FitTec

Fitness Evaluation

American Fitness Testing Association

Name: John Doe Age: 31 Tester: Jen Morin Test site: BMS Test number: 1

Test	Your Values	Your Score	Your Classification
Skinfolds (mm)			
Chest fat thickness	4	12.2	very,very lean
Triceps fat thickness	9	8.9	very lean
Side fat thickness	11	9.6	very,very lean
Thigh fat thickness	9	10.9	very,very lean
Lower back fat thickness	21	8.5	very lean
Abdomen fat thickness	27	5.4	average fat
% Body fat	12.5 %	8.1	very good
Aerobic capacity expressed as ml/kg/min	53.4	8.3	very good
Muscular endurance	repetitions		
Push ups test	30	6.9	above average
Sit ups test	52	12.1	excellent
Box jumps test	0	0	NS
Muscular strength	one repetition maximum (pounds)		
Leg strength test	170	14.8	excellent
Bench press test	175	7.7	very good
Arm curl test	84	8.4	very good
Flexibility	inches		
Upper body flexibility	44.5	3.1	below average
Mid-body flexibility	19	10	excellent
Lower body flexibility	28	16.5	excellent
Overall score		8.8	very good

AFTA's score classification

> 9	excellent
8-9	very good
7-8	good
6-7	above average
4.5-6	average
3-4.5	below average
1.5-3	poor
0-1.5	very poor

AFTA's fitness levels

Superior
Elite-2
Elite-1
Advanced-2
Advanced-1
Intermediate-3
Intermediate-2
Intermediate-1
Novice-3
Novice-2
Novice-1

Your values are the individual results of each of the tests performed on you (example: 30 push ups means that you performed 30 push ups). Your score is a numerical value from -5 to as high as 12, which is used to classify how well you did on each of the tests (see first triangle). Overall score is not a simple average of all the scores, it's based on a weighted equation, where some tests are weighted more than others. AFTA would like to see scores of 6 and above on all the tests. Fitness levels range from novice to superior. AFTA would like everyone to reach an advanced level or beyond after several months of conditioning.

Your fitness level is determined to be Elite-2.

Date: 12/2/12 Serial number:439

AFTA's fitness evaluation determines the level of the five components of fitness (body composition,

flexibility, muscular strength and endurance, and flexibility). AFTA's believes adequate physical fitness is the ability to handle work stress and daily tasks without becoming fatigued. It's a state of overall vitality, related to, but not a measure of athletic ability. Exercise physiologists and personal trainers measure fitness components through various tests to evaluate physiological state, prescribe proper exercise programs, and monitor gains throughout defined periods of time. Improvement in the components of fitness results from a well designed conditioning program.

Your overall level of fitness is considered to be very good.

Anthropometry and body composition are the measures of your height and weight and the amount of lean and fat weight. *Your weight and height was 165 lbs and 69 inches the day you were tested.* Many health problems including heart disease, hypertension, strokes, atherosclerosis, and diabetes, along with decreased work capacity, relate to excess weight, more specifically body fat. *Based on height and weight charts, your ideal weight range is 139-175 lbs.*

Another way to determine body composition is through body mass index (BMI) (a ratio of weight to height). *Your BMI is 24.4, which is considered to be desirable*. Many who strength train, play sports, have big bones, or who are very muscular can have body weights way beyond the ideal height and weight range and can have high BMI values, which may classify them as obese. This classification may be wrong due to the presence of high levels of lean tissue. There are some people who have ideal weights and BMI, but have high levels of body fat with low levels of lean tissue.

BMI standards
<=15, medically significant starvation
>15&<=25, desirable
>25&<=35 , overweight
>35&<=40,medicallysignificant obesity
>40&<=45
super obesity
>45&<=50,morbid obesity
>50,super morbid obesity)

AFTA believes a better way of measuring body composition is through determining percent body fat, a measure of fat and lean weight. AFTA uses the skinfold caliper technique to estimate percent body fat. This procedure has a low margin of error in estimating body fat. Specific measures of skinfolds are very reliable and tell individuals where there maybe specific problems. *Your body fat percentage is 12.5, which is considered very lean*.

Average % body fat levels for men and women in their twenties are 15% and 25%, where a healthy range for those in their thirties is between 6-21% for men and 15-25% for women. AFTA would like to see a change in your percent body fat to 8% in a 3 to 6 month period of training.

To get to this percent body fat you would need to change your current fat weight 20.6 lbs. to 12.6 lbs, a total fat loss of 8 lbs. Your lean weight is 144.4 lbs. Someone starting a conditioning program should expect to gain 5 to 10 lbs. of lean weight due to the addition of muscle. The addition of muscle will enhance your appearance and improve your performance.

Table 1

Body location	Ideal measures
Shoulders	46.75
Chest	39.28
Right arm	12.73
Left arm	12.73
Waist	29.43
Buttock	35.03
Right leg	20.63
Left leg	20.63
Right calf	14.38
Left calf	14.38
Waist/hip ratio	< 0.9

AFTA also uses circumference measures as a means of determining body shape **(see Table 1)**. Compare your circumferences to those of an athletic/ideal physique. Another way to use circumferences is to figure your waist to hip ratio by dividing your waist by your hips. A healthy waist to hip ratio is less than or equal to **.90**. **Abdominal obesity** has been shown to represent the deposit of fat under the skin (subcutaneous) and within and among the organs of the abdomen (intra-abdominal also known as visceral) and is **associated with greater health**

Table 1A

Your waist	*33*	*Inches*
Risk	**MEN**	**WOMEN**
Very Low	< 31.5	< 28.5
Low	31.5-39	28.5-35
High	39.5-47	35.5-43
Very High	>47	>43

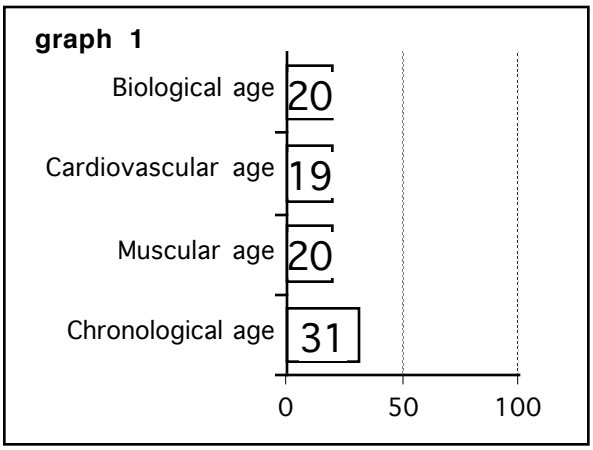
risks. Check your waist circumference risk **(see Table 1A)**. To get a full analysis of body shape have an AFTA physique evaluation performed on you.

Cardiorespiratory ability is the capacity of the heart, lungs, and blood vessels to supply oxygen and nutrients to the muscles for a sustained period of time, several minutes or more. The most widely used test of cardiorespiratory capacity is the VO 2 max test. VO 2 max is the maximum amount of oxygen consumed during physical work, expressed as millimeters of oxygen consumed per minute of maximum exercise per kilogram of body weight, ml/kg/min (VO 2 max = maximum volume of oxygen consumed). Some consider it to be the number one predictor of fitness. Your VO2 max value is 53.4 ml/kg/min, which is considered to be very good. A VO2 max score which is below 32.5 for men and 35 for women is considered a health concern. Athletic VO2 max scores range from 53-58 and 58-64 ml/kg/min, for women and men. AFTA would like to see an improvement of 20% in aerobic ability in a 3 to 6 month period of training. AFTA considers body composition and aerobic ability the most important components of the fitness evaluation because they reflect general health and well being.

Muscular strength and endurance is the ability of a muscle group to generate force. Muscular strength is the maximum amount of force generated by a muscle group. Your muscular strength is considered to be excellent. Muscular endurance is the capability of a muscle to sustain a force for a prolonged period (20 or more repetitions). Your muscular endurance is considered to be excellent. AFTA would like to see an improvement of 20% in muscular ability in a 3 to 6 month period of training.

Flexibility is the capacity of a joint to move freely throughout a full range of motion. Your flexibility is considered to be very good. AFTA would like to see an improvement of 20% in flexibility in a 3 to 6 month period of training.

Physical and chronological age analysis *(your age was 31 the day you were tested)* The Tufts University Department of Aging in association with Dr. William Evans developed an equation to determine **muscular and cardiovascular age** based on similar tests that were performed in this fitness evaluation. Based on these equations your muscular age is **20** years and your cardiovascular age is **19** years. There is much debate on the age at physical peak; it varies in sports as well in testing. For our purposes, consider 19 years the best possible score. Your **biological age** based on an average is **20** years.



Coronary heart disease risk factor analysis
Coronary heart disease (CHD) is still the number one killer of Americans. It's responsible for more than 1.5 million heart attacks and causes more than 550,000 deaths annually in the United States. Beginning at about the age of 40 in men and 60 for women, CHD is the single largest cause of death in the western world. Various personal and environmental risk factors have been identified that appear to play causative roles in making individuals susceptible to the disease. Some are shown in the graph 2 and are used to determine a risk classification for you,(see graph 2: 1-2 good,3 average,4-5 poor,>6 very poor).

Some other risk factors not used in the analysis are 1) diabetes 2) personality and behavior patterns 3) high uric acid levels 4) pulmonary function 5) race 6) tension and stress 7)EKG abnormalities.

Your risk of developing CHD, based on answers you gave in your medical screening, is **a below average risk**. The risk categories are well below average, below average, average, moderate, high, and very high. The results of this analysis doesn't mean that you have CHD or that you'll ever get, but it should be used as a warning to you that you should do something about the modifiable risk factors, those which you can change, such as reducing blood pressure, body weight, cholesterol level, smoking habit, stress, as well as getting more exercise. AFTA must stress that lack of exercise is a risk factor for CHD.

FitTec

Fitness Evaluation

Your blood pressure and heart rate the day you were tested was 120/80 and 65 bts/min. A blood pressure of 120/80 is normal while 140/90 is borderline high. Heart rates below 55 bts/min are considered athletic in most cases.

RISK CATEGORIES

well below average
below average
average
moderate
high
very high

Training guidelines

AFTA as well as other exercise groups recommend that all healthy adults participate in a fitness program that includes strength and aerobic training. See **table 2** for tips on how to strength and aerobic train for your level of fitness.

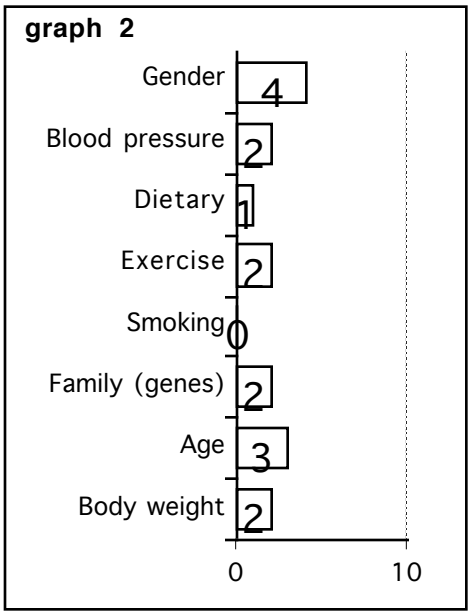
Strength training improves power and endurance, while increasing muscle mass, tone, and bone density. It's made up of a variety of activities where the musculature is overloaded to fatigue in a short period of time (examples dumbbells, barbells, nautilus, calisthenics, etc.). It's also called weight lifting and resistance training. A strength training program should include exercises that works all the major muscle groups **(see table 3)**.

Aerobic training improves cardiorespiratory health and reduces body fat. Aerobic activities are those which are rhythmical and continuous which can be sustained for prolonged periods of time (examples: walking, running, biking). Flexibility training aids in proper muscle balance and posture, while reducing the chance of injuries. Flexibility training should be performed on a daily basis after a warm up or cool down.

AFTA has a full pamphlet describing the training expectations of the various levels of fitness. See your fitness trainer or AFTA associate for guidance on how to fitness train.

Training intensity

In order to receive a physical change from a training program the intensity you work at must reach a certain threshold that your not accustomed to. Here are some suggestions for strength and aerobic training thresholds.



See the **table 3** for a full list of **standard strength exercises** that you can perform, including possible suggested starting weights with a goal of 10 repetitions. These weights might be different from machine to machine and gym to gym, so don't use the weight if it feels like it's too much. If it feels light use more.

Target heart rate range: You need to stress your heart enough that the beats per minute exceed 139 bts/min. (lower training limit) while not exceeding 170 bts/min. (upper training limit). Your maximum limit of heart rate is 189 bts/min. Never approach this number unless your very well trained. Target heart rate ranges don't work for all. Ask your fitness

Table 2

Strength Training	excellent level of strength training tips
Frequency	3-6 x a week-splitting body parts
Intensity	very high intensity
Sets	3-5 per exercise, more than one exercise per body part
Repetitions	4-10, light to heavy weight
Exercises	machines,dumbells,barbells,stability balls,plyometrics,competition lifts
Aerobic Training	very good level of aerobic ability training tips
Frequency	5-6 x a week
Intensity	high intensity, see target heart rate range and RPE range
Duration	20-40 minutes, some interval
Exercises	see MET chart for exercises based on your MET range
Warm up	Warm up before any training with light aerobic activity and stretches
Cool down	Light activity and stretches after training

trainer or AFTA associate on how to measure heart rate. **Target RPE range:** Another way of determining aerobic exercise intensity is through rating your level of perceived exertion, which is an overall physical observation of how you feel (see **RPE chart, table 4**). Your RPE lower limit is 11, while upper limit is 16. The type of aerobic exercise that you can choose can be determined through using a **MET chart (table 5)**(MET=metabolic equivalent, 1 MET is the metabolic requirements at rest, while 3 METS is 3x the metabolic work at rest, such as walking). Your MET training range are exercises that have a MET of **9.2 to 13.**

Table 3

Standard strength exercises	
Exercise	Weight (lbs.)
Bench press	131
Arm curl	63
Triceps extensions	59
Shoulder press	88
Lat pulldown	140
Inner & outer thigh	159
Leg curls	77
Leg extensions	128
Leg press	255
Machine Row	158

Table 4

Rating of Perceived Exertion (RPE) Chart
(overall body effort during exercise)
6
7 VERY, VERY LIGHT
8
9 VERY LIGHT
10
11 FAIRLY LIGHT
12
13 SOMEWHAT HARD
14
15 HARD
16
17 VERY HARD
18
19 VERY, VERY HARD
20 MAXIMAL

When you exercise you use stored calories, some of which is body fat. The amount of activity that you do on a daily basis should approach **322** calories expended. Some of this activity can be planned exercise while some can be informal, like walking a greater distance to your car or using the stairs rather than an elevator or cleaning. See **table 6** to receive a better idea of how many calories you can burn in 20 minutes through various forms of activity. See **graph 3** to see how many calories you expend during the course of a day which is based on your activity history. Your basal metabolic rate is the amount of calories you need to exist while lying perfectly still (breathing, heart rate, body warmth, etc.). Your total caloric expenditure is estimated to be 2316. To decrease weight take in less calories than this number while exercising more.

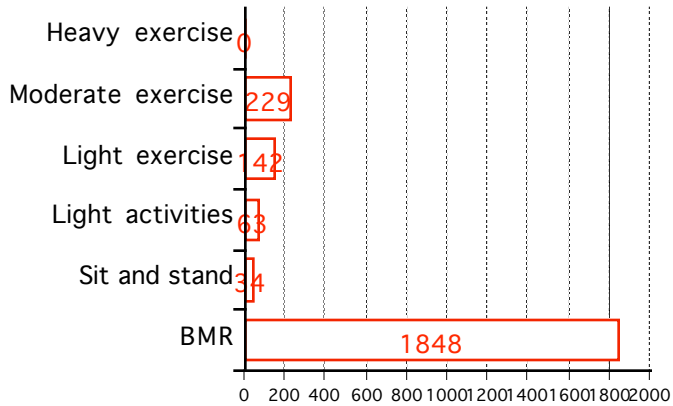
Table 5

ACTIVITIES	METS
REST	1.0
BILLIARDS	2.5
FISHING	2-4
BOWLING	2-4
TABLE TENNIS	3-5
WALKING	3-6
EXERCISE BIKE (LOW LEVELS)	3-6
VOLLEYBALL	3-6
LIGHT CONDITIONING EXERCISE	4-6
HANDBALL	3-7
DANCING (SOCIAL)	4-7
SKIING (WATER)	5-7
SKIING (DOWNHILL)	5-8
BASKETBALL (NON GAME)	3-9
TENNIS	4-9
STAIR CLIMBING	4-8
SWIMMING	4-8
AEROBIC DANCE	6-9
CLIMBING HILLS	5-10
HEAVY CONDITIONING EXERCISE	6-8
EXERCISE BIKE	6-12
SOCCER	6-12
SKIING (CROSS COUNTRY)	6-12
BASKETBALL (GAME)	7-12
SQUASH/RACQUETBALL	8-12
SNOW SHOEING	8-14
ROPE JUMPING (60-80 SKIPS/MIN)	9
RUNNING (12 MIN MILE)	8.7
RUNNING (11 MIN MILE)	9.4
RUNNING (10 MIN MILE)	10.2
RUNNING (9 MIN MILE)	11.2
RUNNING (8 MIN MILE)	12.5
RUNNING (7 MIN MILE)	14.1

Table 6

Activity and exercises	Calories Burnt in 20 Min
Walking 3.5 mph	120
Jumping rope	120
Racquetball	267
Aerobic dance	155
Cycling 10 mph	165
Squash	318
Tennis	164
Skiing	165
Volleyball	75
Strength training	129
Climbing hills	182
Climber (moderate)	300
Cleaning	93
Canoeing	66
Running (12 min/mile)	164
Running (9 min/mile)	290
Running (7 min/mile)	342
Running (6 min/mile)	378
Swimming (crawl)	216

graph 3 BMR=Basal Metabolic Rate



Training Chart

12/2/12
Name: John Doe

AFTA'S LEVEL
Over fitness level: very good
Strength level: Superior
Aerobic level: Elite-1

Level dictates program design

AGES
Chronological age: 31
Cardiovascular Age: 19
Muscular Age: 20

AEROBIC DATA
VO2 MAX 2 Max: 53.4 ml/kg/min
Target heart Rate: 139 - 170
Met Range: 9.2 - 13
Max Met: 18.9
RPE range: 11 - 16

BODY COMPOSITION
Weight (lbs): 165
% body fat: 12.5
Fat weight: 20.6
Lean weight: 144.4
Goal % body fat: 8
Goal weight based
on goal % body fat: 157
Fat free mass index: 21.8

Test	Score
% Body fat	8.1
Aerobic capacity	8.3
Muscular endurance	
Push ups test	6.9
Sit ups test	12.1
Box jumps test	1.3
Muscular strength	
Leg strength test	14.8
Bench press test	7.7
Arm curl test	8.4
Flexibility	
Upper body flexibility	3.1
Mid-body flexibility	10
Lower body flexibility	16.5
Overall score	8.8

Body location	Ideal measures	Your measures
Shoulders	46.75	
Chest	39.28	
Right arm	12.73	
Left arm	12.73	
Waist	29.43	33
Buttock	35.03	40.5
Right leg	20.63	
Left leg	20.63	
Right calf	14.38	
Left calf	14.38	

Skinfolds (mm)	Score	Millimeters
Chest fat thickness	12.2	4
Triceps fat thickness	8.9	9
Side fat thickness	9.6	11
Thigh fat thickness	10.9	9
Lower back fat thickness	8.5	21
Abdomen fat thickness	5.4	27

CALORIC DATA
Estimated basal metabolic rate: 1848
Estimated total caloric expenditure: 2316
Suggested calories to expend daily through activity: 322
Suggested caloric intake to achieve goal: 1816
Daily meals wished to be consumed: 3
Calories per meal= 489

RAW SCORES
Push ups: 30
Crunches: 52

Suggested starting weights

Standard strength exercises	
Exercise	Weight (lbs.)
Bench press	131
Pec dec	105
Arm curl	63
Triceps extensions	63
Lateral raise	42
Lat pulldown	140
Lower back	102
Ab machine	128
Inner & outer thigh	159
Leg curls	77
Leg extensions	128
Leg press	255

Doe		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
EXERCISES-DATES																													
Date																													
Stretch																													
Strength Machines																													
Exercise	Lbs.																												
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Leg curls	77																												
Leg extensions	#																												
Machine Row	#																												
Leg Press =(2*LE)																													
Cardio Type																													
Cardio Duration																													
Heart Rate																													

Target Heart Rate: 139 - 170

John Doe

Fitness Evaluation-enclosed

Posture and Movement Assessment

-future

Exercise Program-see sheet and trainer.

Diet-see web page

Goals: Keep up the good work....

Synopsis

Over fitness level: Elite-2
Strength level: Superior
Aerobic level: Elite-1
Goal % body fat: 8
Goal weight based on goal % body fat: 157
% Body Fat: 12.5, very lean
Flexibility: very good
Strength: excellent
Endurance: excellent
Aerobic: very good
Muscular endurance: excellent