

## Reduction in Body Weight with a Starch Blocking Diet Aid: Starch Away Comparison with Placebo

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**Objective:** To evaluate the weight loss effects of a starch blocking dietary supplement soft chew (Starch Away).

**Methods:** The Starch Away clinical was a 12-week, double-blind, placebo-controlled study involving 60 overweight individuals. Over the course of the 12-week study period subjects consumed either 2 Starch Away soft chews (1,000 mg of white kidney bean extract) or 2 placebo soft chews before each of their meals (6 soft chews per day). Subjects were instructed on proper eating habits and the importance of exercise but were not required to follow a specific program in order to duplicate an actual consumer situation. The study included women and men whose mean age was 33.2 years. The mean weight of the participants was 202.4 pounds at intake. The study required that subjects be in "generally good" health and not consume any other diet aids during the 12-week course. Subjects were weighed at intake, 6, 8 and 12 weeks to track the progression of their weight change.

**Results:** Results of the study indicate that individuals taking Starch Away experienced significantly more weight loss than their placebo counterparts. Overall, the Starch Away group lost nearly 7 pounds compared with a gain of almost 1 pound in the placebo group after 12 weeks. Weight loss in the Starch Away group was statistically significant at weeks 6, 8, and 12 compared to the placebo group. Although the average weight loss analyzed in the active group was 6.9 pounds, individual weight loss over 12 weeks ranged up to 35 pounds. No adverse events were reported during the 12-week study.

**Conclusion:** This clinical research documents the efficacy and safety of Starch Away as a weight loss aid. The statistical significance ( $p = 0.029$ ) of the results of this study indicate that there is a high probability that the general population will experience an average weight loss of 7 pounds over a 12-week period of Starch Away used as directed. The average weight loss achieved in this study is particularly impressive since the study participants, although counseled on diet and exercise at the outset of the study, were not required to modify current diet or exercise regimen during the course of the study.

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Obesity is a growing problem in the United States. Over 50 percent of men and women are overweight. Approximately 40 percent of women and 25 percent of men are attempting to lose weight. Consumers are constantly looking for ways to lose weight.

Starch Away™ is an alpha amylase blocker that contains Phase 2—an extract from the white kidney bean, which blocks the breakdown of starch to sugars, thereby stopping absorption of starches in the intestine. Phase 2 is similar to an extract studied at the Mayo Clinic. In an independent in vitro test by Lycoming Laboratories, using a modified USP method, Phase 2 neutralized 2,250 calories or the equivalent of over one pound of spaghetti.

The purpose of this study was to determine if Starch Away is an effective weight-loss supplement in a population of overweight but otherwise healthy individuals.

### METHODS

A total of 88 people were enrolled in the study. Informed consent was obtained from each subject. The sponsor explained orally and in writing the nature, duration, and purpose of the program in such a manner that all subjects were completely aware of any potential risks. Subjects were informed that they may withdraw from the program at any time without prejudice.

Eligible subjects were males or females 18 to 75 years of age in general good health and who needed to lose at least 10 pounds but not more than 60 pounds. Subjects had to have a body mass index (BMI) between 24 to 32 kg/m<sup>2</sup> and be motivated to lose weight. Exclusion criteria included concomitant intake of over-the-counter diet aids or any prescription medication other than birth control pills; overt endocrine disease, clinical disease, or surgical condition, which could interfere

with the study; known renal, hepatic, thyroid, or cardiac disease, diabetes, or hypertension; unable to return for regular weigh-ins; known alcoholics, unless participating in an Alcoholics Anonymous or similar reinforcement program; women who were pregnant, lactating, or planning on becoming pregnant; individuals who had not signed the written informed consent form; individuals who were taking any investigational drug or "substance of abuse" 30 days prior to enrollment; individuals who had experienced recent gallbladder problems; individuals who were suspected of or had a recent history of an eating disorder; and individuals who were allergic to any of the ingredients in the soft chews. Subjects were also excluded if significant concomitant medications would be required during the course of the study. Subjects in the study were told to report taking any significant or over-the-counter medications during the active phase. Subjects were asked to record ingesting any medications during the study at the final visit.

### **Program Objectives**

This program was conducted to evaluate the effectiveness of Starch Away dietary supplement in weight loss, body measurement, body composition improvement, and satiety, in a population of overweight individuals.

### **Study Design**

This was a 12-week, randomized, double-blind, placebo-controlled, parallel design. Baseline observations were compared with weigh-ins after six, eight, and 12 weeks. Body weight was measured without outer clothing (ie, jackets, sweaters, gloves, hats, shoes, etc.) and whenever possible, at approximately the same time of day at the baseline, week 6, week 8, and week 12 visits. The baseline and final weights were made prior to eating or drinking for all subjects.

Subjects were randomly assigned to receive Starch Away or placebo (eg, Appendix B). Each Starch Away soft chew contained 20 calories, 4 g carbohydrates, 3 g sugar, 30 mg sodium, and 500 mg of white kidney bean extract (Phase 2). Placebo was similar to Starch Away soft chews in look, feel, taste, caloric value, and sodium, carbohydrate, sugar, and fat content. Subjects were supplied with enough soft chews for 12 weeks at six a day or a total of 504 soft chews. Subjects were told to take two soft chews minutes before eating their three daily meals and to eat sensibly. Guidelines for sensible meal ideas were also distributed (eg, Appendix G). In addition to these suggestions, subjects were provided with information on dietary exchanges (eg, Appendix H). Subjects were told that they may consume up to three between-meal snacks a day and that the snacks should consist of a fresh fruit and/or vegetable containing 120 calories or less. All subjects were encouraged to drink plenty of water or other noncaloric beverages daily and were encouraged to walk and exercise regularly while in the program. However, no specific exercise program was provided in order to duplicate as closely as possible the actual consumer situation.

Total body weight, body fat, and lean body mass changes were considered as the primary effectiveness variables. Body composition was determined using the Tanita TBF 300A, which is a research grade bioimpedance body composition instrument. Body measurement changes of the waist and hips were also considered effectiveness variables. Subjects were given forms to record their satiety. Safety was also assessed.

Randomization was performed using a block design (eg, Appendix B). Body weights are presented for all subjects. Mean changes were determined and presented  $\pm$  standard error or standard deviation. For body weight, significance level of the mean changes from baseline was determined by student's t-test. Paired t-tests were used to determine if significant weight loss occurred at the 95% confidence interval at the weigh-ins reported. Independent sample t-tests were used to compare the active participants with the placebo group. All tests were two-tailed and all tests were performed using SPSS 10.0 software.

## RESULTS

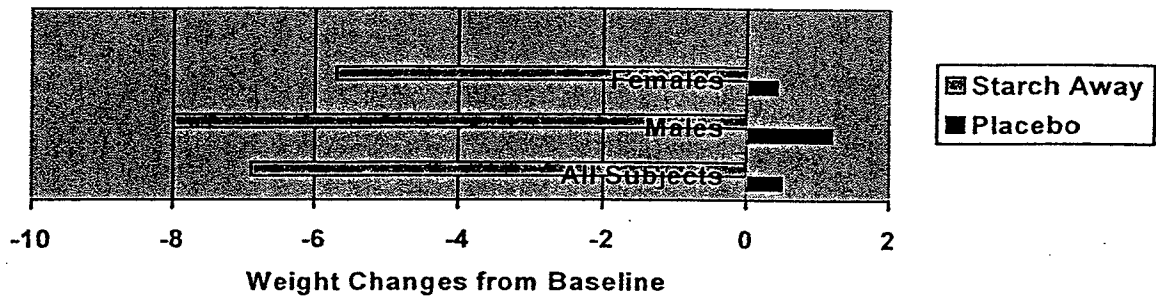
Table 1 shows the clinical characteristics of each study group at baseline. Thirty-eight females and 11 males were randomized to active. There were no differences between the groups' age. Baseline BMI was significantly higher in the active group ( $p = 0.039$ ) than in the placebo group. This difference may have had an impact on the results in that the active group had more weight to lose; however, the study was randomized and every effort was made to insure equality of the two groups at baseline. The higher BMI in the active group was an unforeseen effect of the randomization.

Table 1. Descriptive Statistics		
	Mean	Standard Deviation
<b>All Subjects (N=88)</b>		
Baseline (lb)	202.4	56.9
Age (yr)	33.2	16.4
BMI (kg/m <sup>2</sup> )	33.8	9.8
<b>Actives (N=48)</b>		
Baseline (lb)	202.4	56.9
Age (yr)	33.2	16.4
BMI (kg/m <sup>2</sup> )	36.5	99.9
<b>Placebo (N=40)</b>		
Baseline (lb)	190.9	53.2
Age (yr)	33.7	21.7
BMI (kg/m <sup>2</sup> )	31.2	9.0
<b>Males (N=26)</b>		
Baseline (lb)	199.3	58.0
Age (yr)	38.5	20.9
BMI (kg/m <sup>2</sup> )	26.7	7.3
<b>Females (N=62)</b>		
Baseline (lb)	31.2	57.0
Age (yr)	31.2	13.8
BMI (kg/m <sup>2</sup> )	35.5	10.2
<b>Male Active (N=11)</b>		
Baseline (lb)	216.5	71.2
Age (yr)	31.4	9.7
BMI (kg/m <sup>2</sup> )	33.2	9.2
<b>Male Placebo (N=15)</b>		
Baseline (lb)	216.5	41.5
Age (yr)	43.7	25.4
BMI (kg/m <sup>2</sup> )	27.8	5.5
<b>Female Active (N=36)</b>		
Baseline (lb)	210.6	54.8
Age (yr)	33.2	9.8
BMI (kg/m <sup>2</sup> )	37.5	9.9
<b>Female Placebo (N=26)</b>		
Baseline (lb)	193.2	59.6
Age (yr)	28.3	18.0
BMI (kg/m <sup>2</sup> )	33.0	10.2

## Weight

Table 5 shows the weight changes for all subjects for week 6, week 8, and week 12. Figure 1 shows that weight loss compared with baseline was significant for the active group ( $p = 0.029$ ). Tables 2-4 and Figure 1 show that male and female actives experienced significantly greater weight loss than their placebo counterparts. Overall the active group lost nearly 7 pounds compared with a gain of almost 1 pound in the placebo group after 12 weeks (eg, Appendix D).

**Figure A. Weight Changes from Baseline for Active vs Placebo**



	N	Weight wk 8*	Weight Wk 12†
Active	34	-4.8+/-2.9	-6.9+/-7.9
Placebo	26	0.2+/-5.1	0.5+/-7.9

\*Significance between groups (week 8):  $p = 0.031$ .  
†Significance between groups (week 12):  $p = 0.029$ .

	N	Weight wk 8*	Weight wk 12†
Active	11	-4.8+/-2.0	-8.0+/-5.1
Placebo	13	1.2+/-4.7	1.2+/-4.7

\*Significance between groups (week 8):  $p = 0.01$ .  
†Significance between groups (week 12):  $p = 0.008$ .

	N	Weight wk 8*	Weight wk 12†
Active	23	-4.6+/-3.0	-5.7+/-7.8
Placebo	13	-0.4+/-3.2	0.43+/-4.0

\*Significance between groups (week 8):  $p = 0.001$ .  
†Significance between groups (week 12):  $p = 0.020$ .

	Week 6	Week 8	Week 12
Active	-2.1+/-2.1	-4.8+/-0.5	-6.9+/-7.9
Placebo	0.9+/-4.0	-0.2+/-5.1	0.8+/-6.1
Significance	0.013*	0.031*	0.029*

\* $P = 0.05$

### **Body Composition**

There were no significant differences between groups in body composition (eg, Appendix E).

### **Measurements**

There were no significant differences in waist and hip circumferences between treatment groups (eg, Appendix F).

### **Satiety**

The satiety aspect of the study was aborted because the majority of subjects failed to fill out the forms or filled out the forms incorrectly.

### **Adverse Events**

There were no reports of adverse events.

## **CONCLUSION**

In the United States, being seriously overweight (obese) has reached epidemic proportions. Currently, it is estimated that 60 percent of adult Americans are either overweight, which is defined as having a BMI above 25, or clinically obese, with a BMI exceeding 30. Obesity is associated with many disease states and is related to many diseases including cardiovascular disease and diabetes. In addition to the risks they carry for these diseases, overweight individuals often experience a decreased quality of life, including depression, impaired mobility, and poor self-esteem. Fortunately, obesity is treatable and there is strong evidence that even modest weight loss can bring health improvements. A gradual weight loss (one to two pounds a week) is a safe and healthy strategy and may help keep the weight off for the long-term. Results from this study show that Starch Away offers a safe and effective way to lose weight. Subjects taking Starch Away lost an average of 7 pounds over a 12-week period, which averages to a little over a half a pound a week. Therefore, Starch Away represents a healthy weight loss program simply by restricting the calories absorbed from starch. A reduction in calories from starch alone can lead to beneficial weight-loss effects. These results demonstrate that Starch Away is both effective and safe as part of a weight-loss program in a population of overweight consumers. Clearly, an effective approach to weight management is to restrict caloric intake under conditions in which all of the nutrients essential for human health are maintained at optimal levels in the body. But while this is simple in theory, caloric restriction is often impractical because of the instinct to overeat and the difficulty in making changes to dietary habits. A promising alternative mechanism is to selectively limit the caloric contribution of starches since they contribute nearly one-half of the total caloric intake in the average American diet. Control of carbohydrate calories through the inhibition of alpha-amylase activity is a rational mechanism for assisting a safe and sensible weight-management program.

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**Appendix A**

**Starch Away Protocol**

## **Program Procedure**

### Screening

All subjects will be asked to read and sign informed consent forms.

### Number of Visits

Subjects will be required to weigh-in at baseline and week 12.

### Procedure on the Program Day

Visit one (baseline): Eligible subjects will be instructed as to the course of the study and will be randomized into treatment with Starch Away or identical-appearing placebo.

Subjects will read and sign Informed Consent and Medical History forms in the presence of the investigator. Baseline weights, heights, and body measurements of the waist, hip, right thigh, and chest will be recorded.

Visit two: Weights will be obtained.

Visit three: Weights will be obtained.

Visit four: Weights will be obtained.

### Clinical Assessments

Body weight will be measured without outer clothing (ie, jackets, sweaters, gloves, hats, shoes, etc.) and whenever possible, at approximately the same time of day at the baseline, week 6, week 8, and week 12 visits. The baseline and final weights were to be made prior to eating or drinking for all subjects on the same scale. Measurements of the waist and hips will be recorded.

### **Evaluation of Effectiveness**

Total body weight and measurement changes will be considered as the primary effectiveness variables. Significant changes relative to the control group will be considered evidence of effectiveness.

### **Evaluation of Safety**

Safety will be assessed by reports of adverse events.

### **Statistical Methods**

Body weights will be presented for all subjects. Mean changes will be determined and presented  $\pm$  standard error or standard deviation. For body weight, significance level of the mean changes from baseline will be determined by student's t-test. Paired t-tests will be used to determine if significant weight loss occurred at the 95% confidence interval at the weigh-ins reported. Independent sample t-tests will be used to compare the active participants with the placebo group. All tests will be 2-tailed and all tests will be performed using SPSS 10.0 software.



### **The Starch Away Plan**

Subjects will be told to consume two Starch Away soft chews before meals and eat sensibly. Guidelines for sensible meal ideas will be distributed.

Subjects will be supplied with enough Starch Away soft chews for 12 weeks at six a day or a total of 504 soft chews.

Each Starch Away soft chew contains 20 calories, 4 g carbohydrates, 3 g sugar, 30 mg sodium, and 500 mg of white kidney bean extract (Phase 2).

### **Meal Suggestions**

Suggestions for the meals will be provided in the form of a one-time handout. In addition to these suggestions, subjects will be provided with information on dietary exchanges. Subjects will not be coached in nutrition or told to follow a specific diet.

### **Selection of Participants**

#### Inclusion Criteria

Eligible subjects for inclusion in this program will be males or females 18 to 75 years of age in general good health who need to lose at least 10 pounds, but not more than 60 pounds. Subjects will be included if they have a body mass index (BMI) between 24 to 32 kg/m<sup>2</sup> and are motivated to lose weight.

#### Exclusion Criteria

Subjects will be excluded if they require or are taking any over-the-counter diet aids or any prescription medication other than birth control pills; have any overt endocrine disease, clinical disease, or surgical condition, which could interfere with the study; have known renal, hepatic or thyroid disease, diabetes, cardiac disease, or hypertension; can not return for regular weigh-ins; are known alcoholics, unless participating in an Alcoholics Anonymous or similar reinforcement program; pregnant, lactating, or who are planning on becoming pregnant; have not signed the written informed consent form; are taking any investigational drug or "substance of abuse" 30 days prior to enrollment; have experienced recent gallbladder problems; are suspected of or have a recent history of an eating disorder; and are allergic to any of the ingredients in the soft chews.

### **Concurrent Medications**

No subject will be enrolled in the program if significant concomitant medications would be required during the course of the study. Subjects in the study must report taking any significant or over-the-counter medications during the active phase. Subjects will be asked to record ingesting any medications during the study at the final visit.

### **Informed Consent**

The Sponsor will explain orally and in writing the nature, duration, and purpose of the program in such a manner that all subjects will be completely aware of any potential risks. Subjects will be informed that they may withdraw from the program at any time without prejudice.

The scales used to rate hunger are as follows:

1. How HUNGRY do you feel right now?

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1	2	3	4	5	6	7	8	9

Not hungry at all As hungry I have ever felt

---

2. How strong is your desire to eat right now?

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1	2	3	4	5	6	7	8	9

No desire Extremely strong

---

3. How much food do you think you could eat right now?

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1	2	3	4	5	6	7	8	9

Nothing at all A very large amount

---

4. How full does your stomach feel right now?

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1	2	3	4	5	6	7	8	9

Very Empty Extremely full

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5. Please indicate how thirsty you are RIGHT NOW.

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1	2	3	4	5	6	7	8	9

Not at all Extremely

---

The scales used to assess taste are as follows:

1. Considering everything, which statement best describes how well you like the sample?

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1	2	3	4	5	6	7	8	9

Dislike extremely Dislike very much Dislike moderately Dislike slightly Do not like or dislike Like slightly Like moderately Like very much Like extremely

### Effectiveness

Total body weight, body fat, and lean body mass changes will be considered as the primary effectiveness variables. Body measurement changes of the waist and hips will also be considered primary effectiveness variables. Suppression of hunger for at least 4 hours or longer following an overnight fast will be considered proof of effectiveness in satiety satisfaction. Subject evaluations of the products will be considered as a secondary effectiveness variable.

### Duration.

The trial will last 12 weeks.

# Starch Away Protocol

## Introduction

Obesity is a growing problem in the United States. Over 50 percent of men and women are overweight. Approximately 40 percent of women and 25 percent of men are attempting to lose weight. Consumers are constantly looking for ways to lose weight.

Starch Away™ is an alpha amylase blocker that contains Phase 2—an extract from the white kidney bean that blocks the breakdown of starch to sugars, thereby stopping absorption of starches in the intestine. Phase 2 is similar to an extract studied at the Mayo Clinic. In an independent in vitro test by Lycoming Laboratories, using a modified USP method, Phase 2 neutralized 2,250 calories or the equivalent of over one pound of spaghetti.

The purpose of this study is to determine if Starch Away is an effective weight-loss supplement in a population of overweight but otherwise healthy individuals.

## Program Objectives

This program will be conducted to evaluate the effectiveness of Starch Away dietary supplement in weight loss, body measurement, body composition improvement, and consumer acceptability in a population of overweight individuals.

## Design

The study will be executed in a randomized, double-blind, parallel-controlled design with baseline observations being compared with weigh-ins after 6, 8, and 12 weeks. Subjects will be told to ingest two Starch Away soft chews minutes before eating their three daily meals. All subjects will be encouraged to drink plenty of water or other noncaloric beverages daily and will be encouraged to walk and exercise regularly while in the program. However, no specific exercise program will be provided in order to duplicate as closely as possible the actual consumer situation.

## Number of Subjects

One hundred overweight but otherwise healthy male and female subjects will be enrolled in the program. Subjects will be randomized to treatment with Starch Away or placebo.

## Study Procedure and Hunger Assessments

Subjects will be given the following directions on consuming the Starch Away soft chews:

1. Plan on consuming the Starch Away soft chews a few minutes before the first meal of the day on a typical weekday. Do not eat anything prior to this on the study day. (Do not eat anything after midnight the day before).
2. Rate your hunger before consuming the Starch Away soft chews then after consuming your first daily meal of the day.

**Appendix B**

**Randomization Table**

Randomization Table

Block Number	Treatment A	9119	9152	Treatment B	
1	4	3		2	1
2	5	6		7	8
3	9	10		11	12
4	16	14		15	13
5	17	19		20	18
6	21	24		22	23
7	27	26		25	28
8	30	32		31	29
9	34	35		33	36
10	40	39		38	37
11	43	42		41	44
12	47	48		45	46
13	52	49		51	50
14	56	54		53	55
15	57	60		59	58
16	64	61		63	62
17	68	66		67	65
18	70	72		71	69
19	75	74		73	76
20	80	77		78	79
21	84	83		81	82
22	88	86		87	85
23	89	92		90	91
24	93	95		94	96
25	97	98		99	100
26	102	104		101	103

## **Appendix D**

### **Subject Listings for Weight**

columbiabmi

	no	ran	sex	age	bmi	wo	wt6	wt8
1								
2	34.00	1.00	2.00	31.00	49.20	304.60		295.60
3	10.00	1.00	1.00	17.00	32.00	186.60		174.83
4	49.00	1.00	1.00	41.00	32.10	328.00	326.60	
5	3.00	1.00	1.00	17.00	32.00	186.70		
6	61.00	1.00	2.00	31.00		212.00		
7	74.00	1.00	2.00	29.00	39.00	176.00	173.80	171.30
8	104.00	1.00	2.00	16.00	41.90	251.80		246.50
9	66.00	1.00	2.00	31.00	31.40	161.00	158.60	155.20
10	97.00	1.00	2.00	26.00	29.90	147.80	144.00	140.20
11	15.00	2.00	2.00	55.00	37.50	246.80	243.80	241.20
12	24.00	1.00	1.00	44.00	28.80	184.00	180.00	177.40
13	36.00	2.00	2.00	53.00	34.30	212.60		
14	7.00	2.00	2.00	16.00	28.70	167.20		168.10
15	89.00	1.00	1.00	31.00	28.80	206.40	202.00	198.30
16	1.00	2.00	2.00	16.00			209.00	
17	83.00	1.00	2.00	26.00		219.00		
18	11.00	1.00	1.00	29.00	39.40	208.60		207.00
19	56.00	2.00	2.00	38.00	40.80	223.00		
20	29.00	2.00	2.00	16.00	26.20	162.20		162.00
21	98.00	1.00	2.00	39.00	30.50	183.20	182.00	180.10
22	47.00	1.00	2.00	34.00		187.00		
23	100.00	2.00	1.00	18.00	22.50	161.20	156.00	151.40

columbiabmi

	wtchg8	wk12	no2	wtchg12	name	ran2	ran3	Inches
1	.	.	.	.	.	.	.	.
2	-9.00	.	34.00	.	.	.	1.00	66.00
3	.	175.00	10.00	-11.60	.	.	1.00	69.00
4	.	317.00	49.00	-11.00	.	.	.	72.00
5	.	186.20	3.00	-.50	.	.	1.00	64.00
6	.	.	61.00	.	.	.	.	66.00
7	-4.70	160.00	74.00	-16.00	.	.	1.00	61.00
8	-5.30	247.00	104.00	-4.80	.	.	1.00	64.00
9	-5.80	158.00	66.00	-3.00	.	.	1.00	60.00
10	-7.60	141.00	97.00	-6.80	.	.	1.00	59.00
11	-5.60	244.00	15.00	-2.80	.	.	1.00	68.00
12	-6.60	180.00	24.00	-4.00	.	.	1.00	67.00
13	.	210.40	36.00	-2.20	.	.	2.00	66.00
14	.90	165.40	7.00	.00	.	.	2.00	64.00
15	-8.10	171.80	89.00	-34.60	.	.	1.00	71.00
16	.	214.00	1.00	5.00	.	.	.	64.00
17	.	209.00	83.00	-10.00	.	.	1.00	61.00
18	-1.60	177.40	93.00	-31.20	.	.	1.00	61.00
19	.	219.20	56.00	-3.80	.	.	2.00	62.00
20	-.20	164.00	29.00	1.80	.	.	2.00	66.00
21	-3.10	184.00	98.00	.80	.	.	1.00	65.00
22	.	177.80	47.00	-9.20	.	.	1.00	63.00
23	-9.80	153.80	100.00	-7.40	.	.	2.00	71.00



columbiabmi

	meters	wtkg0	bmlbase	wk12kg	wk12bmi	bmlchg
1	.	.	.	.	.	.
2	1.67	138.90	49.80	.	.	.
3	1.75	85.09	27.90	79.80	26.19	-1.70
4	1.82	149.57	45.10	144.55	43.56	-1.50
5	1.62	85.14	32.50	84.91	32.38	-.10
6	1.67	96.67	34.70	.	.00	.
7	1.54	80.26	33.70	72.96	30.63	-3.10
8	1.62	114.82	43.80	112.63	42.96	-.80
9	1.52	73.42	31.90	72.05	31.27	-.60
10	1.49	67.40	30.20	64.30	28.86	-1.40
11	1.72	112.54	38.00	111.26	37.59	-.40
12	1.70	83.90	29.20	82.08	28.57	-.60
13	1.67	96.95	34.80	95.94	34.41	-.40
14	1.62	76.24	29.10	75.42	28.77	-.30
15	1.80	94.12	29.20	78.34	24.28	-4.90
16	1.62	95.30	36.30	97.58	37.22	.90
17	1.54	99.86	41.90	95.30	40.01	-1.90
18	1.54	95.12	39.90	80.89	33.96	-6.00
19	1.57	101.69	41.30	99.96	40.62	-.70
20	1.67	73.96	26.50	74.78	26.82	.30
21	1.64	83.54	30.90	83.90	31.03	.10
22	1.59	85.27	33.60	81.08	31.91	-1.70
23	1.80	73.51	22.80	70.13	21.74	-1.00

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columbiabmi

	no	ran	sex	age	bmi	wo	wt6	wt8
24	105.00	1.00	2.00	36.00	47.40	253.20	250.10	248.50
25	42.00	1.00	1.00	22.00	.	147.20	.	.
26	22.00	2.00	1.00	78.00	23.60	146.40	.	143.50
27	80.00	1.00	2.00	55.00	24.80	162.80	.	158.20
28	21.00	1.00	2.00	16.00	.	135.00	.	.
29	55.00	2.00	2.00	38.00	40.80	223.00	.	.
30	94.00	2.00	2.00	16.00	22.80	120.80	.	120.80
31	101.00	2.00	2.00	30.00	33.10	199.00	.	198.60
32	13.00	2.00	2.00	16.00	27.00	182.80	.	.
33	38.00	2.00	2.00	16.00	29.50	182.60	.	182.60
34	82.00	2.00	2.00	16.00	21.40	124.80	.	124.70
35	96.00	2.00	2.00	45.00	30.10	180.60	.	181.10
36	92.00	1.00	2.00	28.00	30.70	179.00	.	172.30
37	52.00	1.00	2.00	16.00	19.80	133.80	132.00	131.00
38	87.00	2.00	2.00	34.00	37.10	209.60	206.00	205.10
39	62.00	2.00	2.00	37.00	31.00	186.20	191.60	192.70
40	81.00	2.00	1.00	73.00	34.20	199.20	198.00	197.70
41	63.00	2.00	2.00	39.00	.	219.00	.	.
42	102.00	1.00	2.00	39.00	35.60	220.00	214.00	206.00
43	69.00	.	2.00	39.00	.	220.00	220.40	.
44	91.00	2.00	2.00	16.00	45.30	180.60	.	.
45	60.00	1.00	2.00	50.00	50.20	256.80	257.80	256.10
46	59.00	2.00	2.00	49.00	27.20	184.00	.	.

columbiabmi

	wtchg8	wk12	no2	wtchg12	name	ran2	ran3	Inches
24	-4.20	247.00	105.00	-6.20	.	.	1.00	68.00
25	.	140.00	42.00	-7.20	.	.	.	71.00
26	-2.90	143.00	22.00	-3.40	.	.	2.00	66.00
27	-4.60	152.00	80.00	-10.80	.	.	1.00	68.00
28	.	130.00	21.00	-5.00	.	.	1.00	62.00
29	.	.	55.00	.	.	.	2.00	64.00
30	.00	112.60	94.00	-8.20	.	.	2.00	61.00
31	-.40	198.00	101.00	-1.00	.	.	2.00	65.00
32	.	.	13.00	.	.	.	2.00	69.00
33	.00	181.00	38.00	-1.60	.	.	2.00	66.00
34	-.10	128.00	82.00	3.20	.	.	2.00	64.00
35	.50	182.00	96.00	1.40	.	.	2.00	67.00
36	-6.70	.	92.00	.	.	.	1.00	64.00
37	-2.80	129.00	52.00	-4.80	.	.	1.00	69.00
38	-4.50	215.00	87.00	5.40	.	.	2.00	63.00
39	6.50	192.00	62.00	5.80	.	.	2.00	65.00
40	-1.50	.	81.00	.	.	.	2.00	64.00
41	.	220.00	63.00	1.00	.	.	.	66.00
42	-14.00	.	102.00	-220.00	.	.	1.00	66.00
43	.	220.00	69.00	.	.	.	2.00	.
44	.	170.00	91.00	-10.60	.	.	2.00	65.00
45	-.70	258.00	60.00	1.20	.	.	1.00	60.00
46	.	179.00	59.00	-5.00	.	.	2.00	69.00

columbiabmi

	meters	wtkgo	bmlbase	wk12kg	wk12bmi	bmlchg
24	1.72	115.46	39.00	112.63	38.05	-1.00
25	1.80	67.12	20.80	63.84	19.78	-.60
26	1.67	66.76	23.90	65.21	23.39	-1.70
27	1.72	74.24	25.10	69.31	23.42	-.90
28	1.57	61.56	25.00	59.28	24.09	.
29	1.62	101.69	38.80	.	.00	-1.60
30	1.54	55.08	23.10	51.35	21.56	-.20
31	1.64	90.74	33.60	90.29	33.39	-27.40
32	1.75	83.36	27.40	.	.00	-.30
33	1.67	83.27	29.90	82.54	29.60	.60
34	1.62	56.91	21.70	58.37	22.26	.20
35	1.70	82.35	28.70	82.99	28.88	.
36	1.62	81.62	31.10	.	.00	-.70
37	1.75	61.01	20.00	58.82	19.30	1.00
38	1.59	95.58	37.60	98.04	38.59	1.00
39	1.64	84.91	31.40	87.55	32.37	.
40	1.62	90.84	34.60	.	.00	.20
41	1.67	99.86	35.80	100.32	35.98	.
42	1.67	100.32	36.00	.	.00	.
43	.00	100.32	.	100.32	.	-1.80
44	1.64	82.35	30.50	77.52	28.66	.20
45	1.52	117.10	50.80	117.65	51.06	-.70
46	1.75	83.90	27.50	81.62	26.78	.

columbiabmi

	no	ran	sex	age	bmi	w0	wt6	wt8
47	51.00	2.00	2.00	16.00	.	166.00	.	.
48	99.00	2.00	2.00	16.00	18.90	106.80	107.00	107.00
49	6.00	1.00	2.00	39.00	29.20	170.40	170.20	.
50	2.00	2.00	2.00	16.00	17.50	98.80	98.80	99.00
51	77.00	1.00	1.00	16.00	57.30	344.60	.	.
52	42.00	1.00	1.00	16.00	.	168.00	.	.
53	32.00	1.00	2.00	36.00	35.20	192.20	.	188.20
54	78.00	2.00	2.00	86.00	21.10	108.20	.	108.00
55	58.00	2.00	1.00	23.00	.	140.00	.	.
56	4.00	1.00	1.00	29.00	28.80	154.40	.	.
57	33.00	2.00	1.00	44.00	28.00	206.40	207.80	208.20
58	19.00	1.00	1.00	19.00	26.40	178.60	.	170.80
59	9.00	1.00	1.00	19.00	26.40	178.60	.	.
60	5.00	1.00	2.00	43.00	41.40	256.40	253.40	250.20
61	27.00	1.00	2.00	32.00	43.80	275.60	.	274.40
62	39.00	1.00	1.00	42.00	27.00	188.20	187.00	185.00
63	65.00	2.00	2.00	62.00	42.60	280.00	.	.
64	26.00	1.00	2.00	38.00	24.20	169.00	.	163.20
65	84.00	1.00	2.00	29.00	32.50	172.00	.	168.00
66	73.00	1.00	2.00	39.00	.	219.00	.	.
67	90.00	2.00	1.00	87.00	26.50	167.60	165.00	166.00
68	30.00	1.00	2.00	38.00	.	216.00	.	.
69	37.00	2.00	1.00	34.00	25.70	189.60	200.00	201.20

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columbiabmi

	wtchg8	wk12	no2	wtchg12	name	ran2	ran3	Inches
47	.	167.00	51.00	1.00	.	.	2.00	.
48	.20	114.40	99.00	7.60	.	.	2.00	63.00
49	.	172.00	6.00	1.60	.	.	1.00	64.00
50	.20	112.60	2.00	13.80	.	.	2.00	63.00
51	.	340.00	77.00	-4.60	.	.	1.00	.
52	.	166.60	42.00	-1.40	.	.	1.00	61.00
53	-4.00	186.00	32.00	-6.20	.	.	1.00	.
54	-.20	108.00	78.00	-.20	.	.	2.00	60.00
55	.	140.00	58.00	.00	.	.	.	64.00
56	.	206.00	4.00	51.60	.	.	1.00	72.00
57	1.80	211.00	33.00	4.60	.	.	2.00	72.00
58	-7.80	.	19.00	.	.	.	1.00	.
59	.	.	9.00	.	.	.	1.00	69.00
60	-6.20	255.00	5.00	-1.40	.	.	1.00	66.00
61	-1.20	.	27.00	.	.	.	1.00	66.50
62	-3.20	186.00	39.00	-2.20	.	.	1.00	70.00
63	.	278.40	65.00	-1.60	.	.	2.00	68.00
64	-5.80	156.00	26.00	-13.00	.	.	1.00	70.00
65	-4.00	161.00	84.00	-11.00	.	.	1.00	61.00
66	.	225.00	73.00	6.00	.	.	.	.
67	-1.60	168.20	90.00	.60	.	.	2.00	67.00
68	.	213.00	30.00	-3.00	.	.	1.00	66.00
69	11.60	199.00	37.00	9.40	.	.	2.00	72.00

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columbiabmi

	meters	wtkg0	bmlbase	wk12kg	wk12bmi	bmlchg
47	.00	75.70		76.15		1.40
48	1.59	48.70	19.20	52.17	20.53	.30
49	1.62	77.70	29.60	78.43	29.92	2.50
50	1.59	45.05	17.70	51.35	20.21	.
51	.00	157.14		155.04		-.30
52	1.54	76.61	32.20	75.97	31.90	.
53	.00	87.64		84.82		.00
54	1.52	49.34	21.40	49.25	21.37	.00
55	1.62	63.84	24.30	63.84	24.35	7.10
56	1.82	70.41	21.20	93.94	28.31	.60
57	1.82	94.12	28.40	96.22	29.00	.
58	.00	81.44				-.26.70
59	1.75	81.44	26.70		.00	-.20
60	1.67	116.92	41.90	116.28	41.70	-44.40
61	1.68	125.67	44.40		.00	-.30
62	1.77	85.82	27.40	84.82	27.04	-.20
63	1.72	127.68	43.10	126.95	42.89	-1.90
64	1.77	77.06	24.60	71.14	22.68	-2.10
65	1.54	78.43	32.90	73.42	30.82	.
66	.00	99.86		102.60		.10
67	1.70	76.43	26.60	76.70	26.69	-.50
68	1.67	98.50	35.30	97.13	34.83	1.30
69	1.82	86.46	26.10	90.74	27.35	-1.40

columbiabmi

	no	ran	sex	age	bmi	w0	wt6	wt8
70	86.00	1.00	1.00	28.00		238.00		
71	79.00	2.00	1.00	60.00	31.30	296.00	299.60	300.50
72	40.00	1.00	1.00	29.00	51.40	379.00	378.00	377.00
73	8.00	2.00	2.00	16.00	27.00	182.80	181.00	180.50
74	76.00	2.00	1.00	40.00	31.10	219.60	213.00	214.10
75	75.00	1.00	2.00	29.00	33.30	176.00		170.00
76	18.00	2.00	1.00	43.00	27.90	183.20	193.40	191.40
77	35.00	1.00	2.00	35.00	30.30	165.40		160.40
78	67.00	2.00	2.00	45.00	45.70	309.60	311.00	312.00
79	23.00	2.00	2.00	70.00	24.80	167.80		168.20
80	71.00	2.00	1.00	17.00	24.10	158.20		
81	12.00	2.00	2.00			247.20	249.00	249.00
82	64.00	1.00	2.00	49.00	31.60	167.40		160.40
83	45.00	2.00	2.00	16.00	50.80	286.60	289.00	288.40
84	57.00	1.00	2.00	16.00	21.10	115.20	115.00	115.00
85	46.00	2.00	1.00	16.00	27.60	186.60	176.00	171.80
86	88.00	1.00	2.00	28.00	35.20	205.20	205.20	203.70
87	95.00	1.00	2.00	26.00	37.20	237.40		230.80
88	17.00	1.00	1.00	42.00	27.80	199.60	197.80	195.40
89	103.00	2.00	1.00	34.00	31.80	179.40	181.40	180.50
90	14.00	1.00	2.00	52.00	39.00	206.40	207.00	205.80
91	44.00	2.00	2.00	23.00	27.60	146.20	145.00	143.60
92	41.00	2.00	1.00	77.00	33.20	205.40	205.60	205.40



columblabmi

	wtchg8	wk12	no2	wtchg12	name	ran2	ran3	inches
70	.	228.00	86.00	-10.00	.	.	1.00	71.00
71	4.50	302.00	79.00	6.00	.	.	2.00	.
72	-2.00	362.00	40.00	-17.00	.	.	1.00	72.00
73	-2.30	189.00	8.00	6.20	.	.	2.00	69.00
74	-5.50	208.00	76.00	-11.60	.	.	2.00	71.50
75	-6.00	173.80	75.00	-2.20	.	.	1.00	73.00
76	8.20	.	18.00	.	.	.	2.00	68.00
77	-5.00	160.00	35.00	-5.40	.	.	1.00	62.00
78	2.40	310.00	67.00	.40	.	.	2.00	69.00
79	.40	169.00	23.00	1.20	.	.	2.00	69.00
80	.	157.00	71.00	-1.20	.	.	2.00	68.00
81	.	265.00	12.00	17.80	.	.	2.00	67.00
82	-7.00	161.00	64.00	-6.40	.	.	1.00	61.00
83	1.80	292.40	45.00	5.80	.	.	2.00	63.00
84	-.20	114.00	57.00	-1.20	.	.	1.00	62.00
85	-14.80	175.00	46.00	-11.60	.	.	2.00	69.00
86	-1.50	203.00	88.00	-2.20	.	.	1.00	64.00
87	-6.60	.	95.00	.	.	.	1.00	67.00
88	-4.20	191.00	17.00	-8.60	.	.	1.00	71.00
89	8.00	178.00	103.00	-1.40	.	.	2.00	63.00
90	-.60	203.00	14.00	-3.40	.	.	1.00	61.00
91	-2.60	151.40	44.00	5.20	.	.	2.00	61.00
92	.00	206.60	41.00	1.20	.	.	2.00	66.00

columblabmi

	meters	wtkg0	bmlbase	wk12kg	wk12bmi	bmicHg
70	1.80	108.53	33.60	103.97	32.22	.
71	.00	134.98	.	137.71	.	-2.30
72	1.82	172.82	52.10	165.07	49.75	.90
73	1.75	83.36	27.40	86.18	28.28	-1.60
74	1.81	100.14	30.60	94.85	28.99	-.30
75	1.85	80.26	23.50	79.25	23.23	.
76	1.72	83.54	28.20	.	.00	-1.00
77	1.57	75.42	30.70	72.96	29.65	.10
78	1.75	141.18	46.30	141.36	46.39	.20
79	1.75	76.52	25.10	77.06	25.29	-.20
80	1.72	72.14	24.40	71.59	24.19	2.80
81	1.70	112.72	39.20	120.84	42.06	-1.20
82	1.54	76.33	32.00	73.42	30.82	1.00
83	1.59	130.69	51.40	133.33	52.48	-.20
84	1.57	52.53	21.30	51.98	21.13	-1.70
85	1.75	85.09	27.90	79.80	26.19	-.40
86	1.62	93.57	35.70	92.57	35.31	.
87	1.70	108.25	37.70	.	.00	-1.20
88	1.80	91.02	28.20	87.10	26.99	-.30
89	1.59	81.81	32.20	81.17	31.95	-.70
90	1.54	94.12	39.50	92.57	38.87	1.00
91	1.54	66.67	28.00	69.04	28.99	.20
92	1.67	93.66	33.60	94.21	33.79	.10

columbiabmi

	no	ran	sex	age	bmi	w0	wt6	wt8
93	25.00	2.00	2.00	29.00	40.90	209.40	.	.
94	68.00	1.00	2.00	50.00	55.90	305.60	.	.
95	70.00	1.00	2.00	50.00	55.90	305.60	.	289.10
96	72.00	1.00	2.00	32.00	50.60	285.40	.	280.60
97	82.00	2.00	2.00	16.00	.	124.80	.	.
98	230.00	93.00	-7.40	.	.	.	.	.

columbiabmi

	wtchg8	wk12	no2	wtchg12	name	ran2	ran3	Inches
93	.	209.90	25.00	.50	.	.	2.00	60.00
94	.	303.80	68.00	-1.80	.	.	1.00	62.00
95	.	289.00	70.00	-16.60	.	.	1.00	62.00
96	-4.80	285.60	72.00	.20	.	.	1.00	64.00
97	.	.	82.00	.	93.00	1.00	1.00	28.00
98	.	.	.	.	.	.	.	.

columbiabmi

	meters	wtkg0	bmi1base	wk12kg	wk12bmi	bmi1chg
93	1.52	95.49	41.40	95.71	41.54	-.30
94	1.57	139.35	56.60	138.53	56.30	-3.10
95	1.57	139.35	56.60	131.78	53.56	.00
96	1.62	130.14	49.60	130.23	49.67	.
97	.	237.40	.	.	.	.
98	.	.	.	.	.	.

	no	ran	sex	age	bmi	w0	wt6	wt8
1								
2	34.00	1.00	2.00	31.00	49.20	304.60		295.60
3	10.00	1.00	1.00	17.00	32.00	186.60		174.83
4	49.00	1.00	1.00	41.00	32.10	328.00	326.60	
5	3.00	1.00	1.00	17.00	32.00	186.70		
6	61.00	1.00	2.00	31.00		212.00		
7	74.00	1.00	2.00	29.00	39.00	176.00	173.80	171.30
8	104.00	1.00	2.00	16.00	41.90	251.80		246.50
9	66.00	1.00	2.00	31.00	31.40	161.00	158.60	155.20
10	97.00	1.00	2.00	26.00	29.90	147.80	144.00	140.20
11	15.00	2.00	2.00	55.00	37.50	246.80	243.80	241.20
12	24.00	1.00	1.00	44.00	28.80	184.00	180.00	177.40
13	36.00	2.00	2.00	53.00	34.30	212.60		
14	7.00	2.00	2.00	16.00	28.70	167.20		168.10
15	89.00	1.00	1.00	31.00	28.80	206.40	202.00	198.30
16	1.00	2.00	2.00	16.00			209.00	
17	83.00	1.00	2.00	26.00		219.00		
18	11.00	1.00	1.00	29.00	39.40	208.60		207.00
19	56.00	2.00	2.00	38.00	40.80	223.00		
20	29.00	2.00	2.00	16.00	26.20	162.20		162.00
21	98.00	1.00	2.00	39.00	30.50	183.20	182.00	180.10
22	47.00	1.00	2.00	34.00		187.00		
23	100.00	2.00	1.00	18.00	22.50	161.20	156.00	151.40

columbiabmi

	wtchg8	wk12	no2	wtchg12	name	ran2	ran3	Inches
1	.	.	.	.	.	.	.	.
2	-9.00	.	34.00	.	.	.	1.00	66.00
3	.	175.00	10.00	-11.60	.	.	1.00	69.00
4	.	317.00	49.00	-11.00	.	.	.	72.00
5	.	186.20	3.00	-.50	.	.	1.00	64.00
6	.	.	61.00	.	.	.	.	66.00
7	-4.70	160.00	74.00	-16.00	.	.	1.00	61.00
8	-5.30	247.00	104.00	-4.80	.	.	1.00	64.00
9	-5.80	158.00	66.00	-3.00	.	.	1.00	60.00
10	-7.60	141.00	97.00	-6.80	.	.	1.00	59.00
11	-5.60	244.00	15.00	-2.80	.	.	1.00	68.00
12	-6.60	180.00	24.00	-4.00	.	.	1.00	67.00
13	.	210.40	36.00	-2.20	.	.	2.00	66.00
14	.90	165.40	7.00	.00	.	.	2.00	64.00
15	-8.10	171.80	89.00	-34.60	.	.	1.00	71.00
16	.	214.00	1.00	5.00	.	.	.	64.00
17	.	209.00	83.00	-10.00	.	.	1.00	61.00
18	-1.60	177.40	93.00	-31.20	.	.	1.00	61.00
19	.	219.20	56.00	-3.80	.	.	2.00	62.00
20	-.20	164.00	29.00	1.80	.	.	2.00	66.00
21	-3.10	184.00	98.00	.80	.	.	1.00	65.00
22	.	177.80	47.00	-9.20	.	.	1.00	63.00
23	-9.80	153.80	100.00	-7.40	.	.	2.00	71.00

columbiabmi

	meters	wtkgo	bmbibase	wk12kg	wk12bmi	bmicgh
1						
2	1.67	138.90	49.80			-1.70
3	1.75	85.09	27.90	79.80	26.19	-1.50
4	1.82	149.57	45.10	144.55	43.56	-1.10
5	1.62	85.14	32.50	84.91	32.38	
6	1.67	96.67	34.70		.00	-3.10
7	1.54	80.26	33.70	72.96	30.63	-80
8	1.62	114.82	43.80	112.63	42.96	-60
9	1.52	73.42	31.90	72.05	31.27	-1.40
10	1.49	67.40	30.20	64.30	28.86	-40
11	1.72	112.54	38.00	111.26	37.59	-60
12	1.70	83.90	29.20	82.08	28.57	-40
13	1.67	96.95	34.80	95.94	34.41	-30
14	1.62	76.24	29.10	75.42	28.77	-4.90
15	1.80	94.12	29.20	78.34	24.28	.90
16	1.62	95.30	36.30	97.58	37.22	-1.90
17	1.54	99.86	41.90	95.30	40.01	-6.00
18	1.54	95.12	39.90	80.89	33.96	-70
19	1.57	101.69	41.30	99.96	40.62	.30
20	1.67	73.96	26.50	74.78	26.82	.10
21	1.64	83.54	30.90	83.90	31.03	-1.70
22	1.59	85.27	33.60	81.08	31.91	-1.00
23	1.80	73.51	22.80	70.13	21.74	-1.00



	no	ran	sex	age	bmi	wo	wt6	wt8
24	105.00	1.00	2.00	36.00	47.40	253.20	250.10	248.50
25	42.00	1.00	1.00	22.00	.	147.20	.	.
26	22.00	2.00	1.00	78.00	23.60	146.40	.	143.50
27	80.00	1.00	2.00	55.00	24.80	162.80	.	158.20
28	21.00	1.00	2.00	16.00	.	135.00	.	.
29	55.00	2.00	2.00	38.00	40.80	223.00	.	.
30	94.00	2.00	2.00	16.00	22.80	120.80	.	120.80
31	101.00	2.00	2.00	30.00	33.10	199.00	.	198.60
32	13.00	2.00	2.00	16.00	27.00	182.80	.	.
33	38.00	2.00	2.00	16.00	29.50	182.60	.	182.60
34	82.00	2.00	2.00	16.00	21.40	124.80	.	124.70
35	96.00	2.00	2.00	45.00	30.10	180.60	.	181.10
36	92.00	1.00	2.00	28.00	30.70	179.00	.	172.30
37	52.00	1.00	2.00	16.00	19.80	133.80	132.00	131.00
38	87.00	2.00	2.00	34.00	37.10	209.60	206.00	205.10
39	62.00	2.00	2.00	37.00	31.00	186.20	191.60	192.70
40	81.00	2.00	1.00	73.00	34.20	199.20	198.00	197.70
41	63.00	2.00	2.00	39.00	.	219.00	.	.
42	102.00	1.00	2.00	39.00	35.60	220.00	214.00	206.00
43	69.00	.	2.00	39.00	.	220.00	220.40	.
44	91.00	2.00	2.00	16.00	45.30	180.60	.	.
45	60.00	1.00	2.00	50.00	50.20	256.80	257.80	256.10
46	59.00	2.00	2.00	49.00	27.20	184.00	.	.

columblabmi

	wtchg8	wk12	no2	wtchg12	name	ran2	ran3	inches
24	-4.20	247.00	105.00	-6.20	.	.	1.00	68.00
25	.	140.00	42.00	7.20	.	.	.	71.00
26	-2.90	143.00	22.00	-3.40	.	.	2.00	66.00
27	-4.60	152.00	80.00	-10.80	.	.	1.00	68.00
28	.	130.00	21.00	-5.00	.	.	1.00	62.00
29	.	.	55.00	.	.	.	2.00	64.00
30	.00	112.60	94.00	-8.20	.	.	2.00	61.00
31	-.40	198.00	101.00	-1.00	.	.	2.00	65.00
32	.	.	13.00	.	.	.	2.00	69.00
33	.00	181.00	38.00	-1.60	.	.	2.00	66.00
34	-.10	128.00	82.00	3.20	.	.	2.00	64.00
35	.50	182.00	96.00	1.40	.	.	2.00	67.00
36	-6.70	.	92.00	.	.	.	1.00	64.00
37	-2.80	129.00	52.00	-4.80	.	.	1.00	69.00
38	-4.50	215.00	87.00	5.40	.	.	2.00	63.00
39	6.50	192.00	62.00	5.80	.	.	2.00	65.00
40	-1.50	.	81.00	.	.	.	2.00	64.00
41	.	220.00	63.00	1.00	.	.	.	66.00
42	-14.00	.	102.00	.	.	.	1.00	66.00
43	.	220.00	69.00	.	.	.	2.00	.
44	.	170.00	91.00	-10.60	.	.	2.00	65.00
45	-.70	258.00	60.00	1.20	.	.	1.00	60.00
46	.	179.00	59.00	-5.00	.	.	2.00	69.00

columbiabmi

	meters	wtkg0	bmlbase	wk12kg	wk12bmi	bmlchg
24	1.72	115.46	39.00	112.63	38.05	-1.00
25	1.80	67.12	20.80	63.84	19.78	-.60
26	1.67	66.76	23.90	65.21	23.39	-1.70
27	1.72	74.24	25.10	69.31	23.42	-.90
28	1.57	61.56	25.00	59.28	24.09	.
29	1.62	101.69	38.80	.	.00	-1.60
30	1.54	55.08	23.10	51.35	21.56	-.20
31	1.64	90.74	33.60	90.29	33.39	-27.40
32	1.75	83.36	27.40	.	.00	-.30
33	1.67	83.27	29.90	82.54	29.60	.60
34	1.62	56.91	21.70	58.37	22.26	.20
35	1.70	82.35	28.70	82.99	28.88	.
36	1.62	81.62	31.10	.	.00	-.70
37	1.75	61.01	20.00	58.82	19.30	1.00
38	1.59	95.58	37.60	98.04	38.59	1.00
39	1.64	84.91	31.40	87.55	32.37	.
40	1.62	90.84	34.60	.	.00	.20
41	1.67	99.86	35.80	100.32	35.98	.
42	1.67	100.32	36.00	.	.00	.
43	.00	100.32	.	100.32	.	.
44	1.64	82.35	30.50	77.52	28.66	.20
45	1.52	117.10	50.80	117.65	51.06	-.70
46	1.75	83.90	27.50	81.62	26.78	.

columbiabmi

	no	ran	sex	age	bmi	wo	wt6	wt8
47	51.00	2.00	2.00	16.00	.	166.00	.	.
48	99.00	2.00	2.00	16.00	18.90	106.80	107.00	107.00
49	6.00	1.00	2.00	39.00	29.20	170.40	170.20	.
50	2.00	2.00	2.00	16.00	17.50	98.80	98.80	99.00
51	77.00	1.00	1.00	16.00	57.30	344.60	.	.
52	42.00	1.00	1.00	16.00	.	168.00	.	.
53	32.00	1.00	2.00	36.00	35.20	192.20	.	188.20
54	78.00	2.00	2.00	86.00	21.10	108.20	.	108.00
55	58.00	2.00	1.00	23.00	.	140.00	.	.
56	4.00	1.00	1.00	29.00	28.80	154.40	.	.
57	33.00	2.00	1.00	44.00	28.00	206.40	207.80	208.20
58	19.00	1.00	1.00	19.00	26.40	178.60	.	170.80
59	9.00	1.00	1.00	19.00	26.40	178.60	.	.
60	5.00	1.00	2.00	43.00	41.40	256.40	253.40	250.20
61	27.00	1.00	2.00	32.00	43.80	275.60	.	274.40
62	39.00	1.00	1.00	42.00	27.00	188.20	187.00	185.00
63	65.00	2.00	2.00	62.00	42.60	280.00	.	.
64	26.00	1.00	2.00	38.00	24.20	169.00	.	163.20
65	84.00	1.00	2.00	29.00	32.50	172.00	.	168.00
66	73.00	1.00	2.00	39.00	.	219.00	.	.
67	90.00	2.00	1.00	87.00	26.50	167.60	165.00	166.00
68	30.00	1.00	2.00	38.00	.	216.00	.	.
69	37.00	2.00	1.00	34.00	25.70	189.60	200.00	201.20

columbiabmi

	wtchg8	wk12	no2	wtchg12	name	ran2	ran3	Inches
47	.	167.00	51.00	1.00	.	.	2.00	.
48	.20	114.40	99.00	7.60	.	.	2.00	63.00
49	.	172.00	6.00	1.60	.	.	1.00	64.00
50	.20	112.60	2.00	13.80	.	.	2.00	63.00
51	.	340.00	77.00	-4.60	.	.	1.00	.
52	.	166.60	42.00	-1.40	.	.	1.00	61.00
53	-4.00	186.00	32.00	-6.20	.	.	1.00	.
54	-.20	108.00	78.00	-.20	.	.	2.00	60.00
55	.	140.00	58.00	.00	.	.	.	64.00
56	.	206.00	4.00	.	.	.	1.00	72.00
57	1.80	211.00	33.00	4.60	.	.	2.00	72.00
58	-7.80	.	19.00	.	.	.	1.00	.
59	.	.	9.00	.	.	.	1.00	69.00
60	-6.20	255.00	5.00	-1.40	.	.	1.00	66.00
61	-1.20	.	27.00	.	.	.	1.00	66.50
62	-3.20	186.00	39.00	-2.20	.	.	1.00	70.00
63	.	278.40	65.00	-1.60	.	.	2.00	68.00
64	-5.80	156.00	26.00	-13.00	.	.	1.00	70.00
65	-4.00	161.00	84.00	-11.00	.	.	1.00	61.00
66	.	225.00	73.00	6.00	.	.	.	.
67	-1.60	168.20	90.00	.60	.	.	2.00	67.00
68	.	213.00	30.00	-3.00	.	.	1.00	66.00
69	11.60	199.00	37.00	9.40	.	.	2.00	72.00

columbiabmi

	meters	wtkgO	bmbase	wk12kg	wk12bmi	bmi/chg
47	.00	75.70	.	76.15	.	1.40
48	1.59	48.70	19.20	52.17	20.53	.30
49	1.62	77.70	29.60	78.43	29.92	2.50
50	1.59	45.05	17.70	51.35	20.21	.
51	.00	157.14	.	155.04	.	-.30
52	1.54	76.61	32.20	75.97	31.90	.
53	.00	87.64	.	84.82	.	.00
54	1.52	49.34	21.40	49.25	21.37	.00
55	1.62	63.84	24.30	63.84	24.35	7.10
56	1.82	70.41	21.20	93.94	28.31	.60
57	1.82	94.12	28.40	96.22	29.00	.
58	.00	81.44	.	.	.	-26.70
59	1.75	81.44	26.70	.	.00	-.20
60	1.67	116.92	41.90	116.28	41.70	-44.40
61	1.68	125.67	44.40	.	.00	-.30
62	1.77	85.82	27.40	84.82	27.04	-.20
63	1.72	127.68	43.10	126.95	42.89	-1.90
64	1.77	77.06	24.60	71.14	22.68	-2.10
65	1.54	78.43	32.90	73.42	30.82	.
66	.00	99.86	.	102.60	.	.10
67	1.70	76.43	26.60	76.70	26.69	-.50
68	1.67	98.50	35.30	97.13	34.83	1.30
69	1.82	86.46	26.10	90.74	27.35	-1.40

columbiabmi

	no	ran	sex	age	bmi	wo	wt6	wt8
70	86.00	1.00	1.00	28.00		238.00		
71	79.00	2.00	1.00	60.00	31.30	296.00	299.60	300.50
72	40.00	1.00	1.00	29.00	51.40	379.00	378.00	377.00
73	8.00	2.00	2.00	16.00	27.00	182.80	181.00	180.50
74	76.00	2.00	1.00	40.00	31.10	219.60	213.00	214.10
75	75.00	1.00	2.00	29.00	33.30	176.00		170.00
76	18.00	2.00	1.00	43.00	27.90	183.20	193.40	191.40
77	35.00	1.00	2.00	35.00	30.30	165.40		160.40
78	67.00	2.00	2.00	45.00	45.70	309.60	311.00	312.00
79	23.00	2.00	2.00	70.00	24.80	167.80		168.20
80	71.00	2.00	1.00	17.00	24.10	158.20		
81	12.00	2.00	2.00			247.20	249.00	249.00
82	64.00	1.00	2.00	49.00	31.60	167.40		160.40
83	45.00	2.00	2.00	16.00	50.80	286.60	289.00	288.40
84	57.00	1.00	2.00	16.00	21.10	115.20	115.00	115.00
85	46.00	2.00	1.00	16.00	27.60	186.60	176.00	171.80
86	88.00	1.00	2.00	28.00	35.20	205.20	205.20	203.70
87	95.00	1.00	2.00	26.00	37.20	237.40		230.80
88	17.00	1.00	1.00	42.00	27.80	199.60	197.80	195.40
89	103.00	2.00	1.00	34.00	31.80	179.40	181.40	180.50
90	14.00	1.00	2.00	52.00	39.00	206.40	207.00	205.80
91	44.00	2.00	2.00	23.00	27.60	146.20	145.00	143.60
92	41.00	2.00	1.00	77.00	33.20	205.40	205.60	205.40

columbiabmi

	wtchg8	wk12	no2	wtchg12	name	ran2	ran3	Inches
70	.	228.00	86.00	-10.00	.	.	1.00	71.00
71	4.50	302.00	79.00	6.00	.	.	2.00	.
72	-2.00	362.00	40.00	-17.00	.	.	1.00	72.00
73	-2.30	189.00	8.00	6.20	.	.	2.00	69.00
74	-5.50	208.00	76.00	-11.60	.	.	2.00	71.50
75	-6.00	173.80	75.00	-2.20	.	.	1.00	73.00
76	8.20	.	18.00	.	.	.	2.00	68.00
77	-5.00	160.00	35.00	-5.40	.	.	1.00	62.00
78	2.40	310.00	67.00	.40	.	.	2.00	69.00
79	.40	169.00	23.00	1.20	.	.	2.00	69.00
80	.	157.00	71.00	-1.20	.	.	2.00	68.00
81	.	265.00	12.00	17.80	.	.	2.00	67.00
82	-7.00	161.00	64.00	-6.40	.	.	1.00	61.00
83	1.80	292.40	45.00	5.80	.	.	2.00	63.00
84	-.20	114.00	57.00	-1.20	.	.	1.00	62.00
85	-14.80	175.00	46.00	-11.60	.	.	2.00	69.00
86	-1.50	203.00	88.00	-2.20	.	.	1.00	64.00
87	-6.60	.	95.00	.	.	.	1.00	67.00
88	-4.20	191.00	17.00	-8.60	.	.	1.00	71.00
89	8.00	178.00	103.00	-1.40	.	.	2.00	63.00
90	-.60	203.00	14.00	-3.40	.	.	1.00	61.00
91	-2.60	151.40	44.00	5.20	.	.	2.00	61.00
92	.00	206.60	41.00	1.20	.	.	2.00	66.00



columbiabmi

	meters	wtkg0	bmi1base	wk12kg	wk12bmi	bmi1chg
70	1.80	108.53	33.60	103.97	32.22	.
71	.00	134.98	.	137.71	.	-2.30
72	1.82	172.82	52.10	165.07	49.75	.90
73	1.75	83.36	27.40	86.18	28.28	-1.60
74	1.81	100.14	30.60	94.85	28.99	-.30
75	1.85	80.26	23.50	79.25	23.23	.
76	1.72	83.54	28.20	.	.00	-1.00
77	1.57	75.42	30.70	72.96	29.65	.10
78	1.75	141.18	46.30	141.36	46.39	.20
79	1.75	76.52	25.10	77.06	25.29	-.20
80	1.72	72.14	24.40	71.59	24.19	2.80
81	1.70	112.72	39.20	120.84	42.06	-1.20
82	1.54	76.33	32.00	73.42	30.82	1.00
83	1.59	130.69	51.40	133.33	52.48	-.20
84	1.57	52.53	21.30	51.98	21.13	-1.70
85	1.75	85.09	27.90	79.80	26.19	-.40
86	1.62	93.57	35.70	92.57	35.31	.
87	1.70	108.25	37.70	.	.00	-1.20
88	1.80	91.02	28.20	87.10	26.99	-.30
89	1.59	81.81	32.20	81.17	31.95	-.70
90	1.54	94.12	39.50	92.57	38.87	1.00
91	1.54	66.67	28.00	69.04	28.99	.20
92	1.67	93.66	33.60	94.21	33.79	.10

columbiabmi

	no	ran	sex	age	bmi	wo	wt6	wt8
93	25.00	2.00	2.00	29.00	40.90	209.40	.	.
94	68.00	1.00	2.00	50.00	55.90	305.60	.	.
95	70.00	1.00	2.00	50.00	55.90	305.60	.	.
96	72.00	1.00	2.00	32.00	50.60	285.40	.	289.10
97	82.00	2.00	2.00	16.00	.	124.80	.	280.60
98	230.00	93.00	-7.40	.	.	.	.	.

columbiabmi

	wtchg8	wk12	no2	wtchg12	name	ran2	ran3	Inches
93	.	209.90	25.00	.50	.	.	2.00	60.00
94	.	303.80	68.00	-1.80	.	.	1.00	62.00
95	.	289.00	70.00	-16.60	.	.	1.00	62.00
96	-4.80	285.60	72.00	.20	.	.	1.00	64.00
97	.	.	82.00	.	93.00	1.00	1.00	28.00
98	.	.	.	.	.	.	.	.

columbiabmi

	meters	wtkg0	bmi base	wk12kg	wk12bmi	bmi chg
93	1.52	95.49	41.40	95.71	41.54	-.30
94	1.57	139.35	56.60	138.53	56.30	-3.10
95	1.57	139.35	56.60	131.78	53.56	.00
96	1.62	130.14	49.60	130.23	49.67	.
97	.	237.40	.	.	.	.
98	.	.	.	.	.	.

columbia wts2

	no	ran	sex	age	bmi	wt0	wt6	wt8
1	1.00	2.00	2.00	16.00	.	.	.	.
2	1.20	2.00	2.00	16.00	28.70	167.20	.	168.10
3	2.00	2.00	2.00	16.00	17.50	98.80	98.80	99.00
4	2.00	2.00	1.00	16.00	19.20	138.00	.	.
5	5.00	1.00	2.00	43.00	41.40	256.40	253.40	250.20
6	6.00	1.00	2.00	39.00	.	170.40	.	.
7	9.00	1.00	2.00	26.00	63.50	358.60	.	.
8	10.00	1.00	1.00	17.00	32.00	186.60	.	174.83
9	11.00	1.00	2.00	29.00	39.40	208.60	.	207.00
10	12.00	2.00	2.00	16.00	28.70	167.20	.	.
11	13.00	2.00	2.00	16.00	27.00	182.80	.	.
12	14.00	1.00	2.00	52.00	39.00	206.40	207.00	205.80
13	17.00	1.00	1.00	42.00	27.80	199.60	197.80	195.40
14	18.00	2.00	1.00	43.00	27.90	183.20	193.40	.
15	19.00	1.00	1.00	19.00	26.40	178.60	.	.
16	21.00	1.00	2.00	26.00	41.20	263.00	.	.
17	21.00	1.00	2.00	36.00	47.40	253.20	250.10	248.50
18	22.00	2.00	1.00	78.00	23.60	146.40	.	.
19	24.00	1.00	1.00	44.00	28.80	184.00	180.00	177.40
20	25.00	2.00	2.00	29.00	40.90	209.40	.	.
21	26.00	1.00	2.00	38.00	24.20	169.00	.	163.20
22	26.00	1.00	1.00	29.00	.	154.40	.	.
23	27.00	1.00	2.00	32.00	43.80	275.60	.	.

columbia wts2

	wtchg8	wt12	wtchg12	var00001
1	.	.	.	64.00
2	.90	171.00	3.80	64.00
3	.20	103.00	4.20	63.00
4	.	.	.	.
5	-6.20	255.00	-1.40	66.00
6	.	172.00	1.60	.
7	.	.	.	.
8	.	175.00	-11.60	64.00
9	-1.60	177.40	-31.20	61.00
10	.	.	.	.
11	.	.	.	69.00
12	-.60	203.00	-3.40	61.00
13	-4.20	191.00	-8.60	71.00
14	.	.	.	68.00
15	.	.	.	.
16	.	.	.	.
17	-4.20	247.00	-6.20	65.00
18	.	.	.	71.00
19	-6.60	180.00	-4.00	67.00
20	.	.	.	60.00
21	-5.80	156.00	-13.00	70.00
22	.	150.00	-4.40	70.00
23	.	.	.	70.00

columbia wts2

	no	ran	sex	age	bmi	wt0	wt6	wt8
24	29.00	2.00	2.00	16.00	26.20	162.20	.	162.00
25	30.00	1.00	2.00	38.00	.	216.00	.	.
26	32.00	1.00	2.00	36.00	35.20	192.20	.	188.20
27	33.00	2.00	1.00	44.00	28.00	206.40	207.80	208.20
28	34.00	1.00	2.00	31.00	49.20	304.60	.	.
29	35.00	1.00	2.00	35.00	30.30	165.40	.	160.40
30	36.00	2.00	2.00	53.00	34.30	212.60	.	.
31	37.00	2.00	1.00	34.00	26.40	.	.	.
32	38.00	2.00	2.00	16.00	29.50	182.60	.	.
33	39.00	1.00	1.00	42.00	27.00	188.20	187.00	185.00
34	40.00	1.00	1.00	29.00	51.40	379.00	378.00	377.00
35	41.00	2.00	1.00	77.00	33.20	205.40	205.60	205.40
36	44.00	2.00	2.00	23.00	27.60	146.20	.	.
37	45.00	2.00	2.00	16.00	51.30	286.60	289.40	.
38	45.00	2.00	2.00	16.00	50.80	286.60	.	.
39	46.00	2.00	1.00	16.00	27.60	186.60	.	.
40	50.00	2.00	1.00	18.00	20.90	154.40	.	.
41	51.00	2.00	2.00	16.00	.	166.00	.	.
42	52.00	1.00	2.00	16.00	19.80	133.80	132.00	131.00
43	52.00	1.00	2.00	55.00	37.50	246.80	243.80	241.20
44	54.00	1.00	1.00	22.00	.	147.20	.	.
45	55.00	2.00	2.00	38.00	40.80	223.00	.	.
46	56.00	1.00	2.00	23.00	24.00	140.00	.	.

columbia wts2

	wtchg8	wt12	wtchg12	var00001
24	-1.20	164.00	1.80	66.00
25	.	213.00	-3.00	68.00
26	-4.00	188.60	-6.20	64.00
27	1.80	211.00	4.60	72.00
28	.	203.20	.	65.00
29	-5.00	160.00	-5.40	62.00
30	.	.	.	.
31	.	317.00	.	72.00
32	.	.	.	.
33	-3.20	186.00	-2.20	70.00
34	-2.00	362.00	-17.00	72.00
35	.00	206.60	1.20	66.00
36	.	.	.	.
37	.	.	.	.
38	.	.	.	63.00
39	.	.	.	.
40	.	.	.	.
41	.	167.00	1.00	61.00
42	-2.80	129.00	-4.80	69.00
43	-5.60	244.00	-2.80	69.00
44	.	.	.	.
45	.	.	.	.
46	.	.	.	.



No	ran	sex	age	bmi	weight 0	wt 6	wt 8	wt chg	Weight 12	No.	wtchg	name
34	1	2	31	49.2	304.6		296		-9		34	Alison Myers
10	1	1	17	32	186.6		175			175	10	ALLEN B. MIDDLETON JR
49	1	1	41	32.1	328	326.6				317	49	Alton Middleton
3	1	1	17	32	186.7					186.2	3	alton Middleton Jr
61	1	2	31		212						61	Angela Swanigan
74	1	2	29	39	176	173.8	171	-4.7		160	74	Angle Pittman
104	1	2	16	41.9	251.8		247	-5.3		247	104	Ashley Husband
66	1	2	31	31.4	161	158.6	155	-5.8		158	66	Avis Pope
97	1	2	26	29.9	147.8	144	140	-7.6		141	97	Beatrice Foxworth
15	2	2	55	37.5	246.8	243.8	241	-5.6		244	15	Betty Harvey
24	1	1	44	28.8	184	180	177	-6.6		180	24	Billie Holmes
36	2	2	53	34.3	212.6					210.4	36	Brenda Myers
7	2	2	16	28.7	167.2		168	0.9		165.4	7	Brittany Walker
89	1	1	31	28.8	206.4	202	198	-8.1		171.8	89	C Pittman
1	2	2	16			209				214	1	CALYINA FLOWERS
83	1	2	26		219					209	83	Changa Ezell
11	1	1	29	39.4	208.6		207	-1.6		177.4	93	Cindy Sartin
56	2	2	38	40.8	223					219.2	56	Copince Oliver
29	2	2	16	26.2	162.2		162	-0.2		164	29	Cordni Oliver
98	1	2	39	30.5	183.2	182	180	-3.1		184	98	Cynthia Daniels
47	1	2	34		187					177.8	47	Deborah Curtis
100	2	1	18	22.5	161.2	156	151	-9.8		153.8	100	Demora Terril
105	1	2	36	47.4	253.2	250.1	249	-4.2		247	105	Diwanla Gutter
42	1	1	22		147.2					140	42	Donla Jefferson
22	2	1	78	23.6	146.4		144	-2.9		143	22	Dorsey Pittman
80	1	2	55	24.8	162.8		158	-4.6		152	80	Faue Bourne
21	1	2	16		135					130	21	Gwen Hayes
55	2	2	38	40.8	223						55	Janice Oliver
94	2	2	16	22.8	120.8		121	0		112.6	94	Jelisa Montgomery
101	2	2	30	33.1	199		199	-0.4		198	101	Juanita Carson
13	2	2	16	27	182.8						13	Karlsha Gutter
38	2	2	16	29.5	182.6		183	0		181	38	Kayla Oliver
82	2	2	16	21.4	124.8		125	-0.1		128	82	KenByun Buckley
96	2	2	45	30.1	180.6		181	0.5		182	96	Klerra Alexandra
92	1	2	28	30.7	179		172	-6.7			92	Kitila Blankinship
52	1	2	16	19.8	133.8	132	131	-2.8		129	52	Lacey Montgomery
87	2	2	34	37.1	209.6	206	205	-4.5		215	87	Lasandra Buckley
62	2	2	37	31	186.2	191.6	193	6.5		192	62	LAURA WALKER
81	2	1	73	34.2	199.2	198	198	-1.5			81	LC Bourne





## **Appendix E**

### **Subject Listings for Body Composition**

	bmichg	ran	sex
1	.	.	.
2	.	1.00	2.00
3	-1.70	1.00	1.00
4	-1.50	1.00	1.00
5	-.10	1.00	1.00
6	.	1.00	2.00
7	-3.10	1.00	2.00
8	-.80	1.00	2.00
9	-.60	1.00	2.00
10	-1.40	1.00	2.00
11	-.40	2.00	2.00
12	-.60	1.00	1.00
13	-.40	2.00	2.00
14	-.30	2.00	2.00
15	-4.90	1.00	1.00
16	.90	2.00	2.00
17	-1.90	1.00	2.00
18	-6.00	1.00	1.00
19	-.70	2.00	2.00
20	.30	2.00	2.00
21	.10	1.00	2.00
22	-1.70	1.00	2.00
23	-1.00	2.00	1.00
24	-1.00	1.00	2.00
25	-1.00	1.00	1.00

	bmichg	ran	sex
26	-.60	2.00	1.00
27	-1.70	1.00	2.00
28	-.90	1.00	2.00
29	.	2.00	2.00
30	-1.60	2.00	2.00
31	-.20	2.00	2.00
32	-27.40	2.00	2.00
33	-.30	2.00	2.00
34	.60	2.00	2.00
35	.20	2.00	2.00
36	.	1.00	2.00
37	-.70	1.00	2.00
38	1.00	2.00	2.00
39	1.00	2.00	2.00
40	.	2.00	1.00
41	.20	2.00	2.00
42	.	1.00	2.00
43	.	.	2.00
44	-1.80	2.00	2.00
45	.20	1.00	2.00
46	-.70	2.00	2.00
47	.	2.00	2.00
48	1.40	2.00	2.00
49	.30	1.00	2.00
50	2.50	2.00	2.00

	bmichg	ran	sex
51	.	1.00	1.00
52	-.30	1.00	1.00
53	.	1.00	2.00
54	.00	2.00	2.00
55	.00	2.00	1.00
56	7.10	1.00	1.00
57	.60	2.00	1.00
58	.	1.00	1.00
59	-26.70	1.00	1.00
60	-.20	1.00	2.00
61	-44.40	1.00	2.00
62	-.30	1.00	1.00
63	-.20	2.00	2.00
64	-1.90	1.00	2.00
65	-2.10	1.00	2.00
66	.	1.00	2.00
67	.10	2.00	1.00
68	-.50	1.00	2.00
69	1.30	2.00	1.00
70	-1.40	1.00	1.00
71	.	2.00	1.00
72	-2.30	1.00	1.00
73	.90	2.00	2.00
74	-1.60	2.00	1.00
75	-.30	1.00	2.00

	bmichg	ran	sex
76	.	2.00	1.00
77	-1.00	1.00	2.00
78	.10	2.00	2.00
79	.20	2.00	2.00
80	-.20	2.00	1.00
81	2.80	2.00	2.00
82	-1.20	1.00	2.00
83	1.00	2.00	2.00
84	-.20	1.00	2.00
85	-1.70	2.00	1.00
86	-.40	1.00	2.00
87	.	1.00	2.00
88	-1.20	1.00	1.00
89	-.30	2.00	1.00
90	-.70	1.00	2.00
91	1.00	2.00	2.00
92	.20	2.00	1.00
93	.10	2.00	2.00
94	-.30	1.00	2.00
95	-3.10	1.00	2.00
96	.00	1.00	2.00
97	.	2.00	2.00
98	.	1.00	1.00



FAT 0	Fat Week 6	fat Week 8	Fat Week 12	fatchg	
52.2	23.8	24		-28.2	66
27.3	25.5	27.1		-0.2	
54.4	53.7		52.3		72
28			24.8		64
					66
39	37.6	41.5	31.9	2.5	61
49.4			50.5	-49.4	64
39.9	40.4		37.2		60
36.7	12.9	13.6	37.3	-23.1	59
37.5	48.5	44.9	44.6	7.4	68
25.1	24.6		22.7		67
39	45.7	45.6		6.6	66
40.2	23.9	24.1		-16.1	64
26.4	28	39.9	27.6	13.5	71
42.1		37.6	43.6	-4.5	61
48.1	50	50.4		2.3	62
39.2	48.5		40.4		66
43.6	43.9	46.1	44.7	2.5	65
			40		63
32.1	33	33.1		1	71
42.3	47.4	43.4	47.3	1.1	68
					71
19.5		41.4		21.9	66
40.1	28	25.8		-14.3	68
					62
48.1					
23.7	43.9	42.8		19.1	61
45.3				-45.3	65
43.1					69
37.5	42.6	43.1		5.6	66
30.7	30.7	30.4	26.2	-0.3	64
51.3		44.2	42.4	-7.1	67
36.7	41.2	35.5		-1.2	64
29.6	30.3		29		69
45.2	16.1	51.9	46.2	6.7	63
41.2	42.6		40.5		65
35.1	36.9	49.8		14.7	64

43.6		43.6	43.3		66
	43.6		43.3	0	66
23.7		23.6	42.1	-0.1	65
50.7	45.7		49	-50.7	60
43.3			42.3		69
			42.1		
31.2	31	48.7	29.5	17.5	63
33.4	39.9		41.3		64
27.3	25.5		32.4		63
66.6		25.1		-41.5	
			42.1		61
43.8			43.3	62	
29.5	45.4	45	28.4	15.5	60
30.3					64
19.9			19.8		72
32.1	33	48.9	33.2	16.8	72
42.1		42.7		0.6	
19					69
44.6	46	24.6	46.8	-20	66
50	30.3	29.8		-20.2	66.5
25.6	23.9	27.9	24.7	2.3	70
66.6			50.6		68
50	20.5	20.2	31.7	-29.8	70
43.2		41.5	40.5	-1.7	61
43.8	30.7		30.7		67
	9.1		33.5		66
20.7	23.7	22.8		2.1	72
					71
52.2		50.4		-1.8	
49	42.4	18.5	49.4	-30.5	72
40	45.1		43.5		69
28.4	27.4		28.4		71.5
35.8	31.3	44.1	34.4	8.3	73
25.1	27.6	26		0.9	68
41.2			41.5		62
47	43.9	38.6		-8.4	69
38.5	32.7	32.3		-6.2	69

16.5	24.6	24.9		8.4	68
49.1			50.6		67
42.5	27.4	27	35	-15.5	61
55	54.3	54.4	54.4		63
25.7	23.8		22.2	-25.7	62
24.6		38.9		14.3	69
44.9	45.4	39.9	44	-5	64
46.2	45.4	31.5		-14.7	67
22.6	22.6	42.7	21.7	20.1	71
41.2	42.3				63
52.9	47.1	38.5	42.7	-14.4	61
33.3	32.7	41		7.7	61
36.7	40.3	19.2		-17.5	66
47.4	54.3	54.8		7.4	60
55.1			55.3		62
35.4	36.9	36.1	55.3	0.7	62
51.3	31	30.9	52.8	-20.4	64

## **Appendix G**

### **Sensible Meal Ideas**

## Sensible Meal Ideas

### Getting Started:

Congratulations on choosing Starch Away™ to help you with your diet. Starch Away is a safe, all natural, stimulant free diet aid that blocks calories from starch. Now you can diet and no longer feel deprived of the starch carbohydrates you enjoy. You don't have to give up bread, pasta, pizza, potatoes, and other starches.

Just take 1 to 2 Starch Away soft chews a few minutes before a meal that contains starch or "breadly" foods and block calories from starch. Make a positive step by combining Starch Away with a sensible diet plan and you will be on your way to attaining and maintaining your personal goals.

Remember – we are all unique and a healthy weight for you may be quite different from your friends or family members. The amount you should weigh will depend on your age, gender, height, and body frame. Chart A will give you some idea of a suggested weight for your height.

Since you need to lose weight, your current environment has not worked for attaining and maintaining your ideal weight. It is critical that you find out the reasons that your calorie input is greater than your calorie output. What are your eating habits that create this calorie excess? You will need to make permanent changes in your eating and exercise habits to maintain your weight loss.

Chart A. Suggested Weights for Adults

Height	Weight in lbs. (19-34 years)	Weight in lbs. (over 35 years)
5'0"	97-128	106-138
5'1"	101-132	111-143
5'2"	104-137	115-148
5'3"	107-141	119-152
5'4"	111-146	122-157
5'5"	114-150	126-162
5'6"	118-155	130-162
5'7"	121-160	134-172
5'8"	125-164	138-178
5'9"	129-169	142-183
5'10"	132-174	146-188
5'11"	136-179	151-194
6'0"	140-184	155-199
6'1"	144-198	159-205
6'2"	148-195	164-210
6'3"	152-200	168-216
6'4"	156-205	173-222
6'5"	160-211	177-228
6'6"	164-216	182-234

### Calories – they do count

Let's back up and talk a little about calories. Calories are a unit of energy. Just like we use dollars as our unit of exchange for commerce, our bodies use calories as their unit of exchange. Unlike our bank account, however, our bodies tightly guard energy. This is probably because of evolution – successful humans needed to survive long periods of famine. With fast food and convenience food always at our fingertips, our body's great ability to conserve its energy no longer serves us well.

We need energy to fuel our bodies and activities each day. It is important to balance our energy needs so we don't get into the energy excess state. Overweight people feel like they have no energy, while they are actually in an energy excess state. Taking in the right number of calories along with a regular exercise program will make you feel energized. Calories can come from carbohydrates, fat, protein, and alcohol. We have a recommended amount of protein to consume each day; an amount based on our ideal body weight. So a large person will need more protein each day than a small person. We also need a small amount of fat each day to provide essential fatty acids. After we include the required protein and fat in our diet, we fill

out the rest of our calorie needs with carbohydrates, alcohol, additional protein, or fat. If you plan to eat bread, pasta, potatoes, or rice, take 1 to 2 Starch Away soft chews a few minutes before your meal and block calories from starch.

So what is the magical breakdown of calorie sources for us to consume. Humans are omnivores, which means we are quite flexible in the foods we can consume. A recommended breakdown for the calories we should consume would be 15 percent of our calories from protein, 30 percent from fat, and 55 percent from carbohydrate. If we decided to include alcohol, it should replace fat calories in the diet.

If you consume excess calories, no matter where they come from, you gain weight. If you consume fewer calories than you need, you lose weight. However, if you do not consume enough calories, your metabolism can slow down. As your body conserves calories, it slows the amount of weight loss. This is why a gradual weight loss of 1 to 2 pounds per week is recommended. To attain this weight loss you will need to reduce your calories by 3500 to 7000 calories a week.

Diets work for many reasons. Since carbohydrates form the bulk of calories for most people, a low carbohydrate diet can be effective since it can significantly reduce calorie intake. Including Starch Away in your diet plan can reduce your calories from starch carbohydrates. Low fat diets can be effective since fat is the most energy dense calorie source, providing 9 calories per gram of fat. Remember that diet changes you make need to be forever if you want to maintain your ideal weight. That is why any diet plan must include foods you really like and must work around your usual schedule and eating patterns.

#### **How often should I eat?**

Recent studies find that the more eating episodes you have each day, the more total calories you eat. Skipping meals, however, has also been linked to overeating. Probably your best strategy is to eat three regular meals each day and avoid high calorie snacks and drinks.

#### **Other nutrition basics that are important to know**

The two rules of good nutrition are variety and moderation. Variety helps us with the wide range of nutrients we need. Also, variety assures us that if there are any harmful substances in foods, that our exposure will be minimized since we don't eat any one type of food many times each day. The Food Guide Pyramid is a useful tool for understanding daily meal planning. We need to build our diet up from the base, rather than obtaining most of our calories from the top of the pyramid. Foods at the base of the pyramid include grains, preferably whole grains, fruits, and vegetables. These foods contain carbohydrates and starches. By using Starch Away you keep these foods in your diet and block calories from starch.

Moderation is a lost art in America. A serving of juice is ½ cup and a serving of milk is 1 cup. A serving of a soft drink is 8 oz. Most of us routinely consume way too much of food and drinks. We are always looking for good value in food and are attracted to large portions rather than higher quality food in small quantities. Probably the most important lesson you can learn in nutrition is to continue to consume foods you enjoy, but in smaller quantities. When you do eat bread, pasta, pizza, or potatoes, take 1 to 2 Starch Away soft chews right before your meal and block the starch calories.

Another way to help make a lower calorie diet more enjoyable is to include more whole foods. Whole foods such as grains, fruits, vegetables, and legumes are excellent sources of dietary fiber and studies show that high fiber diets are more filling and self-limiting. When you take Starch Away, you don't have to eliminate these foods from your diet as you have in the past with other diet plans. Classical studies find that we can easily drink a gallon of apple juice, but few people will eat a dozen apples. Whole foods take more chewing and help our body's natural feedback mechanisms to help us stop eating.

#### **Are all carbohydrates the same?**

We used to think all carbohydrates were the same. We then promoted the idea that simple sugars were not as good as starches. More recently nutritionists have decided that the glycemic index of foods may be a method to compare carbohydrates. The glycemic index compares foods to a standard food, usually white bread, to determine the effect that a set amount of carbohydrates will have on blood glucose and insulin.

A list of some foods and their glycemic indices is shown as follows:

**Glycemic Index of Foods**

*Low glycemic index foods – Eat these foods often*

Apple

Orange

Peach

Pear

Beans

Lentils

Soybeans

High fiber cereals

Nuts

Soups, including bean and tomato

*Moderate glycemic index – Eat in moderation and use Starch Away*

Rye flour and bread

Whole wheat flour and bread

Brown rice

Popcorn

Macaroni

Spaghetti

Boiled potatoes

*High glycemic index – Limit these foods, again use Starch Away*

White bread

Cornflakes

Puffed rice

Jelly beans

Instant rice

Instant potatoes

French-fries

In general, the more complicated the food, the lower the glycemic index. We would expect this since fats and proteins are digested and absorbed more slowly than carbohydrates so mixed foods should have a blunted carbohydrate response. Foods that require chewing and extensive processing, generally higher fiber foods also have a lower glycemic index.

Consumption of low glycemic index foods has been associated with lower body weight and less incidence of chronic diseases, such as diabetes, heart disease, and cancers. Some research finds that consumption of low glycemic index foods significantly retards the hunger signal that triggers the onset of the next meal. Body weight decreased more over 12 weeks in 15 obese female subjects when the prescribed diet was low GI compared to high GI.

Legumes (beans, lentils, etc) have particularly low glycemic index, as do nuts and some fruits. High fiber cereals also have many lower glycemic indices than do refined cereals.

**How do I incorporate low glycemic index foods into my diet?**

Many low glycemic index foods are associated with weight loss. High fiber cereals, fruits, vegetables, and legumes are associated with weight loss and weight maintenance in studies. Focus on eating fewer carbohydrates, but make sure you chose from low glycemic foods. This can make losing weight a lot easier.

**Overall Eating Tips**

1. Be prepared. Most bad food choices are made when we are hungry and just grab what's available, not what our body needs.
2. Eat breakfast. Eat regular meals and limit snacks.
3. Drink plenty of water. Limit intake of calorie-laden drinks.

4. If you do drink alcohol, limit consumption to less than 2 drinks per day. Remember this adds significantly to calorie intake and may not make sense for a low calorie diet.
5. Eat complex carbohydrates with a low glycemic index.
6. Eat foods you like. Just limit portion sizes.
7. Make eating an occasion, not a chore. Eat seated at the table, preferably around friends and family. Don't eat on the run or in your car.
8. Eat slowly and allow your brain to kick in and tell you to stop.
9. Don't have foods in the house that don't fit into your plan.
10. Enjoy life and eating. Buy high-quality foods including fresh fruits, vegetables, and grains.

### Exercise

Long-term weight loss and maintenance requires regular exercise. For exercise to be regular, it typically needs to be purposeful. In other words, you need to build exercise into your daily lifestyle or it will never be maintained. Examples of purposeful exercise include, walking the dog, walking or biking to work, walking to the store or post office. Try parking your car further away and walking more. Lawn work, housework, and chasing children are also purposeful exercises.

Just like diet, exercise habits must be developed and maintained for you to keep your weight at the ideal range. So don't do exercise you hate. Find activities that are social and purposeful.

### Tips for successful exercise program

1. Some is better than none. More is better than some.
2. Find the time to exercise. Take any time you have. Walk to the store, stretch while you are waiting for the laundry to dry, try to not let a day go by without some type of exercise.
3. Find an exercise companion, either human or animal. If your motivation is lagging, your partner will get you going.
4. Keep a schedule and build in rewards for success.
5. Change your routines if weather, injury, or other factors are barriers to exercise.

Before you begin this or any diet aid program, check with your physician.

### Suggested 7 day meal plan

The following meal plans have been developed by registered dietitians to help you plan meals that are healthy and satisfying. Feel free to make changes in the plans to fit your likes and dislikes. Remember to include the recommended servings of grains, fruits, and vegetables each day. Keep portion sizes to recommended levels.

When you do over eat carbohydrates, Starch Away can help. Days where you plan to consume pasta or bread in larger than recommended quantities, take 2 to 3 Starch Away soft chews before the meal.

#### Day 1

##### Breakfast

- 1-2 Starch Away soft chews
- ½ cup high fiber cereal
- 1 cup skim milk
- 1 cup strawberries
- Coffee or tea

##### Lunch

- 1-2 Starch Away soft chews
- 2 slices whole wheat bread
- 1 oz meat or cheese
- Tomato and lettuce
- 1 apple
- Diet soda or iced tea



**Appendix H**

**Dietary Exchanges**

## Meal Exchanges

Directions: Mix and match foods below in any combination, using the exchange lists below.

Daily Exchange Menu	
Meal	Exchanges
Breakfast	1 starch 1 fruit 1 milk
Snack	1 fruit
Lunch	2 meat/meat substitute 1 starch 1 vegetable
Snack	1 vegetable or 1 fruit
Dinner	4 meat/meat substitute 3 vegetable 1 milk 1 fruit
Bonus Exchanges	2

**Each portion listed below equals one "exchange" within its group:**

**Starch Exchanges:**

Breads – 1 slice/1 oz; ½ bagel; ½ bun; ½ English muffin

Grains – ½ cup; 1/3 cup rice

Cereal – ½ cup cooked; 1 cup ready-to-eat

**Meat/Meat Substitute:**

Lean beef (round, sirloin, flank) – 1 oz. (therefore 4 is 4 oz.)

Poultry – white meat no skin – 1 oz.

Fish – 1 oz. or ¼ cup canned (packed in water)

Cheese with 1-3 grams fat per ounce – 1 oz; low-fat cottage cheese – ¼ cup

**Fruit Exchanges:**

Fresh fruit – 1 medium; 1 cup melon/berries

Canned (in own juice or water) – ½ cup

Fruit juice – ½ cup

Choose from:

Banana, peach, cantaloupe, blueberries, strawberries, kiwi, apple, plum, orange, grapefruit, apricots (3), nectarine, berries, pear (fresh only).

**Vegetable Exchanges:**

Cooked vegetable – ½ cup

Raw vegetable – 1 cup

Choose from:

Green beans, spinach, zucchini, tomato juice (1 cup), Brussels sprouts, cucumber, green pepper, radishes, salad greens, wax beans, carrots, broccoli, cabbage, celery, endive, beets, asparagus, kale, eggplant, tomatoes, turnips, wax beans, alfalfa sprouts, bean sprouts.

**Milk Exchanges:**

1% or skim milk – 1 cup; nonfat or low-fat fruit-flavored yogurt, artificially sweetened – 1 cup

**Bonus Exchanges:**

Fat-free dressing – 2 T

Salsa – ¼ cup

Catsup – 1 T

**Free Foods:**

Mustard, vinegar, sugar-free gelatin dessert, low-sodium bouillon, coffee, tea, diet drinks, non-caloric seasonings or seasonings less than 10 calories/serving.

*Dinner*

1-2 Starch Away soft chews  
3 oz. broiled flank steak  
1 cup pasta  
½ cup green beans  
Tossed green salad with dressing  
Mineral water

*Day 2*

*Breakfast*

1-2 Starch Away soft chews  
¾ cup orange juice  
Egg sandwich with whole wheat bread  
Coffee

*Lunch*

1-2 Starch Away soft chews  
Spinach salad with dressing  
Balsamic vinegar  
2 rye crisps  
Oatmeal cookie  
Diet soda or water

*Dinner*

1-2 Starch Away soft chews  
1 cup pasta with 3 oz. shrimp  
½ cup marinara sauce  
1 cup tossed salad  
2 tsp. dressing  
Raspberries  
Hot tea

*Day 3*

*Breakfast*

1-2 Starch Away soft chews  
½ cup cooked oatmeal  
3 tsp. raisins  
¾ cup grapefruit juice  
Coffee or tea

*Lunch*

1-2 Starch Away soft chews  
2 cups lentil soup  
Whole wheat bun  
1 tsp. butter  
1 apple  
Diet soda or water

*Dinner*

1-2 Starch Away soft chews  
3 oz. broiled fish  
½ cup brown rice  
½ cup broccoli  
Whole grain bun  
1 cup cantaloupe  
Mineral water

#### Day 4

##### *Breakfast*

1-2 Starch Away soft chews  
¾ cup bran flakes cereal  
1 small banana  
1 cup skim milk  
Coffee or tea

##### *Lunch*

1-2 Starch Away soft chews  
1 cup tomato soup  
4 whole wheat crackers  
2 oz. cheese  
Orange  
Diet soda or water

##### *Dinner*

1-2 Starch Away soft chews  
3 oz. lean pork  
3 small boiled potatoes  
½ cup spinach  
2 sliced tomatoes  
1 slice of angel food cake with berries  
Coffee or tea

#### Day 5

##### *Breakfast*

1-2 Starch Away soft chews  
2 slices whole wheat toast with spread  
Blueberry jam  
½ grapefruit  
Coffee or tea

##### *Lunch*

1-2 Starch Away soft chews  
3 oz. tuna  
2 tsp. mayonnaise  
2 slices rye bread  
Lettuce and tomato  
Dill pickle  
Small brownie  
Diet soda

##### *Dinner*

1-2 Starch Away soft chews  
3 oz. grilled chicken breast  
Bed of greens  
Salsa  
Bread stick  
Peaches  
Coffee or tea

*Breakfast*

1-2 Starch Away soft chews  
Pecan waffle  
2 tsp. syrup  
¾ cup orange juice  
Coffee or tea

*Lunch*

1-2 Starch Away soft chews  
Small hamburger, condiments, and bun  
½ cup cole slaw  
Small ice cream  
Diet soda

*Dinner*

1-2 Starch Away soft chews  
2 slices vegetarian pizza  
10 edamame (soybeans)  
Apple pie  
Diet soda (or something stronger if desired)

**Day 7 (the weekend continues)**

*Breakfast*

1-2 Starch Away soft chews  
Morning glory muffin  
¾ cup orange juice  
Coffee

*Lunch*

1-2 Starch Away soft chews  
Hoagie sandwich heavy on the vegetables  
Small bag of chips  
Iced tea

*Dinner*

1-2 Starch Away soft chews  
Chili  
Rye crackers  
2 oz. Provolone cheese  
½ cup pineapple  
Beverage of choice

**Guidelines to remember:**

- Portion size is terribly important. Most foods can fit into your eating plan if portion size is monitored.
- Develop a menu plan to fit your lifestyle. If you love Sunday brunch, modify your eating plan to incorporate a sensible brunch into your plan.
- Be prepared. Develop seven meal plans that you are good at making and enjoy and recycle these menus weekly. This simplifies shopping and food preparation.
- Plan on days where you will eat more carbohydrates than you should. Again, Starch Away can block calories from starch when taken before each meal.