightly below values for resting metabolic rate (RMR)...For this reason the term RMR sometimes substitutes for BMR in many situations...For the typical person, RMR accounts for about 60 to 75% of TDEE...⁶¹

The terms BMR and RMR will be used interchangeably.

Per the above, to determine the approximate TDEE, one can multiply BMR/RMR by 1.5, ⁶² since BMR is 60-75% of TDEE. The average of the range is 67.5% or close to 2/3, which is 66.7%. Two-thirds (66.7%) multiplied by 1.5 = 100%.

Simply comparing the caloric intake recommendations of the representative experts to the BMR ⁶³ demonstrates that, almost uniformly, the total caloric intake recommendations fall below it. BMR starts at an approximately 33 1/3% reduction in caloric intake from the TDEE. ⁶⁴

To generate the values for Basal Metabolic Rate ⁶⁵ and, then, by derivation, the TDEE, the following formulas are considered acceptable approximations:

For women, multiply weight in pounds by 10 and for men, multiply weight in pounds by 11 to get the BMR.⁶⁶

To calculate TDEE, the BMR results are increased by 50%. ⁶⁷ This generates a TDEE that is the ballpark number of Calories necessary to keep weight stable and does not include the additional Calories expended on any exercise regimen recommended by the referenced experts.

Before continuing this analysis, I point out to FTC that it is not possible to apply it to Bob's and Oprah's scheme as their caloric recommendations are not based on anything having to do with the consumer's body weight and there is no mention of weight making any difference in the number of Calories the customer is told to consume. Only "Activity Level" seems to matter. ⁶⁸ Therefore, this scrutiny will be limited to Katz/Cruise and Oz/Roizen.

⁶¹ TDEE = Total Daily Energy Expenditure.

⁶² This is equivalent to increasing the BMR/RMR by 50%

⁶³ See Appendix B.

⁶⁴ TDEE is about 150% of RMR. $150\% * 0.67 = 100\%$. $1.00 - 0.67 = 0.33$.

⁶⁵ the rate at which heat is produced by an individual in a resting state [syn: BMR]. Source: *WordNet* ® 2.0, © 2003 Princeton University

⁶⁶ "Your body needs a certain number of calories per day to maintain bodily functions—referred to as your Basal Metabolic Rate (BMR). You can estimate your BMR by multiplying your current weight (in pounds) by 10 for women, 11 for men." From: http://www.pdrhealth.com/content/lifelong_health/chapters/fgac03.shtml

⁶⁷ For a BMR/TDEE calculator, see Wisconsin Department of Health Services, at <http://dhs.wisconsin.gov/Health/physicalactivity/Sites/Worksitealpha.htm>, linking to <http://nat.crgq.com/energy/ec.html>

⁶⁸ Greene, B. *The Best Life Diet*. New York, NY: Simon & Schuster 2006. Foreword by Oprah Winfrey:156.

Using the assumptions mentioned, to determine how many fewer Calories than the BMR the experts want consumers to ingest, it is necessary to subtract the expert's daily caloric intake recommendation from the BMR.

To determine how many fewer Calories than the TDEE the experts want consumers to ingest, the RMR is multiplied by 1.5 and the expert's daily caloric intake recommendation is subtracted from that product.

To determine the percent reduction from RMR, the expert's daily caloric intake recommendation is divided by the RMR, that quotient is subtracted from 1.0 and the remainder is multiplied by 100.

To determine the percent reduction from TDEE, the expert's daily caloric intake recommendation is divided by the TDEE, that quotient is subtracted from 1.0 and the remainder is multiplied by 100.

Performing the calculations as described, and which are found in Appendix B, demonstrates that Katz/Cruise and Oz/Roizen expect their consumers to ingest significantly fewer Calories than the energy deficits of 15 – 20% that are met with resistance, discomfort and negative behavioral changes.⁶⁹

The percentage of daily caloric reduction will vary according to the starting weight of the consumer. The ranges of the percentage deficits from 160 – 300 pounds, based on the expert's daily caloric intake recommendations, are:

Percent reduction from BMR post-exercise (recommended exercise Calories subtracted):

Katz/Cruise – Females: 28 – 47%⁷⁰

Males: 35 – 51%

Oz/Roizen – Females: 8 – 13% (Calories for weight loss not subtracted)⁷¹

Males: 16 – 21% (Calories for weight loss not subtracted)

Percent reduction from BMR post-exercise (recommended exercise Calories subtracted):

Oz/Roizen – Females: 30 – 39% (Calories for 1 pound per week weight loss subtracted)

Males: 36 – 44% (Calories for 1 pound per week weight loss subtracted)

Percent reduction from BMR post-exercise (recommended exercise Calories subtracted):

⁶⁹ Drummond J. Foreword in Keys A, Brozek J, Henschel A, Mickelsen O, Taylor HL. *The Biology of Human Starvation*. Minneapolis, MN: The University of Minnesota Press 1950:xiv.

⁷⁰ Katz/Cruise claim that a weight loss of 2 pounds per week is included in their Calorie intake calculations. (“2 pounds every week” (from the front cover dust jacket) and “As your weight drops, move to the next calorie (sic) selection to continue losing 2 pounds a week.” (from p.85))

⁷¹ Oz/Roizen do not include the reduction of Calories for a 1-2 pound per week weight loss in their Calorie intake calculations. Their calculations are for RMR + 300 exercise Calories. (pp. 238-239) From that starting point, 500 – 1000 Calories per day are subtracted for 1 – 2 pounds per week weight loss.

Oz/Roizen – Females: 47 – 70% (Calories for 2 pounds per week weight loss subtracted)
Males: 52 – 73% (Calories for 2 pounds per week weight loss subtracted)

But BMR/RMR represents only about 2/3 of the Total Daily Energy Expenditure (TDEE). From the TDEE, the deficits of the experts range as follows:

Percent reduction from TDEE post-exercise (recommended exercise Calories subtracted):

Katz/Cruise – Females: 52 – 64%
Males: 56 – 68%
Oz/Roizen – Females: 38 – 42% (Calories for weight loss not subtracted)
Males: 44 – 47% (Calories for weight loss not subtracted)

Percent reduction from TDEE post-exercise (recommended exercise Calories subtracted):

Oz/Roizen – Females: 53 – 59% (Calories for 1 pound per week weight loss subtracted)
Males: 58 – 63% (Calories for 1 pound per week weight loss subtracted)

Percent reduction from TDEE post-exercise (recommended exercise Calories subtracted):

Oz/Roizen – Females: 64 – 80% (Calories for 2 pounds per week weight loss subtracted)
Males: 68 – 82% (Calories for 2 pounds per week weight loss subtracted)

However, there remains a problem with the Oz/Roizen values. They are too generous.

In the analysis, the daily caloric intake recommendations were determined using their formula, but were based on the consumer's *current* or *starting* weight. Oz/Roizen instruct that to determine one's RMR, the consumer should use their "*desired weight*."⁷² This will decrease the number of Calories ingested and increase the severity of the diet, relative to starting body weight.

The caloric restrictions imposed by Oz and Roizen are arguably the most Draconian. Looking at their numbers differently, but still in their own words, we see additional evidence of what can reasonably be interpreted as a "grueling plan that requires severe dieting."

Oz and Roizen claim that "every pound of muscle burns between 40 and 120 calories (sic) a day just to sustain itself..."⁷³

This means that their recommendation of 1400 Calories per day, which represents their calculation of the resting metabolic rate⁷⁴ for a person who "want(s) to weigh 150 pounds" is only enough energy to power between 11.67 and 35 pounds of muscle at rest.⁷⁵

⁷² Oz, M. and Roizen, M. *You: On A Diet: The Owner's Manual for Waist Management*. New York, NY: Free Press 2006:238.

⁷³ *Id.*, at 138.

Suppose muscle constitutes 45% of a man’s body mass and 36% of a woman’s. These percentages are the actual ones used in the calculations of the “reference man” and “reference woman.”⁷⁶ The reference man and woman “model integrates the average physical dimensions from thousands of individuals measured in large-scale civilian and military anthropometric surveys with data from laboratory studies of tissue composition and structure.”⁷⁷

If we further assume an actual 150-pound person and not someone heavier who “want(s) to weigh 150 pounds,” then using the standard reference person figures, the man is composed of 67.5 pounds of muscle and the woman is composed of 54 pounds of muscle.⁷⁸

Assuming Oz’s and Roizen’s expert assertion that “every pound of muscle burns between 40 and 120 calories (sic) a day just to sustain itself...,” then the number of Calories at rest that the muscle of the standard reference man burns is between 2700 and 8100 and the number of Calories at rest that the muscle of the standard reference woman burns is between 2160 and 6480.⁷⁹

Using their own numbers and combining the values for males and females, puts Oz’s and Roizen’s example in a daily caloric deficit of between 760 and 6700 Calories.⁸⁰

But this is only for muscle at rest and muscle is not even a top burner of Calories in the big picture of the body’s energy utilization at rest, so analyzing the severity of the caloric restrictions, using Oz’s and Roizen’s numbers cannot stop here.

Muscle comprises only 18% of resting metabolism.⁸¹ Muscle is fourth after liver, brain and “remainder.”

Oxygen Consumption for Various Body Tissues At Rest

Organ	Percentage of Resting Metabolism
Liver	27
Brain	19
Heart	7
Kidneys	10
Skeletal Muscle	18

⁷⁴ “An easy way to estimate your resting metabolic rate is to multiply *your desired weight* in pounds by 8 and add 200...”*Id.*, at 238.

⁷⁵ $1400/120 = 11.67$; $1400/40 = 35$.

⁷⁶ McArdle WD, Katch FI, Katch VL. *Exercise Physiology: Energy, Nutrition and Human Performance* (5th Ed.). Baltimore: Lippincott, Williams & Wilkins (2001):761.

⁷⁷ *Id.*, at 761-762.

⁷⁸ $150 * 0.45 = 67.5$; $150 * 0.36 = 54$.

⁷⁹ $67.5 * 40 = 2700$ and $67.5 * 120 = 8100$. $54 * 40 = 2160$ and $54 * 120 = 6480$.

⁸⁰ $2160 - 1400 = 760$ and $8100 - 1400 = 6700$.

⁸¹ McArdle WD, Katch FI, Katch VL. *Exercise Physiology: Energy, Nutrition and Human Performance* (5th Ed.). Baltimore: Lippincott, Williams & Wilkins (2001):192

Remainder	19
Total	100

Source: McArdle WD, Katch FI, Katch VL. *Exercise Physiology: Energy, Nutrition and Human Performance* (5th ed.); Lippincott, Williams & Wilkins, 2001; p.192.

Because muscle only accounts for 18% of the resting metabolism, it is necessary to multiply Oz's and Roizen's numbers by 5.5 to get ~100% RMR.⁸²

Again, assuming the standard reference man and woman, this results in an RMR of between 14,850 and 44,550 for the man and between 11,880 and 35,640 for the woman.⁸³

TDEE would be about 50% higher – between 22,275 and 66,825 for the man and between 17,820 and 53,460 for the woman.

I submit that this result, based on Oz's and Roizen's assertions, is a "fad" high when applied in the real world and the numbers perpetrated on the consumer by them are not only flawed, but misleading. They use this hook of "every pound of muscle burns between 40 and 120 calories (sic) a day just to sustain itself..." to dupe (in my opinion) consumers into believing that their exercise program, in the face of a negative caloric intake of between 10,480 and 43,150⁸⁴ Calories daily (using their figures and combining the values calculated for the man and woman and only from the RMR, not TDEE), will result in muscle gain. (see next section) As they deceptively and without substantiation (in my opinion) put it, "When you add a water bottle full of muscle to your body, you're able to burn a refrigerator full of fat."⁸⁵

I further submit that, per my understanding, their scheme may qualify as severe dieting, with severe food restrictions (calorically speaking) and is based on false and unsubstantiated claims.

(In her book *Ultimate Fitness*, Gina Kolata, using Dr. Claude Bouchard⁸⁶ as the authority, wrote that the metabolic rate of resting muscle is very low. "Skeletal muscle burns about 13 Calories

⁸² $18\% * 5.5 = 99\%$ (rounded to 100).

⁸³ Male: $2700 * 5.5 = 14,850$.

$8100 * 5.5 = 44,550$.

Female $2160 * 5.5 = 11,880$.

$6480 * 5.5 = 35,640$.

⁸⁴ $11,880 - 1,400 = 10,480$ and $44,550 - 1,400 = 43,150$. This is just from the BMR/RMR. From the TDEE, the calculated deficits are greater.

⁸⁵ Oz, M. and Roizen, M. *You: On A Diet: The Owner's Manual for Waist Management*. New York, NY: Free Press 2006:138.

⁸⁶ From <http://www.obesity.chair.ulaval.ca/boucharde.html>

Claude Bouchard, Ph.D. was the first Chair of the Donald B. Brown Obesity Research Chair from 1997 to 1999. He is now the director of the Pennington Biomedical Research Center at Baton Rouge.

His research focuses primarily on the genetic and molecular basis of obesity, the metabolic complications associated with obesity, as well as the genetic and molecular basis of the response to regular physical activity in terms of the body composition, cardiovascular and diabetes risk factors.

Dr. Bouchard is a member of numerous associations including: the American Society of Human Genetics, the Human Biology Association, the North American Association for the Study of Obesity, the American Physiological Society, the American Institute of Nutrition, the American Society of Clinical Nutrition, the American College of Sports Medicine, the Canadian Society for Exercise Physiology, the American Association for the Advancement of Science and the Association canadienne-française pour l'avancement

per kilogram of body weight over twenty-four hours when a person is at rest," citing researcher Claude Bouchard.⁸⁷ Dr. Bouchard thus places the number of Calories a pound of resting muscle burns at 5.9 per day.⁸⁸)

That it is possible to conclude that their numbers are peculiar and misleading, I believe is further evidenced by the following from page 142 of their book:

That's pretty crucial⁸⁹ when you consider that we lose an average of 5 percent of our muscle mass every ten years after the age of thirty-five – if we don't do anything about it... Today we see drastic effects when we lose muscle – we gain weight. If you don't intentionally rebuild muscle through exercise, every ten years you'll need to eat 120 to 420 fewer calories (sic) each day to maintain your current weight.

Again, using their numbers that "every pound of muscle burns between 40 and 120 calories (sic) a day just to sustain itself..." the implications of the prior paragraph are the following:

120 Calories are burned by between 1 and 3 pounds of muscle⁹⁰
420 Calories are burned by between 3.5 and 10.5 pounds of muscle⁹¹

This means that for an "average of 5 percent of our muscle mass (to be lost) every ten years after the age of thirty-five," a person must start with between 20 and 210 pounds of muscle.⁹²

des sciences (French-Canadian Association for the Advancement of Sciences). He is also a foreign member of the Académie royale de médecine de Belgique (Belgian Royal Academy of Medicine). In addition, he is the North American Vice President of the International Association for the Study of Obesity and Past President of the North American Association for the Study of Obesity as well as the Canadian Society for Exercise Physiology. He has also received a number of awards, including the Citation Award from the American College of Sports Medicine (1992), the Award of Excellence from the Canadian Society for Exercise Physiology, the Prix Benjamin Delessert de Nutrition (France 1993), the Willendorf Award from the International Association for the Study of Obesity (1994), the Keon Award from the Ottawa Heart Institute Alumni (1995), and the Prix Albert Creff from the Académie Nationale de Médecine (France 1997).

He was granted in March 1998 a Doctorate Honoris Causa for his work on the genetics of obesity and exercise by the Katholieke Universiteit Leuven, Belgium.

Dr. Bouchard has published over 550 scientific papers and has written or edited several books. He has made over 600 presentations at various conferences around the world. His research is currently supported by the Medical Research Council of Canada, the National Institutes of Health of the United States, the Heart and Stroke Foundation of Canada, the Natural Sciences and Engineering Research Council of Canada (NSERC), the Fonds pour la formation de chercheurs et l'aide à la recherche du Québec, and the Centre de recherche et d'information nutritionnelles (CERIN), France.

⁸⁷ Kolata, G. *Ultimate Fitness: The Quest for Truth about Health and Exercise*. Farrar Straus Giroux (2003).

⁸⁸ 13 Calories/2.2 pounds (1 kilogram in pounds) = 5.9 Cal/lb of muscle.

⁸⁹ Referring to "add(ing)...muscle," from page 141.

⁹⁰ $120/120 = 1$ and $120/40 = 3$.

⁹¹ $420/120 = 3.5$ and $420/40 = 10.5$.

⁹² $5\% * 20 = 100\%$

$20 * 1 = 20$.

$20 * 10.5 = 210$.

Without doing the math to extrapolate into the future for, let's say, 3 or 4 decades worth of muscle mass loss or approximating total body weight using the reference man and woman standard, I submit that their numbers are misleading.

This, I believe, is bolstered by their answer to the question "How Much Muscle Do You Have?"⁹³ Their answer is "most of us have between twenty and thirty pounds of muscle."⁹⁴

If we accept this "fact" of theirs to be true (and disregard the reference man and woman standard), then the following must hold (which still does not vindicate their scheme or validate their numbers, in my opinion):

1. "...we lose an average of 5 percent of our muscle mass every ten years after the age of thirty-five..."
2. "...most of us have between twenty and thirty pounds of muscle."
3. "every ten years you'll need to eat 120 to 420 fewer calories (sic) each day to maintain your current weight."
4. 5% of 20 – 30 pounds = 1.0 – 1.5 pounds.
5. 1.0 – 1.5 pounds burn between 120 – 420 Calories (according to these experts and in apparent conflict with their other "fact" that "every pound of muscle burns between 40 and 120 calories (sic) a day just to sustain itself...").⁹⁵
6. If "...most of us have between twenty and thirty pounds of muscle," then 100% of our muscle burns between 2400 – 12600 Calories (using their numbers from Step 5).⁹⁶
7. The caloric intake reduction then, for a person who "want(s) to weigh 150 pounds" with a recommended daily caloric intake of 1400 Calories⁹⁷ is between 1000 – 11200 Calories.⁹⁸
8. This is a reduction of between 41.7 – 88.9%.⁹⁹
9. Further this does not factor in that muscle only accounts for 18% of the RMR.

I submit that a caloric reduction plan of this magnitude, using their numbers, can be considered "severe dieting," requiring of "severe food restriction" (calorically speaking) and "grueling."

Or, perhaps, the claims made by these experts are "false and unsubstantiated." This is another consideration. Possibly a better one and worthy of FTC investigation.

3. Muscle Building/Preservation

⁹³ Oz, M. and Roizen, M. *You: On A Diet: The Owner's Manual for Waist Management*. New York, NY: Free Press 2006:142.

⁹⁴ *Id.*

⁹⁵ There appears to be another inconsistency since using the numbers in Step 5, a pound of muscle burns between 80 – 420 Calories. $120/1.5 = 80$ and $420/1 = 420$.

⁹⁶ $5\% * 20 = 100\%$. $20 * 120 = 2400$ and $30 * 420 = 12600$.

⁹⁷ Oz, M. and Roizen, M. *You: On A Diet: The Owner's Manual for Waist Management*. New York, NY: Free Press 2006:238-239.

⁹⁸ $2400 - 1400 = 1000$ and $12600 - 1400 = 11200$.

⁹⁹ $1400/2400 = 0.583$; $1.0 - 0.583 = 0.417$; $0.417 * 100 = 41.7\%$ and $1400/12600 = 0.111$; $1.0 - 0.111 = 0.889$; $0.889 * 100 = 88.9\%$

As mentioned above, Oprah and Bob address the matter of strength training in their diet scheme. They are not alone as Oz and Roizen and Cruise and Katz do, too.

Similarly, as Bob and Oprah suggested that muscle can be accreted to the body while consuming a number of Calories rivaling the conditions of POW or concentration camps, so, too, do Oz, Roizen, Katz and Cruise.

That the intent of these program's assertions is adding muscle mass and not simply preserving muscle mass is clear:

Oz and Roizen: "...muscle strength training...making for a bigger, stronger, and sturdier muscle fiber structure," "you create more muscle mass – muscle mass that you need to help you burn fat,"¹⁰⁰ "...you're building muscle mass,"¹⁰¹ "Building muscle is one component..."¹⁰² "Now the question is: How do we add more muscle, rather than just maintaining what we've got?...The answer, of course, lies in exercise..."¹⁰³

Katz and Cruise: "If you've been incorporating my 8 Minute Moves ® into your program, you've added some lean muscle, which may boost your weight on the scale. This is good weight, so don't stop! My 8 Minute Moves ® will add about one quarter – pound of muscle per week, or about 1 pound per month."^{104 105}

I submit that telling consumers that they can likely grow muscle on these programs requiring "severe dieting" (when compared to POW and concentration camps) is false and represents unsubstantiated claims.

As mentioned earlier, the goal of a proper anaerobic (strength) training program is lasting increase in strength.¹⁰⁶ Increasing strength lastingly requires increasing muscle mass.¹⁰⁷ Even if one disputes the prior two sentences that would not be fatal to the analysis, as the stated goal of these experts is increasing muscle mass and increased muscle mass adds weight to the body which cannot be accomplished when one is in a negative caloric balance, i.e., losing weight.

¹⁰⁰ Oz, M. and Roizen, M. *You: On A Diet: The Owner's Manual for Waist Management*. New York, NY: Free Press 2006:141.

¹⁰¹ *Id.*, at 142.

¹⁰² *Id.*, at 144.

¹⁰³ *Id.*, at 143.

¹⁰⁴ Cruise, J. *The 3-Hour Diet: How Low-Carb Diets Make You Fat and Timing Makes You Thin*. New York, NY: HarperCollins 2005. Foreword by David L. Katz, MD:255.

¹⁰⁵ As a thought experiment, perhaps FTC would ask why athletes, especially strength and speed athletes and various professional teams, do not simply follow Jorge's and David's suggestions since they apparently can gain 12 pounds of pure muscle per year, while "losing belly fat first," without "depriving (themselves)," and, at the same time, "stop(ping) hunger"? (Quoted from the front cover dust jacket of Cruise, J. *The 3-Hour Diet: How Low-Carb Diets Make You Fat and Timing Makes You Thin*. New York, NY: HarperCollins 2005. Foreword by David L. Katz, MD.) I submit the reason is that it does not work.

¹⁰⁶ McArdle WD, Katch FI, Katch VL. *Exercise Physiology: Energy, Nutrition and Human Performance* (5th Ed.). Baltimore: Lippincott, Williams & Wilkins (2001):500.

¹⁰⁷ *Id.*, at 505. There is a "near-linear relation between strength and muscle size..." and "the initial gains in muscular strength with resistance training result largely from neural factors instead of actual structural changes within muscle fibers."

Though not offering a specific numerical value, the energy balance equation, a derivative of the Laws of Thermodynamics, does offer the overarching principle governing adding mass to the body, including the accretion of muscle.¹⁰⁸

In accord with the first law of thermodynamics, the energy balance equation dictates that the body mass remains constant when caloric intake equals caloric expenditure...

*Weight loss occurs whenever energy output exceeds energy intake regardless of the diet's macronutrient mixture, reaffirming the first law of thermodynamics. (italics in original)*¹⁰⁹

NIH expresses the energy balance equation this way (emphasis in the original):¹¹⁰

Energy is another word for "calories." What you eat and drink is ENERGY IN. What you burn through physical activity is ENERGY OUT...

The same amount of **ENERGY IN** and **ENERGY OUT** over time
= **weight stays the same**
More **IN** than **OUT** over time = **weight gain**
More **OUT** than **IN** over time = **weight loss**

Thus, to gain weight, whether as muscle or fat, more Calories must be consumed than burned.

It seems clear from the scholarly texts that "...to maintain or increase lean body mass; energy intake must also be adequate."¹¹¹

In accordance with the energy balance equation, adequate energy intake in order "to maintain or increase lean body mass" cannot be fewer Calories in than out. To maintain or increase body mass, according to the immutable Laws of Thermodynamics, caloric intake must either be the same as the number of Calories burned (maintain body mass) or in excess of Calories burned (increase body mass).

On all of the schemes used as representatives in this complaint, energy intake is claimed to be negative, i.e., people are supposedly losing weight; in other words, losing body mass.

¹⁰⁸ This can be considered similar to the Law of Universal Gravitation where no specific number representing the resulting attraction is offered, but there is an overarching "principle" governing it, i.e., "For any pair of objects, they attract each other with a force that is directly proportional to the product of the masses of the objects and inversely proportional to the square of the distance between their centers of mass." From: <http://www.tech-faq.com/law-of-universal-gravitation.shtml>

¹⁰⁹ McArdle WD, Katch FI, Katch VL. *Exercise Physiology: Energy, Nutrition and Human Performance* (5th Ed.). Baltimore: Lippincott, Williams & Wilkins (2001):840-841 and see Brooks GA, Fahey TD, Baldwin KM. *Exercise Physiology: Human Bioenergetics and Its Applications* (4th ed). New York, NY: McGraw-Hill 2005:22.

¹¹⁰ <http://www.nhlbi.nih.gov/health/public/heart/obesity/wecan/learn-it/balance.htm>

¹¹¹ Brooks GA, Fahey TD, Baldwin KM. *Exercise Physiology: Human Bioenergetics and Its Applications* (4th ed). New York, NY: McGraw-Hill 2005:734.

This makes muscle-building/accreting muscle/adding weight as muscle mass on these schemes a seeming impossibility – at least for as long as the Laws of Thermodynamics continue to apply, which most would agree is likely to be forever given current knowledge.¹¹²

But not all are in agreement.

David Katz and Jorge Cruise overrule the Laws of Thermodynamics for their customers:

There is a popular nutritional axiom that goes like this: If the calories you eat equal the calories you burn, your weight will remain stable. If the calories you eat total more than the calories you burn, you'll gain weight. Finally, if the calories you eat are less than what you burn, you'll lose weight. **The axiom makes sense most of the time, but it isn't as black and white as it sounds.**¹¹³ (emphasis added)

(In passing, I point out to the FTC that, arguably, in telling people that the Laws of Thermodynamics do not apply to weight loss and that their scheme overcomes this failing, thus inferring its superiority, Katz and Cruise are deceiving the public and are making false claims that cannot be substantiated.)

The denial of this “axiom”¹¹⁴ is unsurprising, as they, too, claim to build muscle while one is in a negative caloric balance, the severity of which was discussed earlier:

If you've been incorporating my 8 Minute Moves ® into your program, you've added some lean muscle, which may boost your weight on the scale. This is good weight, so don't stop! My 8 Minute Moves ® will add about one quarter –pound of muscle per week, or about 1 pound per month.¹¹⁵

Their book, as do the others, appears to ignore another basic and necessary principle of successful strength/muscle building, i.e., proper overload.

...heavy muscular overload through resistance training, supported by adequate energy and protein intake (with sufficient recovery), significantly increases muscle mass and strength. Adequate energy intake ensures that no catabolism of protein available for muscle growth occurs from an energy deficit.¹¹⁶

¹¹² And see also, McArdle WD, Katch FI, Katch VL. *Exercise Physiology: Energy, Nutrition and Human Performance* (5th Ed.). Baltimore: Lippincott, Williams & Wilkins (2001):857:

...heavy muscular overload through resistance training, supported by adequate energy and protein intake (with sufficient recovery), significantly increases muscle mass and strength. Adequate energy intake ensures that no catabolism of protein available for muscle growth occurs from an energy deficit.

An “energy deficit,” which is fewer Calories in than out, is antithetical to muscle accretion.

¹¹³ Cruise, J. *The 3-Hour Diet: How Low-Carb Diets Make You Fat and Timing Makes You Thin*. New York, NY: HarperCollins 2005. Foreword by David L. Katz, MD:55.

¹¹⁴ <http://dictionary.reference.com/search?q=axiom>

¹¹⁵ Cruise, J. *The 3-Hour Diet: How Low-Carb Diets Make You Fat and Timing Makes You Thin*. New York, NY: HarperCollins 2005. Foreword by David L. Katz, MD:255.

¹¹⁶ McArdle WD, Katch FI, Katch VL. *Exercise Physiology: Energy, Nutrition and Human Performance* (5th Ed.). Baltimore: Lippincott, Williams & Wilkins (2001):857.

To increase strength lastingly, i.e., accrete muscle mass, the scholarly texts are quite clear:

Physical training is beneficial only as long as it forces the body to adapt to the stress of physical effort. If the stress is not sufficient to overload the body, then no adaptation occurs...

Muscles increase their strength and size when they are forced to contract at tensions close to their maximum. Muscles must be overloaded to hypertrophy and improve strength.¹¹⁷

The following is quoted from a *New York Times* article dealing, in part, with Jorge's and David's claimed results from the exercise plan. The expert in this piece is Dr. Tim Church of the Cooper Institute where Jorge claims to have "attended" (in this context, the meaning of "attended" is uncertain):¹¹⁸

January 19, 2003

Workout Revolution: Is Eight Minutes of Weights all You Need?

By Alex Kuczynski

...The best part of skipping the Stairmaster and going straight to the weight room, these fitness gurus say, is that an entire workout takes only a little longer than brushing and flossing your teeth. Jorge Cruise, another author, promises success with merely "8 Minutes in the Morning" (Harper Resource), his howto guide that reached No. 2 on Amazon.com's best-seller list last year.

...Dr. Tim Church, the director of clinical research at the Cooper Institute, a nonprofit foundation in Dallas that studies exercise and health, said that it is irresponsible to promote a 20-minute-a-week workout for any person, fit or not, and expect that person to remain healthy.

..."But it sounds like these guys have got a gimmick and are trying to make a buck."

...To be reasonably healthy, Dr. Church said, he recommends moderate exercise, for half an hour, five days a week.¹¹⁹

Likewise, Mehmet and Michael offer a similarly "irresponsible" exercise prescription, I submit. It is my belief that it has been established above that these experts also claim to consumers that their exercise program coupled with their weight loss program will result in added muscle mass.

¹¹⁷ Brooks GA, Fahey TD, Baldwin KM. *Exercise Physiology: Human Bioenergetics and Its Applications* (4th ed). New York, NY: McGraw-Hill 2005:461-463 and see McArdle WD, Katch FI, Katch VL. *Exercise Physiology: Energy, Nutrition and Human Performance* (5th Ed.). Baltimore: Lippincott, Williams & Wilkins (2001):460.

¹¹⁸ "He attended the University of California, San Diego, Dartmouth College, and the Cooper Institute for Aerobics Research." From "Jorge Cruise Diet & Fitness Coach" at AOL Coaches, <http://coaches.aol.com/diet/jorge-cruise/main/biography>. Note that Mr. Cruise also claims to have "attended...Dartmouth College..."

¹¹⁹ <http://www.seriousstrength.com/articles/ssnytarticle.pdf>

“In Chapter 11, we’ll outline the specifics of the plan...” In this chapter, entitled, “The YOU Activity Plan: Physical Strategies for Waist Management” the claim is reiterated.¹²⁰ Here is the exercise program they aver will “...add more muscle, rather than just maintaining what we’ve got...”¹²¹

Their program is called the “Twenty-Minute YOU Workout” and as part of “The YOU Activity Plan” consumers are to perform it “three times a week.”¹²² Arguably a bait and switch¹²³ as consumers were promised that all they were required to do to add muscle mass were:

Thirty minutes of strength/resistance training a week to rebuild strength proteins. (That’s once a week for thirty minutes, or split up into two fifteen-minute sessions or three ten-minute ones.)¹²⁴

Their workout includes both (what they call) strength exercises and stretching exercises. “Do the exercises in order; in general, you’ll strengthen a muscle and then stretch it.”¹²⁵

The Twenty-Minute YOU Workout comprises a total of 17 exercises.¹²⁶ There are apparently 6 stretching exercises and 11 strength exercises.¹²⁷ “The YOU twenty-minute workout includes a warm-up” which is presumably about 5 minutes in duration since the immediately preceding sentence is “Before beginning any exercise, warm up your muscles for about five minutes to prevent injury.”¹²⁸ Since the Twenty-Minute YOU Workout apparently begins with two strength training exercises (“Roll with it” and “The Chest Cross”¹²⁹), it appears as if the warm-up is performed prior to them. This results in about 15 minutes remaining for the YOU Workout.

To be most generous in interpreting their writings, let’s assume that the so-called strength exercises can actually be accomplished in 10 minutes. These exercises are promoted as “Using only your body, you work all of the muscles necessary for effective waist management – and that’s for both beginning and advanced exercisers.”¹³⁰ There is a combination of static and dynamic exercises.

I submit that a review of these exercises in the 10 minutes allotted to them and performed as described will lead to the conclusion that they, too, are of inadequate intensity to add muscle

¹²⁰ Oz, M. and Roizen, M. *You: On A Diet: The Owner’s Manual for Waist Management*. New York, NY: Free Press 2006:205 – 222.

¹²¹ *Id.*, at 143.

¹²² *Id.*, at 207: “Three Times A Week: Do the Twenty-Minute YOU Workout.”

¹²³ 3 times/week * 20 minutes = 60 minutes.

¹²⁴ Oz, M. and Roizen, M. *You: On A Diet: The Owner’s Manual for Waist Management*. New York, NY: Free Press 2006:143.

¹²⁵ *Id.*, at 207.

¹²⁶ *Id.*, at 209 – 222.

¹²⁷ “Apparently” as they claim that stretches are “labeled with an S”(at 209); however, I was unable to find any such labeling. There are some exercises with “stretch” in the title. I have considered only those as stretching exercises in this discussion.

¹²⁸ Oz, M. and Roizen, M. *You: On A Diet: The Owner’s Manual for Waist Management*. New York, NY: Free Press 2006:210.

¹²⁹ *Id.*, at 209.

¹³⁰ *Id.*, at 206.

mass, even if caloric intake were adequate, i.e., more Calories consumed than burned, which it is not.

These authors, too, make, in my opinion, “false and unsubstantiated claims” re: the effects of their exercise programs.

As a bottom line, I submit that the physical activity regimens stated in the representative diet books (and referred-to books, e.g., Cruise’s *8 Minutes in the Morning*) are inadequate to result in the claimed outcomes. They are far cries from the required level of overload needed to accomplish lasting muscle/strength gain. (Of course, even if their exercise recommendations were not fatally flawed from dilution to the point of being homeopathic, without adequate nutrition, i.e., more Calories in than out, the programs would not work anyway to lastingly increase strength and muscle mass, I believe.)

And even if it were possible to completely prevent muscle mass loss while in a negative caloric balance (which it is not¹³¹) and engaging in physical activity, I submit that the exercise and nutrition schemes concocted by the representative diet experts are inadequate to fulfill their promises of increasing muscle mass.

I have mentioned Bob’s and Oprah’s and David’s and Jorge’s exercise schemes already, and will avoid further comment. If FTC is interested in discussing their plans further, please contact me.

I also read FTC’s October 21, 2008 release entitled “Invention Promoter Charged with Deceptive Marketing Settles with FTC, Goes Out of Business.”¹³²

In this release, FTC cited several issues it had with the Patent & Trademark Institute (PTI) and Michael S. Fleisher. Among them:

- he violated federal law by duping consumers with false promises
- the purchase of services from the Patent & Trademark Institute (PTI) was likely to result in financial gain for consumers
- PTI evaluated the market potential, patentability, technical feasibility, and merit of consumers’ ideas

In the matter, “The proposed settlement also would bar Fleisher from making misrepresentations about any product or service, such as the likelihood that purchasing goods or services will result in financial gain for any customer; past success in providing goods or services...”

I, in good faith, opine that these representative diet experts dupe consumers with false promises as to both their diet’s likelihood of success (which are arguably starvation diets similar to or worse than those experienced by POWs, concentration camp internees and populations under siege) and muscle-building exercise regimens which, as I understand the science, cannot possibly result in the promised gains.

¹³¹ McArdle WD, Katch FI, Katch VL. *Exercise Physiology: Energy, Nutrition and Human Performance* (5th Ed.). Baltimore: Lippincott, Williams & Wilkins (2001):841 and 848-849.

¹³² <http://www.ftc.gov/opa/2008/10/fleisher.shtm>

Further, these authors promote their programs by averring that they are likely to result in weight loss and muscle gain for consumers and that they, as experts, have competently evaluated their programs. I, in good faith, submit they have not.

4. False And Unsubstantiated Claims re: The Science of Weight Loss and Muscle Building

This is not intended as a comprehensive look at the “science” underlying the recommendations of the representative experts. I mention the following as another possible avenue of investigation by FTC.

As an example, Bob and Oprah recommend increasing the number of exercises as one progresses in Activity Level in order to advance in strength exercising.¹³³ This appears contrary to the recommendations of knowledgeable sources.¹³⁴

There are other interesting statements to be found in Bob’s and Oprah’s book. For example:

“Losing water creates the illusion that you’re losing body fat but will actually inhibit your loss of body fat.”¹³⁵

Again, the scholars seem in dispute with these diet experts, Bob and Oprah:

Restricting water during the first several days of a caloric deficit significantly increases the *proportion* of body water lost and decreases the *proportion* of fat lost. Although more total weight loss occurs with restricted daily water intake, the additional weight lost comes solely from water as dehydration progresses. **Dieters lose the same quantity of body fat regardless of fluid intake level.**¹³⁶ (italics in the original, bold added)

Further, Oprah and Bob state as fact that there is a “set point” which exerts control over weight loss.

When weight loss stalls for a substantial length of time, it usually means that you’ve run up against your set point. *Set point* is the level of body fat that your body is preprogrammed to maintain (it’s actually a range) and your body will do what it can to keep that level consistent. Everyone has his or her own set point...¹³⁷ (italics in original)

This “fact” of a set point is repeated over and over again.¹³⁸

¹³³ Greene, B. *The Best Life Diet*. New York, NY: Simon & Schuster 2006. Foreword by Oprah Winfrey:44-46.

¹³⁴ See, e.g., McArdle WD, Katch FI, Katch VL. *Exercise Physiology: Energy, Nutrition and Human Performance* (5th Ed.). Baltimore: Lippincott, Williams & Wilkins (2001):512-513 – “Develop Strength By Increasing Load, Not Repetitions.”

¹³⁵ Greene, B. *The Best Life Diet*. New York, NY: Simon & Schuster 2006. Foreword by Oprah Winfrey:16.

¹³⁶ McArdle WD, Katch FI, Katch VL. *Exercise Physiology: Energy, Nutrition and Human Performance* (5th Ed.). Baltimore: Lippincott, Williams & Wilkins (2001):848.

¹³⁷ Greene, B. *The Best Life Diet*. New York, NY: Simon & Schuster 2006. Foreword by Oprah Winfrey:19.

¹³⁸ *Id.*, at 20, 41-42, 76 and 80.

I submit that if FTC were to ask Ms. Winfrey and Mr. Greene where the evidence is for the “fact” of the set point (and not theory ¹³⁹), how it was measured by them and what the “range” is that they determined for given individuals in developing their diet scheme, it would be met with silence, hemming and hawing and finally that the “set point” is not “actually” anything.

More interesting “science” is also present in David’s and Jorge’s book (in addition, e.g., to the suspension of the Laws of Thermodynamics) and Mehmet’s and Michael’s (in addition, e.g., to the adding of body mass while simultaneously losing body mass), I opine, and a discussion of it is beyond the scope of this writing. However, if FTC is interested in more regarding this matter, it can contact me.

Perhaps FTC would also consider evaluating whether the publishers, supporters and promoters of these diet schemes (and similar others) are also culpable for their parts in distribution and sponsorship, should FTC find the representative schemes lacking.

In summation, I am writing to FTC because, in my opinion, the representative diet schemes, similar in certain ways to other instances found objectionable by FTC, “require severe dieting,” impose “severe food restrictions” (calorically speaking), make “false and unsubstantiated claims” and “dupe consumers with false promises.”

It is my opinion that FTC’s intervention can help “to prevent (further) fraudulent, deceptive, and unfair business practices and to provide information to help (consumers) spot, stop, and avoid them.”

Thank you.



Michael Applebaum

Contact info provided to FTC

¹³⁹ E.g., see McArdle WD, Katch FI, Katch VL. *Exercise Physiology: Energy, Nutrition and Human Performance* (5th Ed.). Baltimore: Lippincott, Williams & Wilkins (2001):842-845.

APPENDIX A – Wartime Diets and Rations

The following table is in descending order, i.e., highest caloric intakes are listed first. The diet recommendations of the representative diet experts would be at or near the very bottom. See text for their values.

WARTIME DIETS AND RATIONS – In descending order of average Kcal/day ¹⁴⁰

		Daily Average Kcal
Canadian POWs in Japanese POW Camp Near Hong Kong	June 1942	4895
Central Prison in Louvain, Belgium	pre-war	3370
Canadian POWs in Japanese POW Camp Near Hong Kong	March 1943	3067
Canadian POWs in Japanese POW Camp Near Hong Kong	April 1943	2989
Canadian POWs in Japanese POW Camp Near Hong Kong	December 1942	2980
Canadian POWs in Japanese POW Camp Near Hong Kong	February 1943	2946
Canadian POWs in Japanese POW Camp Near Hong Kong	May 1943	2864
Canadian POWs in Japanese POW Camp Near Hong Kong	December 1943	2804
Canadian POWs in Japanese POW Camp Near Hong Kong	January 1943	2766
Canadian POWs in Japanese POW Camp Near Hong Kong	October 1942	2753
Canadian POWs in Japanese POW Camp Near Hong Kong	February 1944	2729
Internees at Pootung Civil Assembly Center Outside Shanghai	December 1944	2672
Internees at Pootung Civil Assembly Center Outside Shanghai	July 1945	2638
Canadian POWs in Japanese POW Camp Near Hong Kong	April 1942	2613
Canadian POWs in Japanese POW Camp Near Hong Kong	November 1943	2566
Changi POW Camp, Singapore	September 1942	2548
Canadian POWs in Japanese POW Camp Near Hong Kong	September 1943	2548
Canadian POWs in Japanese POW Camp Near Hong Kong	January 1944	2546
Canadian POWs in Japanese POW Camp Near Hong Kong	October 1943	2487
Canadian POWs in Japanese POW Camp Near Hong Kong	May 1942	2468
Changi POW Camp, Singapore	August 1942	2466
Canadian POWs in Japanese POW Camp Near Hong Kong	July 1944	2431
Canadian POWs in Japanese POW Camp Near Hong Kong	November 1942	2430
Internees at Pootung Civil Assembly Center Outside Shanghai	February 1944	2420
Canadian POWs in Japanese POW Camp Near Hong Kong	August 1943	2412
Canadian POWs in Japanese POW Camp Near Hong Kong	December 1944	2411
Canadian POWs in Japanese POW Camp Near Hong Kong	September 1944	2350
German Civilians, WWI	April 1916	2343
Canadian POWs in Japanese POW Camp Near Hong Kong	June 1943	2332
Canadian POWs in Japanese POW Camp Near Hong Kong	June 1944	2327
Canadian POWs in Japanese POW Camp Near Hong Kong	July 1943	2326
Internees at Pootung Civil Assembly Center Outside Shanghai	February 1943	2321
Changi POW Camp, Singapore	July 1942	2315

¹⁴⁰ Compiled from Keys A, Brozek J, Henschel A, Mickelsen O, Taylor HL. *The Biology of Human Starvation*. Minneapolis, MN: The University of Minnesota Press 1950:1239-1246.

Canadian POWs in Japanese POW Camp Near Hong Kong	May 1945	2306
Canadian POWs in Japanese POW Camp Near Hong Kong	November 1944	2278
Canadian POWs in Japanese POW Camp Near Hong Kong	April 1944	2275
Changi POW Camp, Singapore	May 1942	2263
Internees at Pootung Civil Assembly Center Outside Shanghai	March 1944	2247
French POWs Interned in Germany, WWI		2245
German Civilians, WWI	July 1916	2232.5
Changi POW Camp, Singapore	June 1942	2222
Canadian POWs in Japanese POW Camp Near Hong Kong	March 1945	2211
Canadian POWs in Japanese POW Camp Near Hong Kong	April 1945	2209
Canadian POWs in Japanese POW Camp Near Hong Kong	June 1945	2197
Canadian POWs in Japanese POW Camp Near Hong Kong	May 1944	2173
Internees at Pootung Civil Assembly Center Outside Shanghai	December 1943	2164
Canadian POWs in Japanese POW Camp Near Hong Kong	July 1945	2161
Canadian POWs in Japanese POW Camp Near Hong Kong	July 1942	2151
Canadian POWs in Japanese POW Camp Near Hong Kong	February 1945	2147
Canadian POWs in Japanese POW Camp Near Hong Kong	March 1942	2138
Internees at Pootung Civil Assembly Center Outside Shanghai	January 1944	2105
Internees at Pootung Civil Assembly Center Outside Shanghai	March 1945	2079
Canadian POWs in Japanese POW Camp Near Hong Kong	August 1944	2071
Internees at Pootung Civil Assembly Center Outside Shanghai	January 1945	2070
Canadian POWs in Japanese POW Camp Near Hong Kong	October 1944	2069
Canadian POWs in Japanese POW Camp Near Hong Kong	September 1942	2068
Changi POW Camp, Singapore	March 1942	2060
Changi POW Camp, Singapore	April 1942	2060
Internees at Pootung Civil Assembly Center Outside Shanghai	September 1943	2046
Internees at Pootung Civil Assembly Center Outside Shanghai	April 1945	2034
Internees at Pootung Civil Assembly Center Outside Shanghai	February 1945	2029
Internees at Pootung Civil Assembly Center Outside Shanghai	May 1945	2015
Canadian POWs in Japanese POW Camp Near Hong Kong	February 1942	2010
Internees at Pootung Civil Assembly Center Outside Shanghai	October 1943	2009
Canadian POWs in Japanese POW Camp Near Hong Kong	March 1944	2006
German Civilians, WWI	April 1917	1985.4
Canadian POWs in Japanese POW Camp Near Hong Kong	August 1942	1981
Internees at Pootung Civil Assembly Center Outside Shanghai	November 1944	1975
Internees at Pootung Civil Assembly Center Outside Shanghai	April 1944	1940
Canadian POWs in Japanese POW Camp Near Hong Kong	January 1945	1921
Internees at Pootung Civil Assembly Center Outside Shanghai	November 1943	1916
Internees at Pootung Civil Assembly Center Outside Shanghai	August 1944	1911
Internees at Pootung Civil Assembly Center Outside Shanghai	June 1945	1892
Food Distributed in Netherlands - sedentary individuals	1942 IV	1876
Paris Insane Asylum, October 1941		1862
Central Prison in Louvain, Belgium	March 1941	1860
Food Distributed in Netherlands - sedentary individuals	1941 III	1852
Food Distributed in Netherlands - sedentary individuals	1941 II	1828
Food Distributed in Netherlands - sedentary individuals	1941 IV	1828
Food Distributed in Netherlands - sedentary individuals	1943 I	1822
Internees at Pootung Civil Assembly Center Outside Shanghai	May 1944	1814

Food Distributed in Netherlands - sedentary individuals	1942 I	1810
Internees at Pootung Civil Assembly Center Outside Shanghai	October 1944	1796
Internees at Pootung Civil Assembly Center Outside Shanghai	July 1944	1792
Food Distributed in Netherlands - sedentary individuals	1943 IV	1784
Food Distributed in Netherlands - sedentary individuals	1943 III	1783
Central Prison in Louvain, Belgium	October 1940	1775
Paris Insane Asylum, September 1941		1759
Internees at Pootung Civil Assembly Center Outside Shanghai	June 1944	1754
Food Distributed in Netherlands - sedentary individuals	1942 III	1750
Paris Insane Asylum, December 1941		1740
Food Distributed in Netherlands - sedentary individuals	1943 II	1724
Food Distributed in Netherlands - sedentary individuals	1942 II	1699
Internees at Pootung Civil Assembly Center Outside Shanghai	September 1944	1672
Central Prison in Louvain, Belgium	May 1941	1660
Food Distributed in Netherlands - sedentary individuals	1944 I	1656
Central Prison in Louvain, Belgium	July 1941	1647
Russian and British POWs in Tost, Germany, WWII		1611
Food Distributed in Netherlands - sedentary individuals	1944 II	1585
Food Distributed in Netherlands - sedentary individuals	1944 III	1529
Paris Insane Asylum, April 1941		1436
Dachau, Germany Concentration Camp	September 1944	1017
Canadian POWs in Japanese POW Camp Near Hong Kong	January 1942	898
Dachau, Germany Concentration Camp	April 1945	533

APPENDIX B – Caloric Intake Calculations

The table below compares the recommended caloric intakes of Katz/Cruise and Oz/Roizen using the prescriptions in their books, to the calculated BMR/RMR using the equations mentioned in the text. The caloric differences are then calculated for females and males. The caloric intake values of the experts are pre-exercise.

Conventional thinking holds: “One pound of fat contains approximately 3,500 calories, so to lose one pound a week, a person should consume approximately 3,500 fewer calories per week. This can be done by reducing the daily intake by 500 calories per day (500 x 7 days will provide a deficit of 3,500 calories per week). To lose 2 pounds per week, a deficit of 1,000 calories per day is required.”¹⁴¹ “A slow weight loss of 1 or 2 pounds a week, until the desirable body weight is reached, is best.”¹⁴²

Weight	Katz/Cruise –	Oz/Roizen –	BMR/RMR		Diff.		Diff.	
	Recommended Daily Caloric Intake	Recommended Daily Caloric Intake	Female	Male	Female Katz/Cruise	Male Katz/Cruise	Female Oz/Roizen	Male Oz/Roizen
160	1450	1780	1600	1760	-150	-310	180	20
170	1450	1860	1700	1870	-250	-420	160	-10
180	1450	1940	1800	1980	-350	-530	140	-40
190	1450	2020	1900	2090	-450	-640	120	-70
200	1650	2100	2000	2200	-350	-550	100	-100
210	1650	2180	2100	2310	-450	-660	80	-130
220	1650	2260	2200	2420	-550	-770	60	-160
230	1650	2340	2300	2530	-650	-880	40	-190
240	1650	2420	2400	2640	-750	-990	20	-220
250	1850	2500	2500	2750	-650	-900	0	-250
260	1850	2580	2600	2860	-750	-1010	-20	-280
270	1850	2660	2700	2970	-850	-1120	-40	-310
280	1850	2740	2800	3080	-950	-1230	-60	-340
290	1850	2820	2900	3190	-1050	-1340	-80	-370
300	2050	2900	3000	3300	-950	-1250	-100	-400

The table below compares the recommended caloric intakes of Katz/Cruise and Oz/Roizen using the prescriptions in their books, to the calculated BMR/RMR using the equations mentioned in the text. The caloric differences are then calculated for females and males. The caloric intake values of the experts are post-exercise, with 300 Calories per day subtracted. This represents the recommended amount of daily exercise. (Specifically mentioned in the diet of Oz/Roizen. See the text for the general exercise recommendations applied to the Katz/Cruise diet scheme.)

Conventional thinking holds: “One pound of fat contains approximately 3,500 calories, so to lose one pound a week, a person should consume approximately 3,500 fewer calories per week. This can be done by reducing the daily intake by 500 calories per day (500 x 7 days will provide a

¹⁴¹ <http://www.nlm.nih.gov/MEDLINEPLUS/ency/article/001940.htm>

¹⁴² <http://www.nlm.nih.gov/MEDLINEPLUS/ency/article/001940.htm>

deficit of 3,500 calories per week). To lose 2 pounds per week, a deficit of 1,000 calories per day is required.”¹⁴³ “A slow weight loss of 1 or 2 pounds a week, until the desirable body weight is reached, is best.”¹⁴⁴

Weight	Katz/Cruise –	Oz/Roizen –	BMR/RMR		Diff. Female	Diff. Male	Diff. Female	Diff. Male
	Recommended Daily Caloric Intake	Recommended Daily Caloric Intake	Female	Male				
160	1150	1480	1600	1760	-450	-610	-120	-280
170	1150	1560	1700	1870	-550	-720	-140	-310
180	1150	1640	1800	1980	-650	-830	-160	-340
190	1150	1720	1900	2090	-750	-940	-180	-370
200	1350	1800	2000	2200	-650	-850	-200	-400
210	1350	1880	2100	2310	-750	-960	-220	-430
220	1350	1960	2200	2420	-850	-1070	-240	-460
230	1350	2040	2300	2530	-950	-1180	-260	-490
240	1350	2120	2400	2640	-1050	-1290	-280	-520
250	1550	2200	2500	2750	-950	-1200	-300	-550
260	1550	2280	2600	2860	-1050	-1310	-320	-580
270	1550	2360	2700	2970	-1150	-1420	-340	-610
280	1550	2440	2800	3080	-1250	-1530	-360	-640
290	1550	2520	2900	3190	-1350	-1640	-380	-670
300	1750	2600	3000	3300	-1250	-1550	-400	-700

The table below compares the recommended caloric intakes of Katz/Cruise and Oz/Roizen using the prescriptions in their books, to the calculated BMR/RMR using the equations mentioned in the text. The percent reductions are then calculated for females and males. The caloric intake values of the experts are post-exercise, with 300 Calories per day subtracted. This represents the recommended amount of daily exercise. (Specifically mentioned in the diet of Oz/Roizen. See the text for the general exercise recommendations applied to the Katz/Cruise diet scheme.) The percentage reductions are calculated using the following formula:

$$100*(1-(\text{Recommended Daily Caloric Intake}/\text{Calculated BMR}))$$

It is known that energy deficits of 15 – 20% are met with resistance, discomfort and negative behavioral changes.¹⁴⁵

Weight	Katz/Cruise	Oz/Roizen	BMR/RMR		% Reduction	% Reduction	% Reduction	% Reduction
			Female	Male	Female From RMR -	Male From RMR -	Female From RMR -	Male From RMR -
					Katz/Cruise	Katz/Cruise	Oz/Roizen	Oz/Roizen

¹⁴³ <http://www.nlm.nih.gov/MEDLINEPLUS/ency/article/001940.htm>

¹⁴⁴ <http://www.nlm.nih.gov/MEDLINEPLUS/ency/article/001940.htm>

¹⁴⁵ Drummond J. Foreword in Keys A, Brozek J, Henschel A, Mickelsen O, Taylor HL. *The Biology of Human Starvation*. Minneapolis, MN: The University of Minnesota Press 1950:xiv.

160	1150	1480	1600	1760	28.13	34.66	7.50	15.91
170	1150	1560	1700	1870	32.35	38.50	8.24	16.58
180	1150	1640	1800	1980	36.11	41.92	8.89	17.17
190	1150	1720	1900	2090	39.47	44.98	9.47	17.70
200	1350	1800	2000	2200	32.50	38.64	10.00	18.18
210	1350	1880	2100	2310	35.71	41.56	10.48	18.61
220	1350	1960	2200	2420	38.64	44.21	10.91	19.01
230	1350	2040	2300	2530	41.30	46.64	11.30	19.37
240	1350	2120	2400	2640	43.75	48.86	11.67	19.70
250	1550	2200	2500	2750	38.00	43.64	12.00	20.00
260	1550	2280	2600	2860	40.38	45.80	12.31	20.28
270	1550	2360	2700	2970	42.59	47.81	12.59	20.54
280	1550	2440	2800	3080	44.64	49.68	12.86	20.78
290	1550	2520	2900	3190	46.55	51.41	13.10	21.00
300	1750	2600	3000	3300	41.67	46.97	13.33	21.21

The table below compares the recommended caloric intakes of Oz/Roizen in order to lose 1 pound per week, using the prescription in their book, to the calculated BMR/RMR using the equations mentioned in the text. The percent reductions are then calculated for females and males. The caloric intake values of the experts are post-exercise, with 300 Calories per day subtracted. This represents the recommended amount of daily exercise. (Specifically mentioned in the diet of Oz/Roizen.) The percentage reductions are calculated using the following formula:

$$100*(1-(\text{Recommended Daily Caloric Intake}/\text{Calculated BMR}))$$

It is known that energy deficits of 15 – 20% are met with resistance, discomfort and negative behavioral changes.¹⁴⁶

Weight	Oz/Roizen - 1 Pound Weight Loss/wk	BMR/RMR Female	BMR/RMR Male	% Reduction	
				Female From RMR - Oz/Roizen	Male From RMR - Oz/Roizen
160	980	1600	1760	38.75	44.32
170	1060	1700	1870	37.65	43.32
180	1140	1800	1980	36.67	42.42
190	1220	1900	2090	35.79	41.63
200	1300	2000	2200	35.00	40.91
210	1380	2100	2310	34.29	40.26
220	1460	2200	2420	33.64	39.67
230	1540	2300	2530	33.04	39.13
240	1620	2400	2640	32.50	38.64

¹⁴⁶ Drummond J. Foreword in Keys A, Brozek J, Henschel A, Mickelsen O, Taylor HL. *The Biology of Human Starvation*. Minneapolis, MN: The University of Minnesota Press 1950:xiv.

250	1700	2500	2750	32.00	38.18
260	1780	2600	2860	31.54	37.76
270	1860	2700	2970	31.11	37.37
280	1940	2800	3080	30.71	37.01
290	2020	2900	3190	30.34	36.68
300	2100	3000	3300	30.00	36.36

The table below compares the recommended caloric intakes of Oz/Roizen in order to lose 2 pounds per week, using the prescription in their book, to the calculated BMR/RMR using the equations mentioned in the text. The percent reductions are then calculated for females and males. The caloric intake values of the experts are post-exercise, with 300 Calories per day subtracted. This represents the recommended amount of daily exercise. (Specifically mentioned in the diet of Oz/Roizen.) The percentage reductions are calculated using the following formula:

$$100*(1-(\text{Recommended Daily Caloric Intake}/\text{Calculated BMR}))$$

It is known that energy deficits of 15 – 20% are met with resistance, discomfort and negative behavioral changes.¹⁴⁷

Weight	Oz/Roizen - 2 Pounds Weight Loss/wk	BMR/RMR Female	BMR/RMR Male	% Reduction	
				Female From RMR - Oz/Roizen	Male From RMR - Oz/Roizen
160	480	1600	1760	70.00	72.73
170	560	1700	1870	67.06	70.05
180	640	1800	1980	64.44	67.68
190	720	1900	2090	62.11	65.55
200	800	2000	2200	60.00	63.64
210	880	2100	2310	58.10	61.90
220	960	2200	2420	56.36	60.33
230	1040	2300	2530	54.78	58.89
240	1120	2400	2640	53.33	57.58
250	1200	2500	2750	52.00	56.36
260	1280	2600	2860	50.77	55.24
270	1360	2700	2970	49.63	54.21
280	1440	2800	3080	48.57	53.25
290	1520	2900	3190	47.59	52.35
300	1600	3000	3300	46.67	51.52

¹⁴⁷ Drummond J. Foreword in Keys A, Brozek J, Henschel A, Mickelsen O, Taylor HL. *The Biology of Human Starvation*. Minneapolis, MN: The University of Minnesota Press 1950:xiv.

The table below compares the recommended caloric intakes of Katz/Cruise and Oz/Roizen using the prescriptions in their books, to the calculated TDEE using the equations mentioned in the text. The caloric differences are then calculated for females and males. The caloric intake values of the experts are pre-exercise.

Conventional thinking holds: “One pound of fat contains approximately 3,500 calories, so to lose one pound a week, a person should consume approximately 3,500 fewer calories per week. This can be done by reducing the daily intake by 500 calories per day (500 x 7 days will provide a deficit of 3,500 calories per week). To lose 2 pounds per week, a deficit of 1,000 calories per day is required.”¹⁴⁸ “A slow weight loss of 1 or 2 pounds a week, until the desirable body weight is reached, is best.”¹⁴⁹

Weight	Katz/Cruise	Oz/Roizen	TDEE Female	TDEE Male	Diff.		Diff.	
					Female Katz/Cruise	Male Katz/Cruise	Female Oz/Roizen	Male Oz/Roizen
160	1450	1780	2400	2640	-950	-1190	-620	-860
170	1450	1860	2550	2805	-1100	-1355	-690	-945
180	1450	1940	2700	2970	-1250	-1520	-760	-1030
190	1450	2020	2850	3135	-1400	-1685	-830	-1115
200	1650	2100	3000	3300	-1350	-1650	-900	-1200
210	1650	2180	3150	3465	-1500	-1815	-970	-1285
220	1650	2260	3300	3630	-1650	-1980	-1040	-1370
230	1650	2340	3450	3795	-1800	-2145	-1110	-1455
240	1650	2420	3600	3960	-1950	-2310	-1180	-1540
250	1850	2500	3750	4125	-1900	-2275	-1250	-1625
260	1850	2580	3900	4290	-2050	-2440	-1320	-1710
270	1850	2660	4050	4455	-2200	-2605	-1390	-1795
280	1850	2740	4200	4620	-2350	-2770	-1460	-1880
290	1850	2820	4350	4785	-2500	-2935	-1530	-1965
300	2050	2900	4500	4950	-2450	-2900	-1600	-2050

The table below compares the recommended caloric intakes of Katz/Cruise and Oz/Roizen using the prescriptions in their books, to the calculated TDEE using the equations mentioned in the text. The caloric differences are then calculated for females and males. The caloric intake values of the experts are post-exercise, with 300 Calories per day subtracted. This represents the recommended amount of daily exercise. (Specifically mentioned in the diet of Oz/Roizen. See the text for the general exercise recommendations applied to the Katz/Cruise diet scheme.)

Conventional thinking holds: “One pound of fat contains approximately 3,500 calories, so to lose one pound a week, a person should consume approximately 3,500 fewer calories per week. This can be done by reducing the daily intake by 500 calories per day (500 x 7 days will provide a deficit of 3,500 calories per week). To lose 2 pounds per week, a deficit of 1,000 calories per day

¹⁴⁸ <http://www.nlm.nih.gov/MEDLINEPLUS/ency/article/001940.htm>

¹⁴⁹ <http://www.nlm.nih.gov/MEDLINEPLUS/ency/article/001940.htm>

is required.”¹⁵⁰ “A slow weight loss of 1 or 2 pounds a week, until the desirable body weight is reached, is best.”¹⁵¹

Weight	Katz/Cruise	Oz/Roizen	TDEE Female	TDEE Male	Diff.	Diff.	Diff.	Diff.
					Female	Male	Female	Male
					Katz/Cruise	Katz/Cruise	Oz/Roizen	Oz/Roizen
160	1150	1480	2400	2640	-1250	-1490	-920	-1160
170	1150	1560	2550	2805	-1400	-1655	-990	-1245
180	1150	1640	2700	2970	-1550	-1820	-1060	-1330
190	1150	1720	2850	3135	-1700	-1985	-1130	-1415
200	1350	1800	3000	3300	-1650	-1950	-1200	-1500
210	1350	1880	3150	3465	-1800	-2115	-1270	-1585
220	1350	1960	3300	3630	-1950	-2280	-1340	-1670
230	1350	2040	3450	3795	-2100	-2445	-1410	-1755
240	1350	2120	3600	3960	-2250	-2610	-1480	-1840
250	1550	2200	3750	4125	-2200	-2575	-1550	-1925
260	1550	2280	3900	4290	-2350	-2740	-1620	-2010
270	1550	2360	4050	4455	-2500	-2905	-1690	-2095
280	1550	2440	4200	4620	-2650	-3070	-1760	-2180
290	1550	2520	4350	4785	-2800	-3235	-1830	-2265
300	1750	2600	4500	4950	-2750	-3200	-1900	-2350

The table below compares the recommended caloric intakes of Katz/Cruise and Oz/Roizen using the prescriptions in their books, to the calculated TDEE using the equations mentioned in the text. The percent reductions are then calculated for females and males. The caloric intake values of the experts are post-exercise, with 300 Calories per day subtracted. This represents the recommended amount of daily exercise. (Specifically mentioned in the diet of Oz/Roizen. See the text for the general exercise recommendations applied to the Katz/Cruise diet scheme.) The percentage reductions are calculated using the following formula:

$$100*(1-(\text{Recommended Daily Caloric Intake}/\text{Calculated TDEE}))$$

It is known that energy deficits of 15 – 20% are met with resistance, discomfort and negative behavioral changes.¹⁵²

Weight	Katz/Cruise	Oz/Roizen	TDEE Female	TDEE Male	%	%	%	%
					Reduction	Reduction	Reduction	Reduction
					Female	Male	Female	Male
					From TDEE -	From TDEE -	From TDEE -	From TDEE -
160	1150	1480	2400	2640	52.08	56.44	38.33	43.94

¹⁵⁰ <http://www.nlm.nih.gov/MEDLINEPLUS/ency/article/001940.htm>

¹⁵¹ <http://www.nlm.nih.gov/MEDLINEPLUS/ency/article/001940.htm>

¹⁵² Drummond J. Foreword in Keys A, Brozek J, Henschel A, Mickelsen O, Taylor HL. *The Biology of Human Starvation*. Minneapolis, MN: The University of Minnesota Press 1950:xiv.

170	1150	1560	2550	2805	54.90	59.00	38.82	44.39
180	1150	1640	2700	2970	57.41	61.28	39.26	44.78
190	1150	1720	2850	3135	59.65	63.32	39.65	45.14
200	1350	1800	3000	3300	55.00	59.09	40.00	45.45
210	1350	1880	3150	3465	57.14	61.04	40.32	45.74
220	1350	1960	3300	3630	59.09	62.81	40.61	46.01
230	1350	2040	3450	3795	60.87	64.43	40.87	46.25
240	1350	2120	3600	3960	62.50	65.91	41.11	46.46
250	1550	2200	3750	4125	58.67	62.42	41.33	46.67
260	1550	2280	3900	4290	60.26	63.87	41.54	46.85
270	1550	2360	4050	4455	61.73	65.21	41.73	47.03
280	1550	2440	4200	4620	63.10	66.45	41.90	47.19
290	1550	2520	4350	4785	64.37	67.61	42.07	47.34
300	1750	2600	4500	4950	61.11	64.65	42.22	47.47

The table below compares the recommended caloric intakes of Oz/Roizen in order to lose 1 pound per week, using the prescription in their book, to the calculated TDEE using the equations mentioned in the text. The percent reductions are then calculated for females and males. The caloric intake values of the experts are post-exercise, with 300 Calories per day subtracted. This represents the recommended amount of daily exercise. (Specifically mentioned in the diet of Oz/Roizen.) The percentage reductions are calculated using the following formula:

$$100*(1-(\text{Recommended Daily Caloric Intake}/\text{Calculated TDEE}))$$

It is known that energy deficits of 15 – 20% are met with resistance, discomfort and negative behavioral changes.¹⁵³

Weight	Oz/Roizen - 1 Pound Weight Loss/wk	TDEE Female	TDEE Male	% Reduction	
				Female From TDEE - Oz/Roizen	Male From TDEE - Oz/Roizen
160	980	2400	2640	59.17	62.88
170	1060	2550	2805	58.43	62.21
180	1140	2700	2970	57.78	61.62
190	1220	2850	3135	57.19	61.08
200	1300	3000	3300	56.67	60.61
210	1380	3150	3465	56.19	60.17
220	1460	3300	3630	55.76	59.78
230	1540	3450	3795	55.36	59.42
240	1620	3600	3960	55.00	59.09
250	1700	3750	4125	54.67	58.79
260	1780	3900	4290	54.36	58.51

¹⁵³ Drummond J. Foreword in Keys A, Brozek J, Henschel A, Mickelsen O, Taylor HL. *The Biology of Human Starvation*. Minneapolis, MN: The University of Minnesota Press 1950:xiv.

270	1860	4050	4455	54.07	58.25
280	1940	4200	4620	53.81	58.01
290	2020	4350	4785	53.56	57.78
300	2100	4500	4950	53.33	57.58

The table below compares the recommended caloric intakes of Oz/Roizen in order to lose 2 pounds per week, using the prescription in their book, to the calculated TDEE using the equations mentioned in the text. The percent reductions are then calculated for females and males. The caloric intake values of the experts are post-exercise, with 300 Calories per day subtracted. This represents the recommended amount of daily exercise (Specifically mentioned in the diet of Oz/Roizen.). The percentage reductions are calculated using the following formula:

$$100*(1-(\text{Recommended Daily Caloric Intake}/\text{Calculated TDEE}))$$

It is known that energy deficits of 15 – 20% are met with resistance, discomfort and negative behavioral changes.¹⁵⁴

Weight	Oz/Roizen - 2 Pounds Weight Loss/wk	TDEE Female	TDEE Male	% Reduction Female From TDEE - Oz/Roizen	% Reduction Male From TDEE - Oz/Roizen
				Oz/Roizen	Oz/Roizen
160	480	2400	2640	80.00	81.82
170	560	2550	2805	78.04	80.04
180	640	2700	2970	76.30	78.45
190	720	2850	3135	74.74	77.03
200	800	3000	3300	73.33	75.76
210	880	3150	3465	72.06	74.60
220	960	3300	3630	70.91	73.55
230	1040	3450	3795	69.86	72.60
240	1120	3600	3960	68.89	71.72
250	1200	3750	4125	68.00	70.91
260	1280	3900	4290	67.18	70.16
270	1360	4050	4455	66.42	69.47
280	1440	4200	4620	65.71	68.83
290	1520	4350	4785	65.06	68.23
300	1600	4500	4950	64.44	67.68

The table below compares the recommended caloric intakes of Oz/Roizen using the prescriptions in their books in order to lose 1 pound per week, to the calculated TDEE using the equations mentioned in the text. The caloric differences are then calculated for females and males. The caloric intake values of the experts are pre-exercise.

¹⁵⁴ Drummond J. Foreword in Keys A, Brozek J, Henschel A, Mickelsen O, Taylor HL. *The Biology of Human Starvation*. Minneapolis, MN: The University of Minnesota Press 1950:xiv.

Conventional thinking holds: “One pound of fat contains approximately 3,500 calories, so to lose one pound a week, a person should consume approximately 3,500 fewer calories per week. This can be done by reducing the daily intake by 500 calories per day (500 x 7 days will provide a deficit of 3,500 calories per week). To lose 2 pounds per week, a deficit of 1,000 calories per day is required.”¹⁵⁵ “A slow weight loss of 1 or 2 pounds a week, until the desirable body weight is reached, is best.”¹⁵⁶

Weight	Oz/Roizen	TDEE Female	TDEE Male	Diff. Female Oz/Roizen - 1 lb. wt. loss	Diff. Male Oz/Roizen - 1 lb. wt. loss
160	1780	2400	2640	-1120	-1360
170	1860	2550	2805	-1190	-1445
180	1940	2700	2970	-1260	-1530
190	2020	2850	3135	-1330	-1615
200	2100	3000	3300	-1400	-1700
210	2180	3150	3465	-1470	-1785
220	2260	3300	3630	-1540	-1870
230	2340	3450	3795	-1610	-1955
240	2420	3600	3960	-1680	-2040
250	2500	3750	4125	-1750	-2125
260	2580	3900	4290	-1820	-2210
270	2660	4050	4455	-1890	-2295
280	2740	4200	4620	-1960	-2380
290	2820	4350	4785	-2030	-2465
300	2900	4500	4950	-2100	-2550

The table below compares the recommended caloric intakes of Oz/Roizen using the prescriptions in their books in order to lose 1 pound per week, to the calculated TDEE using the equations mentioned in the text. The caloric differences are then calculated for females and males. The caloric intake values of the experts are post-exercise, with 300 Calories per day subtracted. This represents the recommended amount of daily exercise. (Specifically mentioned in the diet of Oz/Roizen.)

Conventional thinking holds: “One pound of fat contains approximately 3,500 calories, so to lose one pound a week, a person should consume approximately 3,500 fewer calories per week. This can be done by reducing the daily intake by 500 calories per day (500 x 7 days will provide a deficit of 3,500 calories per week). To lose 2 pounds per week, a deficit of 1,000 calories per day is required.”¹⁵⁷ “A slow weight loss of 1 or 2 pounds a week, until the desirable body weight is reached, is best.”¹⁵⁸

¹⁵⁵ <http://www.nlm.nih.gov/MEDLINEPLUS/ency/article/001940.htm>

¹⁵⁶ <http://www.nlm.nih.gov/MEDLINEPLUS/ency/article/001940.htm>

¹⁵⁷ <http://www.nlm.nih.gov/MEDLINEPLUS/ency/article/001940.htm>

¹⁵⁸ <http://www.nlm.nih.gov/MEDLINEPLUS/ency/article/001940.htm>

Weight	Oz/Roizen	TDEE Female	TDEE Male	Diff. Female Oz/Roizen - 1 lb. wt. loss	Diff. Male Oz/Roizen - 1 lb. wt. loss
160	1480	2400	2640	-1420	-1660
170	1560	2550	2805	-1490	-1745
180	1640	2700	2970	-1560	-1830
190	1720	2850	3135	-1630	-1915
200	1800	3000	3300	-1700	-2000
210	1880	3150	3465	-1770	-2085
220	1960	3300	3630	-1840	-2170
230	2040	3450	3795	-1910	-2255
240	2120	3600	3960	-1980	-2340
250	2200	3750	4125	-2050	-2425
260	2280	3900	4290	-2120	-2510
270	2360	4050	4455	-2190	-2595
280	2440	4200	4620	-2260	-2680
290	2520	4350	4785	-2330	-2765
300	2600	4500	4950	-2400	-2850

The table below compares the recommended caloric intakes of Oz/Roizen using the prescriptions in their books in order to lose 2 pound per week, to the calculated TDEE using the equations mentioned in the text. The caloric differences are then calculated for females and males. The caloric intake values of the experts are pre-exercise.

Conventional thinking holds: “One pound of fat contains approximately 3,500 calories, so to lose one pound a week, a person should consume approximately 3,500 fewer calories per week. This can be done by reducing the daily intake by 500 calories per day (500 x 7 days will provide a deficit of 3,500 calories per week). To lose 2 pounds per week, a deficit of 1,000 calories per day is required.”¹⁵⁹ “A slow weight loss of 1 or 2 pounds a week, until the desirable body weight is reached, is best.”¹⁶⁰

Weight	Oz/Roizen	TDEE Female	TDEE Male	Diff. Female Oz/Roizen - 2 lb. wt. loss	Diff. Male Oz/Roizen - 2 lb. wt. loss
160	1780	2400	2640	-1620	-1860
170	1860	2550	2805	-1690	-1945
180	1940	2700	2970	-1760	-2030
190	2020	2850	3135	-1830	-2115
200	2100	3000	3300	-1900	-2200
210	2180	3150	3465	-1970	-2285
220	2260	3300	3630	-2040	-2370
230	2340	3450	3795	-2110	-2455

¹⁵⁹ <http://www.nlm.nih.gov/MEDLINEPLUS/ency/article/001940.htm>

¹⁶⁰ <http://www.nlm.nih.gov/MEDLINEPLUS/ency/article/001940.htm>

240	2420	3600	3960	-2180	-2540
250	2500	3750	4125	-2250	-2625
260	2580	3900	4290	-2320	-2710
270	2660	4050	4455	-2390	-2795
280	2740	4200	4620	-2460	-2880
290	2820	4350	4785	-2530	-2965
300	2900	4500	4950	-2600	-3050

The table below compares the recommended caloric intakes of Oz/Roizen using the prescriptions in their books in order to lose 2 pounds per week, to the calculated TDEE using the equations mentioned in the text. The caloric differences are then calculated for females and males. The caloric intake values of the experts are post-exercise, with 300 Calories per day subtracted. This represents the recommended amount of daily exercise. (Specifically mentioned in the diet of Oz/Roizen.)

Conventional thinking holds: “One pound of fat contains approximately 3,500 calories, so to lose one pound a week, a person should consume approximately 3,500 fewer calories per week. This can be done by reducing the daily intake by 500 calories per day (500 x 7 days will provide a deficit of 3,500 calories per week). To lose 2 pounds per week, a deficit of 1,000 calories per day is required.”¹⁶¹ “A slow weight loss of 1 or 2 pounds a week, until the desirable body weight is reached, is best.”¹⁶²

Weight	Oz/Roizen	TDEE Female	TDEE Male	Diff. Female Oz/Roizen - 2 lb. wt. loss	Diff. Male Oz/Roizen - 2 lb. wt. loss
160	1480	2400	2640	-1920	-2160
170	1560	2550	2805	-1990	-2245
180	1640	2700	2970	-2060	-2330
190	1720	2850	3135	-2130	-2415
200	1800	3000	3300	-2200	-2500
210	1880	3150	3465	-2270	-2585
220	1960	3300	3630	-2340	-2670
230	2040	3450	3795	-2410	-2755
240	2120	3600	3960	-2480	-2840
250	2200	3750	4125	-2550	-2925
260	2280	3900	4290	-2620	-3010
270	2360	4050	4455	-2690	-3095
280	2440	4200	4620	-2760	-3180
290	2520	4350	4785	-2830	-3265
300	2600	4500	4950	-2900	-3350

¹⁶¹ <http://www.nlm.nih.gov/MEDLINEPLUS/ency/article/001940.htm>

¹⁶² <http://www.nlm.nih.gov/MEDLINEPLUS/ency/article/001940.htm>