

# Fitness Assessment and Specialized Exercise Program

**Name(s):** \_\_\_\_\_

**Mission:** In this lab you will perform a series of fitness appraisals to determine areas where your client needs to improve their level of fitness and possibly lifestyle changes. After your fitness assessment you will design your own fitness and wellness plan using the F.I.T.T. principle found **in chapter 15 of your textbook (pg. 404-407, 428-429) and with regards to a health-related training program (Text pg. 426)**

You will do the following assessments, which will all contribute to your final fitness and wellness program:

- A. Life Style Checklist
- B. Body Composition Assessment
- C. Cardiorespiratory Assessment
- D. Musculoskeletal Fitness Assessment
- E. Agility Assessment
- F. Reaction Time Assessment
- G. Vitals Assessment
- H. Flexibility Assessment



## Part A - Life Style Checklist

Complete Life Style Checklist below – place an “X” besides the box, which best describes your behavior over the last couple weeks. Explanations of questions and scoring are provided below the chart.

- Add up the number of “x’s” in each column then multiply by number below
- Add up the numbers for each column to calculate score and then find your rating and put in summary chart
- Also note any 1’s or 0’s to comment in final fitness and wellness chart

Family/ Friends	I have someone to talk to about things that are important to me	Almost never		Seldom		Some of the time		Fairly often		Almost Always	
	I give and receive affection	Almost never		Seldom		Some of the time		Fairly often		Almost Always	
Activity	I am vigorously active for at least 30 minutes per day	Less than 1/ week		1-2 times per week		3 times / week		4 times / week		5 times / week	
	I am moderately active (gardening, walking, climbing stairs, housework)	Less than 1/ week		1-2 times per week		3 times / week		4 times / week		5 times / week	
Nutrition	I eat a balanced diet	Almost never		Seldom		Some of the time		Fairly often		Almost Always	
	I often eat sugar, salt, animal fat and junk food	Four of these		Three of these		Two of these		One of these		None of these	
	I am within ____kg of my healthy weight ( <b>Google it</b> )	Not within 8kg		8 kg / 20lbs.		6 kg / 15lbs.		4 kg / 10 lbs.		2 kg. / 5 lbs.	
Tobacco & Toxics	I smoke tobacco	+ 10x / week		1-10x / week		None in past 6 months		None in past year		None in past 5 years	
	I do drugs	Almost Daily		Fairly often		Only occasional		Almost never		Never	
	I overused prescription drugs	Almost Daily		Fairly often		Only occasional		Almost never		Never	
	I drink tea, coffe, cola with caffeine in it	10x per day		7-10x / day		3-6x / day		1-2x / day		Never	
Alcohol	My average alcohol intake per week	20 + drinks		13-20 drinks		11-12 drinks		8-10 drinks		0-7 drinks	
	I drink than more that four drinks on occasion	Almost Daily		Fairly often		Only occasional		Almost never		Never	
	I drive after drinking	Sometime								Never	
Sleep Seatbelt Stress Safe Sex	I sleep well and feel rested	Almost never		Seldom		Some of the time		Fairly often		Almost Always	
	I use seatbelts	Almost never		Seldom		Some of the time		Fairly often		Almost Always	
	I am able to cope with the stresses in my life	Almost never		Seldom		Some of the time		Fairly often		Almost Always	
	I relax and enjoy leisure time	Almost never		Seldom		Some of the time		Fairly often		Almost Always	
	I practice safe sex	Almost never		Seldom		Some of the time		Fairly often		Almost Always	
Type of Behaviour	I seem to be in a hurry	Almost always		Fairly often		Some of the time		Seldom		Almost never	
	I feel angry or hostile	Almost always		Fairly often		Some of the time		Seldom		Almost never	
Insight	I am a positive and optimistic thinker	Almost never		Seldom		Some of the time		Fairly often		Almost Always	
	I feel tense or uptight	Almost always		Fairly often		Some of the time		Seldom		Almost never	
	I feel sad or depressed	Almost always		Fairly often		Some of the time		Seldom		Almost never	
Life	I am satisfied with my life	Almost never		Seldom		Some of the time		Fairly often		Almost Always	
<b>STEP 1</b>	Total X's for each column										
<b>STEP 2</b>	Multiply totals by # in column		X 0		X 1		X 2		X 3	X 4	
<b>STEP 3</b>	Add Scores across bottom	=	0	=		=		=		=	
<b>Grand Total</b>				<b>Rating</b>							

## Rating Table for Lifestyle Checklist

### Part B - Body Composition Assessment

What does your score mean ?					
Rating	85-100 Excellent	70-84 Very Good	55-69 Good	35-54 Fair	0-34 Needs Improvement
Note: Low score doesn't mean you have failed. There is always chance to change your lifestyle – starting now. Look at the areas where you scored 0 or 1 and decide which you want to work on first ( <u>record in final chart where fitness and well being program is developed</u> )					

### Sum of Seven SkinFold

Complete one round of skinfold measurements before performing a second; and if the difference is greater than 1 do a third round and take the average.

- Be sure to take on the right side of the body and relax the muscles.
- Record your results below in the table.
- Add the seven average 7 skinfold measurements and record in total box
- Use the table to find your rating for the body fat percentage
- Put score and rating in summary table

Skinfold area	Trial #1	Trial #2	Trial #3	Average
Tricep				
Bicep				
Subscapular (Bra line)				
Supraspinale(Supra Illium)				
Abs (near belly button)				
Thigh				
Calf				
<b>Total</b>			=	mm

### Rating Table for Sum of Seven Skinfold Test

Measure in mm's		Excellent	Good	Average	Below Average	Poor
<b>Normal Person</b>	<b>Male</b>	60-80	81-90	91-110	111-150	150+
	<b>Female</b>	70-90	91-100	101-120	121-150	150+
Trained Athlete	Male	40-60	61-80	81-100	101-130	130+
	Female	50-70	71-85	86-110	111-130	130+

## Part C - Cardiorespiratory Assessment

### The 3-Minute Step Test

**The 3-Minute Step Test** measures your **aerobic (cardiovascular) fitness level** based on how quickly your heart rate returns to normal after exercise.

**Equipment needed:** Stopwatch or clock with a second hand; a friend to help you keep count; a 12-inch bench, box, or step; a metronome (if you don't have one, use the free online version at [www.MetronomeOnline.com](http://www.MetronomeOnline.com))

**Goal:** Step on and off the bench for 3 minutes straight while keeping a consistent pace and then see how quickly your heart rate will come back down.

**Execution:** This test is based on a 12-inch step, so use one as close to 12 inches as possible, otherwise your results will be skewed. **Set the metronome to 96 beats per minute and make sure you can hear the beat.** Stand facing the step. When ready to begin, start the clock or stopwatch and march up and down on the step to the metronome beat (up, up, down, down) for 3 consecutive minutes. (You can rest if you need to, but remain standing.) When 3 minutes are up, stop immediately, sit down on the step, and count (or have a friend count) your pulse (use your wrist or neck) for one full minute or 15 secs x 4 = 60 second count

<b>Female Norms</b>	<b>16-25</b>
<b>Excellent</b>	52-81
<b>Very Good</b>	85-93
<b>Good</b>	96-102
<b>Fair</b>	104-110
<b>Below Average</b>	113-120
<b>Poor</b>	122-131
<b>Needs Improvement</b>	135-169
<b>Male Norms</b>	<b>18-25</b>
<b>Excellent</b>	50-76
<b>Very Good</b>	79-84
<b>Good</b>	88-93
<b>Fair</b>	95-100
<b>Below Average</b>	102-107
<b>Poor</b>	111-119
<b>Needs Improvement</b>	124-157
<b>Rating</b>	

## Part D - Musculoskeletal Fitness Assessment

### **Hand Grip Strength Test**

Have the subject hold the hand dynamometer in a straight arm position slightly away from the body. Squeeze the grip and exhale while squeezing. Record your scores to the nearest kilogram. Circle the best score from each hand and add them together as your two hand max total.

Hand Grip Test Table

Hand		Hand	
Right Hand		Left Hand	
Right Hand		Left Hand	
<b>Two Hand Max total</b>			
<b>Rating</b>			

### **Standing Long Jump Test**

Have your subject put his feet together flat on the floor. Move into a semi-squat position and ask them to jump out as far as possible. Record the distance that the subject jumps out with tape measure. Complete this three times and put results in results table. A rest of 15 seconds is recommended between each trial. Then take the longest jump score and find the rating from table A and put both in table and summary table.

**Standing Long Jump Test Table**

<b>Trial #</b>	
Trial #1	
Trial #2	
<b>Best Trial</b>	
<b>Rating (from table A)</b>	

A reminder to put score and rating in summary of fitness wellness chart

### **Sit ups in a minute test**

Have your subject do as many sit-ups as they can in 60 seconds. Only when the subject touch their knees with their elbows does it count as one sit-up. Only do a second trial if they want to improve there first score. Then take the sit-up score and find the rating from table A and put both in table and summary table.

**Sit-ups Test Table**

<b>Trial #</b>	
Trial #1	
Trial #2	
<b>Best Trial</b>	
<b>Rating (from table A)</b>	

A reminder to put score and rating in summary of fitness wellness chart

### Circle the scores you have achieved in Musculoskeletal assessment

**Table A**

<b>Males</b>	Grip Strength (kg) (Both hands added together)	Standing Long Jump (Inches)	Sit-ups in One Minute (Number of situps in one minute - elbows to knees)
Excellent	>108	98	61
Very Good	98-107	90	51
Good	90-97	84	45
Fair	79-89	78	38
Needs Improvement	<78	65	28
<b>Females</b>	Grip Strength (kg) (Both hands added together)	Standing Long Jump (Inches)	Sit-ups in One Minute (Number of situps in one minute - elbows to knees)
Excellent	>68	79	54
Very Good	60-67	71	43
Good	53-59	65	37
Fair	48-52	59	30
Needs Improvement	<47	49	20
<b>Rating</b>			

A reminder to put score and rating in summary of fitness wellness chart

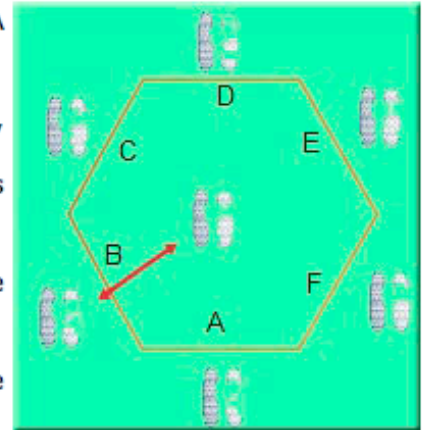
### Part E - Agility Assessment

## Hexagon Test

### How to conduct the test

This test requires the athlete to perform a series of two footed back and forth jumps over the sides of a hexagon.

- The athlete **warms up** for 10 minutes
- The assistant marks out a hexagon with 66 cm sides
- The athlete stands in the middle of the hexagon, facing line A throughout the test
- The assistant gives the command "GO" and starts the stopwatch
- The athlete jumps with both feet over line B and back to the middle, then over line C and back to the middle, then line D and so on
- When the athlete jumps over line A and back to the middle this counts as one circuit
- The athlete is to complete three circuits
- When the athlete completes three circuits the assistant stops the stopwatch and records the time
- The athlete has 5 minute rest and then repeats the test
- On completion of the second test the assistant determines the average of the two recorded times.
- If the athlete jumps the wrong line or lands on a line then the test is to be restarted



### Hexagon Results for

Trial #	Score
Trail # 1	
Trial #2	
<b>Average</b>	
<b>Rating</b>	

### Normative data for the Hexagonal Obstacle Test

The following are national norms, (Arnot 1984)<sup>[1]</sup>, for 16 to 19 year olds.

Gender	Excellent	Above Average	Average	Below Average	Poor
Male	<11.2 secs	11.2 - 13.3 secs	13.4 - 15.5 secs	15.6 - 17.8 secs	>17.8 secs
Female	<12.2 secs	12.2 - 15.3 secs	15.4 - 18.5 secs	18.6 - 21.8 secs	>21.8 secs

A reminder to put score and rating in summary of fitness wellness chart

## Part F - Reaction Time Assessment

### **Meter Stick React Time Test**

1. Have your friend hold a yardstick from the top so that it is up and down with the bottom several feet above the floor. Your friend may have to stand on a chair to do this.
2. You hold your fingers opposite the 30 cm mark, but don't touch the stick! Without warning your friend should let go of the yardstick, and you should try to catch it with your fingers.
3. Notice what inch mark your fingers are on when you catch the stick. Add this number to 30 cm number to see how many centimeters the stick fell before you caught it.
4. Record in chart below, throw out your best and worse distances and average the other 3 together and then compare to Rating chart

### **Rating Table for Ruler Drop Test**

#### **Normative data for the Ruler Drop Test**

The following are national norms, adapted from Davis (2000)<sup>[1]</sup> for 16 to 19 year olds.

Excellent	Above Average	Average	Below Average	Poor
<7.5cm	7.5 - 15.9cm	15.9 - 20.4cm	20.4 - 28cm	>28cm

<b>Trial</b>	<b>Score</b>	
#1		
#2		
#3		
#4		
#5		<b>Rating</b>
<b>Middle "3" Scores Average</b>		



### **Heart Rate & Blood Pressure Test**

Find the subjects resting heart rate and mark on table B. Then Using a stethoscope and cuff find the subject's diastolic and systolic blood pressure and mark your results on table B. With these results transfer your scores and rating to the summary of fitness and wellness chart. Do the blood pressure test twice and take the best result for diastolic and systolic scores even though maybe take at the same trial.

### **Circle the scores you have achieved in Vital assessment**

**Table B**

<b>Males</b>	Resting Heart Rate (RHR)	Diastolic Blood Pressure	Systolic Blood Pressure
Excellent	52	<60	<80
Very Good	62	61-79	80-110
Good	72	80-90	111-130
Fair	83	90 - 100	130-170
Needs Improvement	93	100+	170+
<b>Females</b>	Resting Heart Rate (RHR)	Diastolic Blood Pressure	Systolic Blood Pressure
Excellent	59	<60	<80
Very Good	66	61-79	80-110
Good	72	80-90	111-130
Fair	82	90 - 100	130-170
Needs Improvement	92	100+	170+
<b>Rating</b>			

### **Part H – Flexibility Assessment**

#### **Stand and Reach Test**

The person stands on the step and bends over and slide his hands down the table with a measuring guide to measure their flexibility. If the knees flex, the trial is not counted along with attempts where the subject is bouncing or using a jerking motion down the guide on the step. The test should be repeated twice and the recorded in table below. The maximum reading should be used as the score to find the subject's rating. Please record the score and rating in summary of fitness and wellness assessment table

#### **Rating Table for Stand and Reach Test**

	<b>Men</b>	<b>Women</b>
	<b>Measured in centimeters</b>	<b>Measured in centimeters</b>
<b>Super</b>	> +27	> +30
<b>Excellent</b>	17 to 27	21 to 30
<b>Good</b>	6 to 16	11 to 20
<b>Average</b>	0 to 5	1 to 10
<b>Fair</b>	-8 to -1	-7 to 0
<b>Poor</b>	-20 to -9	-15 to -8
<b>Very Poor</b>	< -20	< -18
<b>Rating</b>		

### **Summary of Fitness and Wellness Assessment**

<b>Assessment Tests</b>	<b>Score</b>	<b>Rating</b>
A. Life Style Checklist – Life Style Checklist		
B. Body Composition – Skin Fold Test		
C. Cardiorespiratory – 3 Minute Step Test		
D. Musculoskeletal - Grip Test		
D. Musculoskeletal - Standing Long Jump Test		
D. Musculoskeletal - Sit-up Test		
E. Agility – Hexagon Test		
F. Reaction Time – Meter Stick Reaction Test		
G. Vitals – Heart Rate Test		
G. Vitals – Blood Pressure Test – Systolic		
G. Vitals – Blood Pressure Test – Diastolic		
H. Flexibility – Sit and Reach Test		

### **Interpreting Your Results**

Once you have completed the assessments, you can interpret your results by answering the following:

1. In which assessment did you achieve the best results? Why do you think this was so?

2. In which assessment did your results show a need for improvement? Why do you think this was so?

3. With reference to specific components of fitness, How could you improve your overall results

4. Why do you think you received the rating you did for your lifestyle checklist?

## Designing the Health Related Fitness and Wellness Program

<b>Fitness Component to improve from Fitness appraisal:</b>		
<b>F.I.T.T. principle</b>	Weeks 1-8	
	<b>Aerobic</b>	<b>Anaerobic</b>
<b>Frequency</b>		
<b>Intensity</b>		
<b>Type</b>		
<b>Time</b>		
<b>Lifestyles need to change to improve Well Being:</b>		