

Fitness Simplified

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*“The first step to fitness recovery is being willing and able to accept that you
are worth the effort to get in shape”*

-From the Fitness Simplified Step Guide

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Introduction

Most people like to entertain the thought that there is an easy way to get fit and stay fit. It is tempting to believe that a pill or new solution can lead to weight loss, muscle gain; and a resulting extreme attractiveness. There is good news and bad news for this way of thinking. The reality is that no “super-pill” is available for healthy, long-term weight loss. The factual news is that a high level of fitness is not easy. The good news is that the principles of lasting, lifelong fitness can be simple.

By understanding the fundamentals of fitness as they apply to your lifestyle, you will be educated in the tools you need to improve or maintain your fitness level. This book will cover the fundamentals of: aerobic exercise for cardiovascular health; aerobic exercise for fat loss, resistance training for functional strength, resistance training for size increase, resistance training for athletic performance, flexibility training, nutrition and goal-setting approaches.

The information included in this text is meant to serve as an informative guidebook to help you get fit. It is recommended to always get a physical examination from a doctor before beginning a new fitness plan

Primary Objective

The construction of this book is done with the intention of creating a simplified, easy reference for fitness. The fitness industry is full of many books and many ideas. Some ideas are backed by research; some are not. The challenge for many readers is finding a source that is research based, easy to understand and easy to follow and refer to on a daily basis if needed.

This book explains concepts of fitness in a way that is easy to understand and easy to reference. Some sections of the book will be extremely relevant to the reader, while other sections may not be as relevant. It is recommended to read the entire text at least one time to understand the available functions of fitness. In addition, the book is designed with the idea that readers can quickly refer back to the sections that are especially relevant in order to find the content most relevant to their lifestyle.

Secondary Objectives

The first secondary objective is to promote fitness nationwide. It is this author's opinion that a lack of fitness education is a cultural problem leading to nationwide health problems. Education in an organized sense (public and private institutions) and a non-organized sense in the field of fitness is an important idea promoted by this book.

The mind set that a positive level of fitness is achieved through lifestyle adaptation as opposed to a cure-all pill or magic fitness plan is another objective of this text. Through understanding and accepting this fact, it may be possible for individuals to begin the process of fitness gains, leading to lifestyle adaptations that will lead to a higher quality of life on a daily basis.

Another secondary objective is the development of self-efficacy in readers. Self-efficacy is a feeling of accomplishment and ability specific to a task. A goal of guiding readers to understand how to achieve a task may lead to an increase in efficacy related to that task. It is desired that an ability to experience feelings of self-efficacy by way of understanding the process

may assist others to realize the potential of following a process to achieve success in other areas of their life.

SECTION 1: GETTING STARTED

Chapter 1: Why Most Fitness Resolutions and Diets Fail

Emotional planning

Much of the time, a resolution is centered around a special occasion or date, such as New Years. Often, the resolution is a part of the celebration for that occasion. Other times, a resolution may be a predetermined date significant only to the individual setting the date. Upon setting the resolution, however, most individuals “resolve” to dramatically change an aspect or several aspects of their life. The resolution can even be a reaction to a negative state of mind or state of being.

If a dramatic change of behavior is planned as a result of a specific emotional state, the motivation for the change may not exist once the emotion has left or decreased. Specifically, the high amount of motivation required to facilitate a huge change may not exist at the level needed for success at the high level of the grandiose goal. Also, it is possible that an individual may be emotionally satisfied by a temporary change, having met the desired behavior goal for a short period of time and returns to pre-resolution behavior once a positive feeling has been restored.

Emotion can be a positive component of goal-setting. However, it is important that it is not the primary factor leading to the design of a fitness program. It is important to use a logical, research-based approach to implementing a program that will effectively allow readers to enjoy the benefits of healthy living as a lifestyle change. Indeed, you may have positive emotions toward the feeling of accomplishment upon realizing fitness gains, with an increased self-esteem and feelings of self-efficacy (the accomplishment from achieving a specific goal; a sense of task ability).

Similar to the physical changes of body composition reduction, lean mass increase; increased strength and flexibility leading to long-term health increases, an increase in mood may be experienced for a long-term basis. An increase in these physical properties in addition to the increases in self-esteem and self-efficacy, are goals of this book. It also relates to the primary objective of implementing life-long increases in fitness.

Unrealistic goals

Often times, when fitness goals are set, they are extreme and difficult to attain. For example, someone may set a goal of working out twice a day, running five miles in the morning and lifting weights for two hours. In another example, someone may set a goal of decreasing body fat from 13% to 3% within one month, an extremely unrealistic goal, as this will be explained later, in detail.

Unrealistic goals can be put into one of two categories: behavioral goals and physical adaptation goals. Behavior goals relate to a plan of action an individual has set for fitness improvement behavior and is directly under the control of the individual. Physical adaptation goals relate to the body's changes as a result of following or not following behavioral goals.

It is important to set behavioral goals because these goals are directly measurable as a result of participant planning. For example, it is easy to understand setting a goal of jogging twenty minutes Monday through Friday and lifting weights for twenty additional minutes on Monday, Wednesday and Friday and recording the days you did or did not reach your goal followed by a reason for not achieving the goals. However, it is much more difficult to assess why or why not a physical adaptation goal such as:

“decrease body composition from 22% to 20% over the next two weeks”, worked or did not work.

It is recommended to have areas of improvement from when creating behavioral goals; for example, it is possible to have a desire in reducing body composition as an area of improvement that leads to a behavioral goal of a given amount of cardio-vascular activity in a fitness plan. It is possible to track and record the physical adaptations to assist in the construction of new behavior goals. However, when deciding to reward yourself for fitness milestones, it should be for accomplishing behavioral goals, as it is much more practical to target changing your behavior than targeting a change in your body’s responses to behavior. A logical progression of behavioral goal setting and the resulting reward system will be detailed later in the book.

The “magic pill” fallacy

Many people looking to start a fitness or diet program are tempted by the thought of a new, exciting discovery that will allow them to get fit with little work, in little time, with very little change in their psychological approach. It is tempting to want to believe that the easiest solution to getting fit is possible; for example: a new fitness pill that can be taken without any additional change. A change such as a new pill or set of pills is tempting because it is the least amount of work or change to a schedule.

The concept of a quick, easy, temporary fitness solution is seen when popular diets are compared. At various times throughout the previous generation, we have seen an array of “pop” diets, often with contradicting themes. For example, a diet high in carbohydrates was emphasized in the eighties, followed by a low-carbohydrate phase popularized in the current decade. In the nineties, low-fat items became a promotional consideration,

often replacing reduced fat with increased amounts of sugar, an item marketed now in low and reduced quantities. If these diet discrepancies are shifting and contradicting, why are we still enticed to believe that there is a quick, revolutionary new diet? Are we fueling the fire with our wishful thinking and tendency to try anything easy with the hope that it is the “real” diet?

For most people, the dietary needs and guidelines are simple. However, simple does not necessarily mean *easy*. It may take some time to change lifestyle habits of wellness that can last for the rest of your life. In this text, we will look at breaking down both diet and exercise needs into easy-to-understand guidelines for lifestyle fitness changes. Simple, combined with a segmented approach of making gradual changes, may appear easy to some at first. It is the hope of mine that a further understanding of fitness and how it can be broken-down into simple elements can assist with an increased fitness level for you and anyone who you share your fitness knowledge with.

Shortage of fitness knowledge

It is common that people starting a fitness plan do not have an information base that will allow them to successfully set up and adhere to a successful fitness plan. They may have a small base of knowledge regarding fitness; or they may have a large base of information from which to draw from, but may find it difficult to decipher what is actual research-based information due to the large amount of “fad” fitness trends that may or may not be effective and the propaganda of fitness information centered around selling a product or group of products.

The intention of simplifying fitness information is to help you filter through the information to choose what is effective and to enable you to design a plan that can be best followed. By understanding some basic knowledge and concepts, it can be possible to screen through the wide range of available information to expend resources only on information that is useful and relevant. With a simplified plan, it is possible to develop a plan that fits the needs and parameters of your daily life.

Chapter 2: Setting Yourself up for Success.

Making a decision

Making a decision to get fit or improve your fitness level is the first part of the process to actually get fit. There are several components to successfully making a decision to get fit and sticking to your plan. A decision without direction and meaning will not enable an individual to succeed. A decision with careful planning and self-knowledge may better enable an individual to succeed.

A major part of making a lasting decision is accepting that steps will be taken to do whatever is necessary to achieve the goal. Often times, when a goal is not achieved, it is because the goal was given up on before alternate routes to achieve the goal has been explored. To put it bluntly, a level of frustration leads to “giving up” on the goal before significant success has been achieved. In order to successfully achieve a difficult goal, it is important to objectively seek ways to improve the route to reach success. For example, if a planned work-out program does not fit into your realistic time frame, it is important to make time adaptations directed at the original goal, while adjusting the details of the plan.

It is extremely important to view setbacks and learning experiences when attempting to complete a goal. When dealing with fitness plans, a partially or completely unknown variable is how the body will react. As will be explained in further detail later, every individual has a set of genetic predispositions related to how their body will react differently to various stimuli; adjustments to those adaptations will be part of the goal-attainment learning process.

Adjusting your environment

It is recommended to make changes in your environment that allows you to perform your desired exercise routine as efficiently as possible. For example, if you have time during a break at work to lift some weights or walk, make sure that you have weights available or an area to walk. Also, make sure that you have fitness footwear and clothes readily available at all times for you to use them. Often times, a small gym bag can be purchased for \$20-50 that can reasonably fit in the trunk of a car or in a desk drawer. As you increase your accessibility to your work out gear, you will ideally reduce the temptation to use this as an excuse for not working out.

In addition to making sure that fitness supplies are available to workout whenever you plan to workout, it is important to make sure that healthy eating options are available at all times. How often do we eat a terribly unhealthy meal because we feel famished and we wanted to eat **something** “five minutes ago”?!! By having healthy snacks available, you can pacify your hunger cravings until you can get to a healthy meal time. Similar to planning for physical activity, you can keep healthy snacks at your home and your place of work (in addition to the possibility of carrying healthy snacks in your car or purse).

Looking for how goals can work, not why they won't work.

Once goals have been set, it is essential to be prepared to approach them with a dynamic fortitude, being prepared to adapt to meet the realistic obstacles related to the attainment of any goal. In simple terms, it is important to be ready to accept that there are going to be obstacles to overcome to meet your goal. The goal may not be reached easily and the lifestyle change may range from somewhat hard to very hard.

When adversity is experienced, one of two approaches can be taken. The first approach, referenced above, includes a willingness and acceptance to work through the obstacles and find how a goal can be accomplished. The second approach, one which may be related to the failure of many goals, is the tendency to rationalize why a goal cannot be accomplished. As it is less work and less anxiety to rationalize why a goal is not attainable, to either admit failure, or increase effort to adapt to the difficult situation, the excuse becomes an easy end to the drive to achieve the goal, and we give up.

During the goal attainment effort, it is recommended to closely look at what the obstacle is. Once the obstacle is identified, it is recommended to develop a simple plan to overcome that obstacle. For example: if an individual is experiencing tightness and pain the day or two following weight lifting, they may add stretching and a light cardio-vascular interval to their post-work-out time to avoid the pain. If someone is experiencing boredom during a long cardio-vascular exercise, they may break down the work-out into segments, focusing on the task of completing each five minute interval, possibly using song-length of work-out music to focus your time on.

One way to think of the mental focus involved with overcoming an obstacle is the use of a task-focused orientation, as opposed to a problem focused orientation. In using a task-focused orientation, a concentration is targeted toward accomplishing small tasks related to a larger goal. A problem-focused orientation often involves a negative emotional response and a rationalized affirmation regarding why a goal cannot be accomplished. In examining the results of each way of thinking, it may be possible to see how each may be reinforcing future behavior in either the direction of goal attainment or goal concession.

Chapter 3: A Basic Starting Point: Individual Differences

Medical considerations

Before beginning any fitness program, it is important to get a complete physical to check for any possible problems. There is a consideration that possible problems should be understood to avoid serious negative consequences (especially with respect to the functioning of the cardio-vascular system). It is important to understand any physical obstacles that may need to be overcome for a successful fitness program.

An example of a medical condition to be aware of in order to develop a successful plan is asthma. Many people with asthma can use an inhaler prior to physical activity in order to allow them to successfully participate in most physical activities. Additionally, many people have a more mild case of asthma, specifically related to exercise: Exercise Induced Asthma or EIA.

Metabolic rates

All individuals have a metabolic rate; for the purpose of this section we will look at resting metabolism and exercise metabolism in terms of how many calories and fat calories are consumed at rest and during exercise. At rest, an individual has a set metabolism rate, or basal metabolic rate. During exercise, a given amount of energy is used depending on body size, activity type and exertion level.

A good way to look at the functioning of metabolic rates is to draw an analogy to an engine from a motor vehicle. A basal metabolic rate is analogous to the idle of an engine, a set rate of fuel consumption is used at rest, with an increase of fuel for larger engines. In the case of the human

body, an increase in muscle tissue can lead to an increased basal metabolic rate.

Exercise levels can be reported in terms of Metabolic Equivalents or METs. At rest (idle) the metabolic equivalent is one (1.0). During all activities, the amount of energy used can be given a MET value. If a 180 pound person is working at a 6.0 MET level, they will be burning more calories than a 120 pound individual working at a 6.0 MET level. This concept is analogous to increased fuel consumption for a 3.6 liter engine running at 3000 rpm compared to a 2.4 liter engine running at 3000 rpm.

Why are MET levels and the human engine relevant to fitness? As an individual increases their lean mass, they increase the engine size, thereby burning more calories at all levels of activity. With a resistance training component for any fitness program, an individual can have the added effect of burning more calories by increasing their muscle mass. A slight increase in muscle mass can have a large benefit, as many individuals, especially women, do not want a “bulky” appearance. In addition, the more muscle mass you have, the more calories you will burn during all levels of energy expenditure.

Genetic muscular predispositions

All individuals have a set proportion of muscular tissue that is better suited for either aerobic performance or anaerobic performance. Aerobic tissue, also known as slow –twitch and “red” tissue, having a red appearance due to the high oxygen levels in the tissue. Many endurance athletes have a high level of aerobic tissue. The second main type of muscle tissue is

“white”, anaerobic, fast-twitch muscle fiber. Many power athletes have a high proportion of fast-twitch fiber.

If endurance athletes, who have a high proportion of aerobic tissue, are looked at in terms of muscle volume (looking at the size of major muscles), the area is smaller compared to athletes with a high proportion of anaerobic tissue. Take a look at Olympic-level distance runners vs. Olympic-level sprinters. Typically, the distance athletes have a smaller volume of muscle cross-sectional area compared to the sprinters. The number of muscle fibers is likely to be similar, but the larger volume of fast-twitch fibers (average size per fiber) leads to an increased overall size.

How can this effect the average person? Given there is a set of predispositions of fiber in the body, an individual could attempt to lift heavy and gain size; however, may find extreme frustration due to having a high number of aerobic fibers compared to anaerobic fibers, and not seeing significant results in terms of muscle growth. In similar theory, an individual with a high number of anaerobic fibers and a low number of aerobic fibers may find it extremely difficult to reach competitive endurance based goals, such as competitive triathlon or marathon times.

It can still be possible to reach strength gains, whether an individual has a high number of anaerobic or aerobic tissues. A resistance training fitness plan, based on neural adaptations as opposed to primarily focusing on tissue growth, will be explained later in this text as a means to reach significant strength gains without significant size increases. Also, it may be possible to find interval-training strategies for individuals who are looking to experience endurance gains, but are limited by a small amount of aerobic fibers.

Chapter 4: Initiation

Workout facilities and equipment

Now that we have looked at some components of individual differences, it is time to plan where to work-out. There is an initial excitement to work-out and “turn over a new leaf” that can lead to a financial commitment to join a gym or buy equipment for a home gym. Often times, this step is taken with good intentions but it is important to remember that this step is merely a preparation step. Also, many plans to become fit fail at this step as the expenditure of time becomes an obstacle. Before joining a gym or buying home gym equipment, it is recommended to write out a realistic calendar of when you can work out.

The upside of joining a gym is that there are limited distractions in a gym facility, compared to the distractions that can take place if you plan to work-out at home. Also, there is often a wide variety of work-out equipment to choose from. With a wide variety of equipment, it is possible to continuously change your work-out to meet any changing desires, such as, a change from a fat-loss to a muscle-building program. Also, there are classes to join, in order to form a support network of comfort ability and a possible sense of accountability to regularly attend classes.

The downside of joining a gym is the time increase in traveling to a gym, depending on how close a gym is to your home or work, and the fees for starting and continuing to use a gym. Also, some people may feel threatened when using a gym if they are just starting a work-out program due to the fact that many people at the gym may be more fit than they are. Some people may also experience a distraction from others at the gym who

try to solicit dates; this may or may not be a negative, but many gyms are starting to offer “female only” sections for women who want to avoid this distraction, for the most part.

The advantages of a home gym are the convenience that the gym is always available when you are home and it never closes. There are no other people to compare yourself to and there is no one to try to “pick up” on you or trying to sell you anything.

There are, however, some definite disadvantages to a home gym. The first disadvantage is the cost. Work-out equipment can be quite expensive. New equipment can be quite costly and any variety of equipment can consume both a large amount of money and space. Also, there are distractions with a home gym, such as: the phone, people at the door, children, roommates or a spouse. An often overlooked disadvantage of a home gym is the ability to procrastinate in completing work-outs. At a gym, you are there to work-out and leave. At home, it is easy to reason that you can put off your work-out time because you will get to it when it is “more convenient”. Often times, procrastination can turn an exercise bike into a coat rack in a matter of weeks.

The most recommended option for work-out facilities is to take advantage of both options: join a gym and have some work-out equipment at home. If a private gym fee is too steep, look into the possibility of training at a local University or Community College. If there are none available, a community center or apartment cabana may offer an affordable alternative. If you can spare the money to have work-out equipment at home, a space-saving, versatile option such as a barbell and a set of dumbbells is recommended or an elliptical trainer for aerobic training is recommended. If finances are more limiting, initial work-outs can be creatively planned to

include a pull-up bar, a sloped sit-up bench, a sit-up pad or even the next-to-nothing options (such as, milk jugs filled with pea gravel and water to suffice for a dumbbell substitute).

Goal setting

Once you have set yourself up for success, it is important to set goals for yourself to work toward. It is important to understand a couple of aspects with goal setting. First of all, it is important to set realistic and healthy goals. A goal of losing 5 pounds in a week, for example, is neither healthy nor realistic. In addition, a goal of losing 5 pounds in a week is a result goal as opposed to a behavioral goal.

Behavioral goals look at what you actually do and have complete control over. Setting behavioral goals is a realistic way to look at what you are doing and, whether or not, you need to make adaptations to your environment. It is acceptable to set long-term benchmark ideals, such as losing 5 pounds in a month but it is recommended to measure personal success of goal attainment by looking at whether or not you meet your behavioral goals, such as: completing 90% of your planned workout sessions in a month. If your goal is to workout 20 times in a month, with a set exercise prescription and you workout 18 or more times, you have met your behavioral goal for that month. The reasoning behind setting a behavioral goal to be measured is because it is both easy to define and determine success.

Benchmark ideals, in terms of what results you would like to accomplish, can be used in accordance with behavioral goals. If you follow your exercise prescription to the set goal standards, you can look at possibly

making adaptations to your exercise prescription directed toward your ideals. For example, if you follow your exercise prescription for 6 weeks, and have only lost one pound, you can increase elements of an exercise prescription or diet to more quickly move toward your result ideals, measuring success by how well you follow the new goals of your exercise prescription. Often times, people only look at the result ideals and give up on an exercise prescription before your body has made the physiological adaptations to allow you to more rapidly move toward your result ideals. If you measure success on the completion of behavioral goals, you will hopefully be less likely to experience frustration and quit your exercise program.

When you reward yourself for a goal, you should give yourself a reward that promotes fitness, as opposed to going against your fitness program. It is acceptable, for example, to buy yourself a new pair of workout shorts that you may not otherwise buy, for a week of meeting your fitness goals and an iPod for 3 months of meeting your behavioral fitness goals. It is counter-productive, however, to reward yourself with a week of heavy drinking and bad eating in Las Vegas, for example, for three months of meeting your behavioral fitness goals.

Goal setting can be an enjoyable component of a fitness program, and build a sense of self-efficacy. Self-efficacy is a sense that you can competently perform a task, based on understanding how to accomplish a task. Self-esteem can also be raised; self-esteem could make you feel better not only about your ability to follow a fitness plan, but also could allow you to feel better about yourself in a general sense. Often times, without looking at the fact that you accomplished a goal, you may become discouraged at initial minimal results (especially with body composition [fat loss] changes).

Self-efficacy can give you a tool that you can rely on to overcome fitness obstacles *when* they arise.

Having fun

Having fun and enjoying what you are doing is an important part of a fitness routine. Of course, some exercises may not be as enjoyable as others but the workout in general ought to be enjoyable. If someone hates what they are doing, it is not likely that they will continue. Many people begin a program that they dislike, with the understanding that they dislike it and need to tap into a sense of self-discipline to force themselves to work-out. Granted, there are times when self-discipline is necessary in an exercise program but if some sense of enjoyment is not experienced with a positive habit of fitness, a lifestyle sense of fitness will most likely be impossible to achieve.

A primary part of enjoying a fitness routine is choosing exercises that are enjoyable. If an individual is looking to build their muscular fitness level, it is advised to find a work-out partner to work-out with and do exercises with in order to obtain these goals. If an individual likes doing X more than Y and they have a hard time initiating their work-out, they should do X before Y. If the motivation for getting to the gym isn't an obstacle; but, finishing a work-out is, they should do Y before X. Also, individuals should choose the preferable exercises that work a specific group of muscles, compared to less-preferable alternatives.

If an exercise routine gets boring, and that becomes an obstacle, it is important to mix-up the exercises that are done. Sometimes, changing the exercises that are done, to work a specific group, can be enough to make the

work-out more enjoyable. Also, varying a work-out to include working muscle groups on a different pattern of days throughout the week may provide a needed change of pace to make work-outs more interesting. Within program design, there is variability in the way exercises are structured, both in terms of reps-sets and cadence of reps (this will be talked about later in program design). Changing program design for either a 6-week or 8-week cycle may also be enough to keep work-outs interesting and enjoyable.

When it comes to cardio-vascular training and interval training, there are two factors to consider. The exercise being completed and the distraction variable are two things to consider when creating an enjoyable cardio-vascular exercise environment. With the exercise being completed, it is important to choose what you are most likely to do. If you enjoy running, run. If you enjoy biking, bike. If you enjoy rollerblading outside, do it! If you desperately enjoy an exercise such as walking, but want the benefits of running, initiate your program with walking and slowly work in running as it becomes more enjoyable. Also, classes are a great way to motivate yourself and have fun with others. There are many classes offered, such as Aerobic Kickboxing and Pilates classes that offer benefits of fitness with the added social atmosphere. If you do not know what you like, keep trying until you find something you like and do not give up!

The distraction factor includes doing an additional activity to keep yourself mentally occupied. It is common to watch TV while riding a bike, jogging or exercising on an elliptical. Many people also read while riding a recumbent bike. Recently, there has also been a tie in with recumbent bikes to electronic gaming. Some bikes at gyms have virtual races set-up to try to beat a computerized opponent to meet your goals. Also, some people have

set up a home gym atmosphere including a gaming system and a TV in front of their recumbent bike to play an XBox or PS2 while they work-out. The basic concept is that you should set yourself up for success to get your workout done and not fool yourself with statements such as “I really shouldn’t need this to work out” or “I should just want to work out enough to do it”. The success is measured in the fact that you are doing it, as it works for you, not based on how others choose to do it.

SECTION 2: PROGRAM DESIGN

In the previous four chapters, we have looked at some background information and concepts of preparation that will allow you to begin a fitness program. We can draw back to some of the information to allow you to successfully set up a program design. You will need to set the start date, choose your times and places to workout and set your behavioral goals and physical change ideals to choose the program design that best fits your needs and parameters.

The best way to start is to choose a general focus of your fitness program. The general main focus themes are: muscular strength, muscular endurance, cardio-vascular training aimed at cardio-vascular (heart and lung) fitness and functional fitness for lifetime activity, such as fitness that may assist in general health for middle-aged or golden-aged individuals. Once you have chosen a general theme to focus your fitness program, adaptations can be made to specify your goals, such as sport-specific fitness. Additionally, continuous adaptations can be made to meet the changing needs of your environment.

It is best to begin a program design with a written template, either electronic or hard-copy of what exercises you will be performing, where and on what days. With a tangible record of what you plan to do, you can track your progress and record any obstacles that you may encounter in your training plan. Also, you can keep a handy record of the goals you accomplish in order to reward yourself for goal attainment!

Chapter 5: The Warm-up and the Cool-Down

It is important to start all exercise sessions with a warm-up period. A light-moderate cardio-vascular exercise is recommended for at least 5 minutes to increase your heart rate and increase the temperature in your muscles, tendons and ligaments. An increase in the temperature of your connective tissues is essential to guard against possible injury involved with exercise. Your muscles, tendons and ligaments all contain collagen fibers that are related to elasticity. Collagen fibers can act as rubber bands in your connective tissues; they assist to maintain the structure of connective tissue and become more pliable if warm. A rubber-band analogy could be tested by simply placing a rubber band in a freezer: take two identical rubber bands, place one in the freezer and one at room temperature; then, stretch the two rubber bands and watch how much more flexible the rubber band at room temperature is compared to the rubber band that was in the freezer.

In addition to the importance of a light-moderate cardio-vascular exercise to increase your heart rate and the temperature of your connective tissues, it is recommended to perform dynamic stretching following a light warm-up to increase the range of motion for the joints that will be involved with your exercises. A dynamic exercise is an active, range of motion exercise involving movement. The comparison is a static stretch, where a muscle is held in an extreme portion of the range of motion, often times to a POP or point-of-pain (static stretching will be further discussed in the cool-down section). A dynamic stretch for the shoulders may include small or large arm circles. A dynamic stretch for the knees may include non-weighted half-squats or non-weighted lunge walks.

Chapter 6: Muscular Endurance

What it is

Muscular endurance is the ability to perform exercise movements for a medium-length period of time. To understand this, let's look at the comparisons. A focus on muscular strength is targeted at performing only a couple of actions at a time and performing them at near maximal strength (such as 5 swings of a baseball or softball bat in a couple of minutes). A focus on cardio-vascular training may include jogging for 20 minutes or more, performing small-force muscular contractions for a lengthened period of time. A work-out focused on muscular endurance could assist with both activities, however, does not focus on the highest possible force production or a lengthened period of relatively low-force production.

Muscular endurance is a recommended component of most fitness programs as it provides a functional element to athletes and non-athletes alike. Athletes are assisted by an increased capacity to perform medium-force continued movements for moderate amounts of time. Non-athletes experience the functional benefits of increased force production and the ability to perform daily tasks for a longer period of time. Also, muscular endurance training may assist individuals with some increase in muscle size without maximal muscle size growth. Often, muscular endurance training is referred to as “toning”, while muscular strength training is referred to as “bulking up”. These references are not necessarily accurate, as it is possible to train for increased maximal strength without dramatically increasing muscle size, as will be discussed in the muscular strength section.

How it works

Within anaerobic muscle tissue, muscle tissue that uses processes not primarily fueled by oxygen consumption, there are enzymes that store glycogen for muscle contraction. There are a given number of enzymes in your muscles that increases with the correct muscular endurance training. This is the reason that muscular endurance training is recommended as a component of all fitness programs. If you want to later focus on muscular strength, it is important to build up the number of enzymes in your muscles to better assist you with numerous exercises, even when targeting specific muscles, supporting muscles may be involved for multiple exercises. If you want to focus on cardio-vascular training, muscular endurance is important to increase the enzyme levels in your muscles in the event that a level of force production is required that uses a higher level of anaerobic tissue than a baseline aerobic fitness level, such as interval training and aerobic classes that involve cross-training.

Over time, your body makes the adaptation that increases the number of enzymes in your muscles. With the increased number of enzymes, it is possible to perform repetitive movements of moderate force at a higher rate of efficiency. It is important to note that, as all fitness aspects, it is important to maintain a level of muscular endurance in order to maintain the desired high number of enzymes and the resulting muscular endurance.

How to achieve muscular endurance

It is important to start all work-outs with a low-moderate cardio-vascular exercise in order to increase the temperature of the connective tissues in your body. As was noted earlier, an increase in blood supply to

your muscles and surrounding your tendons and ligaments will allow you to increase your range of motion and guard against injury by increasing the stretching properties of heated connective tissue.

If you are new to resistance training or returning from a significant hiatus from training, it is important to err on the side of caution when choosing what amount of weight to use when lifting. A good standard of high-repetition lifting for endurance is to choose a weight that you can lift at least 15 times in a row, but not more than 25 times in a row. If you use a weight that is too heavy, you will not be able to perform enough repetitions to target endurance activity and worse yet, could possibly risk injury. If you use a weight that is too light, your muscles will not elicit a response that an adaptation is needed and you will not experience the desired effects for achieving an increase in muscular endurance.

There are three possible recommendations for achieving muscular endurance. The three themes are as follows: muscular endurance alone, muscular endurance in preparation for maximum force strength lifting and muscular endurance coupled with cardio-vascular activity to target slim body shaping. Muscular endurance alone can be recommended for anyone interested in functional ability of movements in most sports and recommended for individuals looking for functional strength for general lifestyle activities. Muscular endurance, in preparation for maximum force strength training, is designed for individuals who want to build up the enzyme levels and connective tissue strength in their body to better perform high-force output lifts. Muscular endurance, coupled with cardio-vascular exercise to target slim body shaping, is best for individuals whose primary goal is to improve their physique and look to get and keep a slim figure.

Chapter 7: Muscular Strength

What it is

Muscular strength is simply the ability to increase the amount of force that is generated by a muscle. The amount of torque generated by joint movement leads to an increased force output at the end of the lever. A basic example is an increase in strength in the biceps muscle, allowing a greater amount of force at the elbow and an increase in the amount of weight that can be curled.

Muscular strength can be important relative to the activity that is desired. Muscular strength can simply be an important aspect of daily life for most people; an ability to lift boxes or carry a baby could positively impact the life of people who wish to have an increase in muscular strength to make their daily living more simple. By comparison, some individuals may wish to increase their ability to perform an athletic activity, either a slow-velocity movement such as weight lifting or a high-velocity movement such as throwing a baseball or football. Regardless of your desired activity, muscular strength increase can be beneficial to essentially everyone.

How it works

As stated earlier, muscular strength is the ability to output force by a group of muscles. The ability to output force is caused by two elements; the most common and well known component of muscular strength is the muscular tissue itself. Most people think of large muscles as being strong muscles and incorrectly reason that the only way to increase strength is to increase muscular size. The other component of muscular strength is the functioning of the nervous system.

Most people do not think of nervous system adaptations to increase muscular strength. However, the adaptations of the nervous system may be the most important, as they can lead to an increase in strength with or without an increase in muscular tissue size. An increase in the efficiency of the nervous system functioning that excites muscular contraction can increase the amount of force output from the muscles. Training which targets the neuromuscular system can increase muscular force output at increasing levels over time.

The action of the neuromuscular system and the training adaptations that lead to increased force outputs could be thought of with an analogy that is similar to water pressure. With a larger diameter hose (analogous to an increased axon size-the cord that carries neural impulses), more water is allowed to travel per unit of time, leading to an increase in pressure, similar to an increase in the number of neural impulses that arrive at a muscle or muscle group per unit of time. Additionally, a more efficient route of travel through a series of pipes to the output point can lead to more pressure (similar to the trainable routing of nervous system impulses traveling from the brain to the muscle).

How to achieve muscular strength

Muscular strength can be achieved by targeting either muscular size increase, an increase in nervous system functioning, or both. An increase in muscular size will be talked about in the following chapter. Achieving muscular strength increase, as a function of the increase in nervous system functioning, includes activities that increase the frequency of neural impulses. Frequency of neural impulses can be increased in relation to the amount of force and the velocity of joint movement.

A muscular contraction can lead to maximal neural frequency with a high amount of force, at a relatively slow movement or a low amount of force at a relatively high velocity of movement. Someone who wants to increase muscular strength without increasing size may consider utilizing a low amount of force (low weight) at a high velocity, a popular option for many females looking to avoid a “bulky” look. Also, following a work-out prescription in preparation for sporting competition may include a work-out low in force and high in velocity to avoid muscular fatigue in the days prior to a competition. A cadence for lifting weight at a low-force, high velocity method, may include a one-two, when lowering the weight, and an “up” count, as quickly as possible when lifting the weight. The limitation is that it is important to follow doctor recommendation for possible joint difficulties, such as, a quick squat thrust with moderate weight if the individual has knee or back problems.

Chapter 8: Muscular Size

What it is

Muscular size is the increase in the cross-sectional size of a muscle; this technical jargon simply means the visible size of the muscle. Muscular size can assist in muscular strength; however, as mentioned earlier, an increase in size is not necessary for an increase in muscular strength to occur. Also, an increase in muscular size can be desired simply for aesthetic appeal, or “sex” appeal. In other words, you can have a design tailored to target size increases rather than strength increases and vice-versa.

How it works

The area of a muscle increases for two reasons: the size of the muscle fibers increase or the number of enzymes in the muscle increase. Similarly, to train toward increasing muscle size, it is important to target the workout toward increasing the size of the fibers (hypertrophy) and increasing the number of enzymes in the muscle.

How to achieve muscular size increase

In order to increase the size of the muscle fiber itself, it is important to include in the exercise prescription a number of repetitions such as 6-10 per set. In addition, a modified cadence for lifting the weight is an extremely underrated technique for achieving size increases. When lowering the weight, elongating the muscle, also called eccentric contraction, lower the weight for a count of five seconds. The slow lowering of the weight is a key technique for achieving size increases but is seldom known as a successful way to gain size!! This change alone may lead to an increase in size for individuals who have thought that they hit a “plateau”.

In order to increase the number of enzymes in the muscle, it is recommended to add an initial set of 20-25 repetitions at the beginning or the end of the sets for the exercise. One set is all that is needed per exercise. If the set of high-repetitions is used as the first set in performing an exercise, it is possible to also use this as the warm-up set for the exercise, increasing the movement ability of the connective tissues and reducing the risk of joint injuries!!

Chapter 9: Body Composition

What it is

Body composition is referred to as “fat mass” versus “lean mass”. Fat mass is simply the amount of fat on body. Body composition is recorded in terms of a percentage. You may have heard people talking about their body fat percentage; this percentage is gauged in terms of fat weight as a percentage of total body weight.

Body composition has become a more accurate measure of fitness than basic body weight. If someone has a large amount of muscle, they may be listed as overweight, or even obese, simply based on their higher body weight, as muscle weighs more than fat. Similarly, many people, especially females, are overly-concerned with body weight, rather than concentrating on measuring body composition. A healthy improvement in body composition over time is recommended as the best way to lose unhealthy weight and keep it off!!

How it works

There are two main components to reducing the percentage of body fat that are dramatically underrated and not understood. Most people get frustrated from a couple of weeks in the gym if their body weight has gone up by a couple of pounds or even reduced a very small amount. Similarly, there is frustration if a reduction in body fat has occurred, but is small, and it seems pointless to continue. Another frustration is when someone tries to lose body fat in a certain area and it does not work. Many people end a program at this point, just a few weeks after starting a program. The answer is simply understanding the two basic principles of reducing body fat.

The first component to understand is that it is impossible to “spot reduce” body fat. If you do a million sit-ups a day, your body still does not reduce the amount of fat around your belly at a higher rate than other places in your body. Body fat reduces at the same rate in all areas of your body. Everyone has a set number of fat cells in different areas of their body. When you reduce body fat, you reduce the *size* of all cells at an equal rate throughout your body. Men typically carry fat around their abdomen, giving the svelte beer belly with chicken legs look in an untrained individual, while women typically carry fat in their butt and thigh region. It is only with the correct training that you can reduce body fat throughout your entire body.

A second fundamental to consider is that your body adapts to training to more efficiently burn body fat over time. It is typical to not see results in the first couple of weeks, as your body is adapting to burn fat more efficiently. Also, as your length of time increases per session, the efficiency of burning fat later in the session increases, compared to earlier in the session. Simply put, in the first ten minutes of training, or if you are in the first week of a fitness plan, your body is burning almost all carbohydrates. But, if you have been training for six weeks and you are in the last ten minutes of an hour-long session, your body will be burning fat at a high percentage.

How to achieve an improvement in body composition

First of all, it is important to choose an activity you like and will stick to; or, a distracter that will let you workout without being bored to tears. If you hate running on a treadmill, you most likely will not want to do it. You can try a distracter, such as watching television while you run on a treadmill;

but, if that does not work, try another activity. Also, allow yourself an alternative on a daily basis if you can't get to the gym. An alternative can be as simple as walking around the neighborhood, or a specific preference such as hitting a punching bag in your garage. The bottom line is: set yourself up for success with options you will actually do, and make adjustments rather than excuses when you can't follow your regularly scheduled activity.

When you plan your activity, it is ideal to work toward performing relatively long sessions of cardio-vascular activity, at least one or two times per week. If it does not work to perform long sessions at first, do what you can to get in a minimum of 20 minutes. Remember, you want to work toward longer sessions, because the percentage of fat calories burned compared to carbohydrate calories, increases over time in a single work-out. Sessions of 2-5 per week are recommended. If you choose to perform cardio-vascular activity for only two times per week and can work-out for 75 minutes per session, that is much better than 6 sessions per week of 15 minutes each.

A good intensity for performing cardio-vascular activity directed at improving body composition is 60-75% of your heart rate maximum (what?). To find your heart rate maximum, take 220 minus your age. If you are 40, for example, your heart rate max is 180. Your goal range would be 108-135. A common thread of thought is that if you work out as hard as possible, that would logically be the best case scenario. But, if you work out at a near maximal rate, you will be burning carbohydrates at a higher percentage and possibly be using anaerobic activity that is also using anaerobic enzymes. You can find your heart rate by looking at a clock for 15 seconds, with your fingers on your neck to feel your pulse; count the beats and multiply by four. If the piece of work-out equipment you are on

has a skin-activated monitor, or if you have a strap-on heart rate monitor, you can use those as a guide as well. Over time, you will be able to gauge your perceived rate of exertion and approximate your appropriate output rate. Enjoy!!

Chapter 10: Flexibility Training

What it is

Flexibility is referred to as the range-of-motion that a joint can perform. If you move a joint in its range of motion, you can feel your flexibility. For example, can you move your arm in a circle without pain? Is there a point that you feel pain in your shoulder? Can you bend your knees in a normal range of motion without pain? Can you twist left and right without pain?

Often times range-of-motion is reduced as you age, either due to injury or simply a loss of elasticity in your connective tissues. Range-of-motion can be important for simple daily living activities or for athletic purposes. If you have difficulty lifting daily objects or moving without pain, it may be beneficial for you to improve your range of motion; it is imperative that you check with a doctor regarding your pain before you begin any flexibility training.

How it works

The first reduction in range-of-motion could be caused by injury. If there is scar tissue in a muscle or joint, range-of-motion could be reduced and physical therapy, massage and/or surgery could be necessary. A micro-tear of muscle, ligament or tendon with scar tissue could even be a concern, as vigorous activity could lead to a full tear of the muscle or connective tissue that has a micro-tear and the resulting scar tissue.

Injury factors aside, the next question to look at is whether you want to improve flexibility for daily living or for athletic purposes. If a small increase in range of motion is desired for daily living or for athletic

purposes, static (stretch and hold) stretching once an individual has gone through a warm-up and dynamic (range of motion movement stretching) flexibility exercises is recommended. If you want a drastic improvement in your range of motion, longer sessions of static stretching are highly recommended.

How to achieve improvements in flexibility

If you are stretching to improve the range-of-motion to a small degree, it is recommended to first perform a range-of-motion exercise, moving your limb through its current range of motion 15 times. Once you have performed the active stretch, you should hold the limb *at* the point of (slight) pain for 15 seconds. Repeat this procedure for all joints that you want to stretch. Similar to a rest period for anaerobic activity, it is recommended to stretch the joint only every 48 hours if you stretch to the point of pain. Active range-of-motion exercises can be performed daily.

If you are stretching to drastically improve the range-of-motion, such as for an athletic purpose, for example: gymnastics or kickboxing, it is recommended to perform long-session static stretching. Once you have performed a warm-up session to elevate the heart rate and have performed active range-of-motion, hold a limb to the point of pain for one minute; every minute, slightly increase the held stretch to the point of pain. Do not aggressively or quickly increase the stretch or hold to an extreme point of pain. If you stretch too quickly or to an extreme point of pain, it is possible to tear ligament, tendon or muscle tissue. Again, it is recommended to consult a physician before beginning a plan and to immediately see a physician if you accidentally stretch too far, too fast and experience extreme pain.

SECTION 3: A SUCCESSFUL DIET

Chapter 11: Basic Components of Diet

When we look at diet, we will be talking about what you eat, in terms of a lifestyle change. As was talked about earlier, most diets fail because they are extreme or based on a temporary solution. Constant changing of diet plans may not lead to the consistent improvement or maintenance of the desired body type. If what you desire is having permanent results, it is important to make changes that are lifestyle changes. This concept may seem immensely simple, but some of you may have already experienced a roller coaster of diets that have not been adapted to your lifestyle.

How many calories should you consume?

This question opens up a “Pandora’s Box” of possible answers. The amount of calories you should consume depends on factors including, but not limited to: gender, weight, age, activity level and type. Any physical ailments, diseases and conditions should be taken into account. For this reason, it is always imperative that you consult a physician to find out exactly how many calories you should consume if you are beginning a weight-loss program. It is very dangerous to begin a diet program that includes a calorie total that is below your personal minimal requirement. A calorie intake that is too low can lead to changes in bone density, brain function, hormones, organ functioning, etc. Due to this important component to the weight loss procedure, we will look at healthy diet options and possible psychological barriers, urging you to consult your physician to

acquire the exact number of calories that you can consume for healthy weight loss (or gain).

Counting calorie types

There are some basic elements of what *type* of calories you should consume, in terms of proteins, fats and carbohydrates. Proteins are in most food products, with complete proteins found in animal products. If you are a vegan, eat no animal products whatsoever, it is recommended to consult a physician regarding complete protein options. Fats are broken down into saturated fats (primarily animal fats) and unsaturated fats (primarily oils). Carbohydrates are the most common calorie source and are found in most foods. Processed foods and foods with refined sugar often have a high “glycemic index”. Whole-grain foods, by direct comparison (and if other sugar elements are not included) have a lower glycemic index. If you consume a large enough quantity of foods with a high glycemic index, your insulin (blood sugar) level can cross a threshold that leads to some of your unprocessed calories being stored as fat.

When you purchase a food item with a nutritional label, you will see the number of calories and grams of: fats (saturated and unsaturated), carbohydrates (and carbohydrates from sugar) and protein. Protein and carbohydrates each yield 4 calories per gram, while fats yield 9 calories per gram. When you are considering changing your diet, it is highly advised to make a practice of recording the foods you eat, noting: the number of servings you consume, the fat, saturated fat, carbohydrates, carbohydrates from sugar, protein and total calories from food. A dietician or physician can look at this information to assist you with a desired target calorie intake number.

Too much fat or protein?

There are some general guidelines for fat consumption that you may want to look at. When you look at the number of calories you consume from each group, calculate the percentage of calories from fat and saturated fat. A general rule for total fat is that you want to keep the calories from total fat at 30 percent or below. Similarly, it is advised to keep the calories from saturated fat at 10 percent or below. Saturated fat can lead to plaque build-up in your arteries and contribute to a variety of cardio-vascular problems. Saturated fats are primarily found in animal products. A simple analysis is whether the fat is a solid or a liquid at room temperature. If the fat is solid, it is most likely either a saturated fat or a hydrogenated unsaturated fat. Many products are advertised as “unsaturated”, but have been “hydrogenated” to form a solid. If you are considering consuming hydrogenated products, it is advised to consult a nutritionist to determine the effect of this product; it may be possible that the hydrogenated product is as potentially harmful as a saturated fat.

In addition, it is advised to consider protein consumption if it is high. For most adult females, if your protein intake is above the 40-50 gram range, you may want to consult a nutritionist or physician to clinically analyze your individual differences; the level is somewhat higher for pregnant or nursing mothers, and it is definitely recommended that these mothers consult a physician for many needs including diets. For adult males, if you are above the 50-60 gram range (60-70 for ages 19-24), you may want to consult a physician to clinically analyze your needs; some additional protein is recommended during a muscle-tissue increase phase, but it is important to consult your physician to make sure you are staying within a healthy range.

Chapter 12: Eating the Right Stuff

It is important to eat the right foods for the desired result and there are two important pieces to this simple concept. One, you will not eat for long foods that you hate; don't limit yourself to an uber-extreme diet. Also, as you do make changes, you can make them gradually (unless your physician recommends otherwise), to learn to enjoy a healthier diet.

As you may have already experienced, you are not going to stick to a diet that you absolutely hate. Most people are not going to switch from a fast-food burger, fries and a soda to a bowl of dressing-free spinach and a can of tuna and enjoy their new lunch. Be realistic with your changes, with a look at what you will be willing to eat as a change in your lifestyle.

Nutritional density

Nutritional density refers to the amount of nutrients in an item or a meal divided by the caloric content. Take, for example, a regular soda. What is the nutritional content of a soda per the content of the calories? There is very little nutritional value in the soda, compared to the number of calories. By comparison, if you eat an apple and an orange, the calories in the orange and apple combined being similar to the calories in a serving of soda, you will consume a relatively high number of vitamins, soluble fiber and non-refined carbohydrates; the fruit has a comparatively higher nutritional density.

A recommendation for finding foods higher in nutritional density is to consume foods that are not processed. Of course, some meats have a high number of calories; it is recommended to choose lean meats (cuts of meat with relatively low levels of fat). When you go grocery shopping, try

making an initial circle of the outside portions of the store to begin your shopping; typically, in the outer-circle of most grocery stores, you will find the non-processed food items.

As you begin to record the food items you eat and pay attention to the food labels on the foods you purchase, you may develop a greater awareness for the nutritional density of the foods you are consuming. Chances are, you will have an idea what foods have a higher nutritional density than others. The key to bringing into your house the foods you desire, is simply to be aware of what you are buying, in terms of nutritional density and getting in the habit of making healthy eating purchases.

Meal adjustments

Meal adjustments for standard meals can be as simple as changing the type of bread and mayonnaise for lunch sandwiches, using a lower-fat milk option, purchasing healthy cereal and planning out dinner meals. If you plan out your dinner and possibly all of the meals for the week, you can analyze your food before you buy it. Remember, “if you don’t have it, you won’t eat it”. When looking at snack options, make sure you have healthy snacks such as fruits, vegetables and whole-grain bagels instead of candy, chips and muffins. When you choose meats, buy lean cuts of meat. When cooking, try using a vegetable oil (such as olive oil) instead of lard or butter or a vegetable oil spray.

Another consideration for meal replacements is trigger foods. When you are extremely hungry, or look for a comfort food, what are your weaknesses? Are you a chocolate junkie? Do you prefer the “greasy-spoon” cuisine? It is important to recognize your “weakness foods” so you can look at when you eat them. If you eat your weakness foods when you

are extremely hungry, try to have healthy meal or snack options available at your work or in your car at all times. If you eat foods when you are depressed or otherwise stressed, keep a journal of how you make the good food choice (such as a piece of fruit) or how you avoided eating altogether (in the event that you are not actually hungry). If you eat out of depression or another stress, it is recommended that you access a support group to assist with overcoming this difficulty. A support group can be as simple as looking at an online chat group for people with similar eating difficulties, to physically attending a support group such as “Overeaters Anonymous”.

Portion sizes

How much food is too much to eat? Is it possible to eat healthy food and still be eating too much? How do you know if you’re eating too much? If these are questions that you have asked yourself, you are headed in the right direction. It is much more productive to have questions regarding your consumption amounts than to be in denial about eating too much. If you are in denial about eating too much but still wish to be educated, the information in this text may help. If you think you may have or know you have a compulsion to eat in excess, you may want to explore the option of a support group such as “Overeaters Anonymous”. Support groups have been mentioned as an important part of recovery, ranging from an online support group or a work-out partner to an actively (physically attended) support group.

Let’s examine the question of, “how much food is too much to eat?” Often times, a serving size has been commonly referred to as a fistful worth of food. This size is referred to as a guide when looking at a diet plan that

specifies the number of servings you should consume in a day from each of the food groups. As stated earlier, the exact calorie consumption and related serving consumption should be regulated by a physician or dietician after analyzing your health, daily activity and fitness goals. The amount of food that every individual should consume varies depending upon the mentioned variables to the extent that it would be irresponsible to suggest a “one size fits all” portion recommendation.

Even though the amount of food you should consume varies greatly, there are some signs that you may be consuming too much. An obvious sign is an increase in body fat. If you are gaining unnecessary body fat, it is possible that you are consuming too much food, the wrong foods, or both. Another sign of possible excess consumption is eating until you are full. If you typically do not stop eating until the feeling of fullness has set in, it is possible that you are consuming more than your body needs. There is a time lapse between when food enters your mouth and when you start to digest it. The process of peristalsis is the beginning of digestion as food enters your body and enters your stomach. If you are eating until you feel full every time, you have consumed excess food from the point that your stomach started to signal “fullness” and when you made a decision to stop eating. It is for this reason that it is possible to eat too much food, even if it is nutritionally dense and “healthy”. Again, it is important to follow the guidelines of a physician or dietician to familiarize yourself with your appropriate portion sizes.

Another important habit to recognize is eating until all of your food is consumed, even if you are no longer hungry. Have you ever finished your quarter-pounder and super-sized soda and had to stuff in your large fries because you didn’t want to throw away what you paid for? Have you ever

been tempted to stuff in the last spoonful of spaghetti to prevent putting it in a container? It would be rare to find anyone who hasn't eaten too much, at least on occasion, so don't feel guilty. However, it is important to recognize trends with your eating in order to develop healthy habits. Next time you have one of these temptations, try turning it around. Do you see the value in \$1.29 worth of fries as more fat on your midsection? Is it going to be more effort to spend 1 minute putting the spaghetti in a container, or spending an extra 20 minutes on the treadmill burning it off? As you become more cognizant of your behavior, chances are you will begin to see your eating behavior become healthier without a great deal of effort. If regulating your overeating does become difficult, talking to your support group regarding this program may be the next best step.

SECTION 4: MAINTAINING A SUCCESSFUL PROGRAM

Chapter 13: Overcoming Obstacles

Undoubtedly, you will encounter obstacles in following your work-out plan. Let me restate that: you will definitely have difficulty following your program. You *will* most likely experience time constraints, boredom, unexpected life events and possibly injury. If you do not anticipate and prepare for obstacles, you may not be able to adapt and modify your program to follow it successfully.

It is difficult to change your life at all to include added activity. It is especially difficult to change your life to include anything you feel is optional. The first step is committing to change your life to include a new fitness program and be open-minded to making the adjustments to successfully follow a plan that will work for you and that you will enjoy making a part of your life for years to come.

Time constraints

The first thing you need to do to set yourself up for success is to write out your weekly schedule and analyze the time slots that you have open for your fitness program. If you find activities you can cut out or cut down on, such as watching TV or chatting online, try to fit activity into these times. If you absolutely do not want to cut these things down or out, or think you will not follow a plan if you do, try to arrange your work-out to include these activities. If you choose to lift weights and watch TV, for example, you can watch TV while you work-out. If you prefer to use your hands for video games or online activities, you can set up a work-out station on a recumbent bike where you can still use your hands.

When you do miss a scheduled work-out time, keep track of the exercises you missed and plan a time when you can make up the work-out. It is expected that you will not be able to meet all of your scheduled work-outs, but it is highly recommended to make up the time. If you cannot get to the gym, for example, you can adjust to have alternative work-outs that can make up for the time missed. Even if the work-out is not exactly the same (for example, performing pull-ups and push-ups to substitute for an upper-body work-out), it is important to remain mentally disciplined to follow a successful program.

Boredom

It is quite common for people to get bored in the course of following a fitness program. Getting in the routine of working-out can be a good stress release but it is important to alleviate any boredom to keep yourself following the program. One way to alleviate the boredom is to give yourself options for where and how you workout.

If you are focused mainly on cardio-vascular activity, the primary way to vary your work-outs is to change the location of where you work-out. If you jog or bike, you can exercise outside in different locations, weather permitting. If you have the luxury of working out at more than one gym or a gym in addition to your home, alternate where you work out if avoiding boredom works better for you than following a routine. If your work-outs focus more on resistance training, you can similarly vary where you work-out or use different exercises to work similar muscle groups according to your desired work-out plan.

An additional method for avoiding boredom is to pair with a partner to perform your work-outs. There are several advantages for working out with

a partner. If you have a reliable partner, you can hold each other accountable for working-out, challenge each other and celebrate together when you reach your goals. Also, working-out with a partner can assist you with your work-outs as you will always have a spotter available, allowing you to be more comfortable with attempting to lift a higher amount of weight without the safety concerns present when lifting without a spotter.

Soreness and possible injury

If you have not been following a work-out routine, it is very common that you will experience soreness when you begin a new work-out program. If you have been working out but alter your program, it is also possible that you will experience some soreness during the day or two after working out. Delayed-onset-muscle-soreness (DOMS) is relatively common for either of these scenarios. If DOMS continues as a result of your body not adapting, it may be possible that you are overtraining. A progressive exercise prescription should help you avoid this complication. If severe pain occurs, see a physician. Again, it is recommended to consult a physician before beginning a new fitness program in the event of unknown existing injury or complications.

A common site of soreness that may occur in many programs is lower back pain. Many people have a spine that is not exactly straight. One of the most common curvatures is called “Lumbar Lordosis”. If your spine is curved more than normal toward your abdomen, you may have Lumbar Lordosis. When this occurs, the ligaments of your lower back are shortened. With the shorter ligaments, soreness and injury are more common when twisting and lifting occur, because a higher than average level of strain is put upon the ligaments when they are stretched beyond their limited comfortable

movement range. Including hamstring, the upper-back portion of your leg, and abdominal exercises can alleviate some of the strain and possibly assist in straightening your spine. Hamstring strength could assist in stabilizing the back, lower portion of your hip girdle and abdominal exercises could help stabilize the front, upper portion of your hip girdle.

Chapter 14: Living the Wellness Lifestyle

A lifestyle change

When you change your life to include a fitness plan that you enjoy, chances are that you will have a sense of confidence from taking charge of improving your quality of life significantly enough that you will not want to go back to living without fitness in your life. In the process of adopting a fitness plan and adjusting to overcome obstacles, you will hopefully also get feelings of self-efficacy (self-efficacy is confidence in the ability to overcome a specific task) that will translate to other areas of your life. The danger in why many diet or fitness plans fail is the problem that faith is put in an unknown “fad”. With many “fad” plans, if you do not have any understanding to the basics of the change, you may not be able to adjust correctly when difficulties *do* occur.

If you have a positive feeling about fitness, hopefully you will want to include fitness as a part of your life-long plan. If you have accomplished your short-term goals to improve your fitness, why would you want to go back? An important thing to remember is that your body is always changing. Therefore, in order to not go back, you must be always going forward. It is important to look at new fitness techniques and ways to keep your fitness interests up over time to maintain the goal of always moving forward. Although it may sound like a chore and a large task to keep fitness a part of your life, the reality is that learning more about fitness can become quite enjoyable over time. Likewise, the enjoyment from this exploration of self-improvement will not be a chore at all, in fact, it will become quite natural and fun, likely occurring without conscious planning.

Sharing your fitness lifestyle

As you enjoy the new addition to your lifestyle, it is important to share your positive feelings or accomplishments with others. You should be proud of your accomplishments of meeting your fitness goals. Many people struggle with how to get and stay fit and if you have done a good job reaching your goals, sharing how you were able to reach your goals can be a positive influence for others who may be struggling with how to get fit. If you do share your goals with others, there are two advantages. The first advantage, as was just mentioned, is the possibility of being a positive example for others. The other advantage is that you develop a support group with others who encourage each other for reaching goals and hold each other accountable. This concept is often seen with spouses or partners who share a love of fitness together. The danger with a desire to encourage a spouse is the tendency to criticize them for a lack of fitness, while not personally following a program; if you start your program first, and they see your success, they may become intrigued with how you have improved yourself and want to hear about how you have made the improvements.

It is important to look at your personality when deciding when and how to share your fitness knowledge. If you are a competitive person, for example, it is recommended that you have a fitness partner and/or group that is also competitive. If there is a “friendly competition” among partners or a group, this can be quite a motivation to improve your fitness levels. If you are more of a nurturer or concerned about a group conscience first, it is recommended to have a partner and/or group with a similar disposition. When you experience obstacles, it will be beneficial to have a group that is focused on listening to your problems and helping you overcome them together, as opposed to wanting to reach their goals faster than you. As long

as you keep in perspective the need to find the right fit for you, it will be possible to explore the different options in finding this fit.

Perspective: optimism in action

Fitness can be a good outlet for stress and a way to maintain balance in your life. Often times, we think of a problem, mull it over, and worry about the “worst-case scenario”. A good break from reality, in the form of a work-out, can be a good way to emotionally calm yourself from the stress of a problem long enough to look at it objectively. If you take the problem, and compound it with other problems, such as drinking or avoiding others due to depression, the problem will still exist, and be complicated with the now negative reaction. An ultimate indirect benefit, as talked about earlier, is the feeling of self-efficacy gained through a fitness plan in the following steps: 1) identifying a problem; 2) devising a plan; 3) implementing the plan; 4) identifying obstacles; 5) overcoming obstacles; 6) growing within your plan. Ideally, this process gained through following a successful program can be carried over to deal with problems emotionally, as working-out can actually increase the endorphins (pleasure chemicals) in your brain, by direct physical change and by a cognitive process of achieving success.

Another important perspective approach is to keep your eyes on the “big picture”. Small difficulties will definitely occur but always focus on the “bigger picture” and the ultimate goal. If you are making changes to improve yourself, you are heading in the right direction. You will not realistically be able to follow the plan perfectly and should not let yourself get discouraged when you cannot; this is where many plans fail. Your plan is individualized and the goal should be to constantly adjust toward the best approximation of what works for you. Do not gauge success or failure on

how others look in the gym or the speed at which someone else is reaching your goals, unless the competitive personality is the most motivating approach for you as talked about earlier. But, even if you are competitive, it is recommended that you focus on competing with yourself and your own goal attainment if you get discouraged when others are reaching their goals faster than you. Remember, there are genetic physical differences in muscle tissue composition and fat storage areas that lead to the importance of focusing on your own fitness program, as we all make individual physiological adaptations.

Good luck in your journey. The goals and successes that lie ahead are worth the work. You have already taken the first step by reading this text. In fact, you have already taken the first couple of steps. The first step is having a goal: improving your level of fitness. The second step is planning to make the changes. You have your goal, and you have begun to educate yourself to successfully make the change. Keep your head up, never give up, and keep your “eyes on the prize”!! Remember, you *are* worth it!!