

AMERICAN MUSCLE & FITNESS

PERSONAL

TRAINER CERTIFICATION PROGRAM

PERSONAL TRAINER'S MANUAL

BY

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INTRODUCTION

Welcome to the American Muscle and Fitness Personal Training Program. The material presented in this manual is not medical or chemical, except where it is absolutely crucial that you understand a system or process related to fitness concepts. It is a disservice to present you with information that will not help advance your career and expertise, or which may cause you to fail the exam.

What is a Personal Trainer?

A Personal Trainer is a fitness technician who designs exercise routines for customers while accompanying and guiding them through their workouts. As a fitness technician you will not be diagnosing injuries, illnesses or prescribing medicines. *Note that it is a felony in the USA to discuss steroids or any drug with your clients, or to tell them where to acquire steroids or other illegal drugs. You cannot under any circumstances inject clients with any substance using a syringe.* You, as a Personal Trainer, will be providing competent advice and safe instruction about standard and well-known training, eating and supplementation principles to your customers for a fee.

General Adaptation to Stress

The cornerstone of resistance training is that muscles adapt to stress by growing stronger, larger or by gaining endurance. This is called a stimulus response. Randomized training (changing exercises frequently) based on Hans Selye's General Adaptation to Stress (GAS) theory will be the overarching principle guiding your clients' training protocol. A menu of different training techniques will be outlined for each of the three basic client types; the weight loss client, the toning client and the muscle building client. Along with your help, the routines in this book, a good work ethic and a positive mental attitude are the main factors that will lead to admirable results for your clients. You will instruct and motivate them to improve physically by providing specific, specialized workout plans and advice. The material presented in this manual will introduce strategies and exercise routines based on the GAS principle. Further topics discussed are muscle function, anatomy, nutrition and supplementation.

Quality of Care

As a Personal Trainer your customer's quality of care is of paramount importance. Don't talk about steroids, and never give a shot or medication to a client because those actions that can get you into serious legal trouble and endanger the client. You must make good health and injury prevention a priority. Most individuals are well able to tolerate vigorous exercise after a brief break in period, and some of your clients may achieve or exceed their goals because of the guidance you provide. Pay attention and listen to feedback as your client exercises. If there is sudden unusual pain or a popping sound cease all exercise immediately and determine if medical attention is warranted. If an injury occurs, do not attempt to diagnose it. Recommend that a doctor examine the problem. On the other hand, delayed onset muscle soreness (DOMS) that occurs 24-48

hours after training is common and can be alleviated by a warm bath and an over the counter anti-inflammatory agent like aspirin.

Business Model

Since you are pursuing a career as a personal fitness trainer, you will have to decide whether you are going into business for yourself or if you want to work for someone else at a public or private health club, or a combination of those two choices. Either way, the pay is as much as \$100 per hour and the work is rewarding.

Most of your clients will expect you to be certified and you want to be to enhance your skills and for safety, insurance and liability reasons. What your customers care about most is what you can do for them and your ability get them their desired results quickly, comfortably and safely. Many health clubs now require you to obtain certification and insurance before they allow you to train anyone on the premises. Certification lets club managers and owners know that you have completed a course about how to train their members properly so that you will not injure one of their customers because of a lack of proper training instruction. This manual will give you all you need to know to become a safe, successful and prosperous personal trainer.

Trainer's Duties

A professional personal fitness trainer wears many hats. Always a coach first, clients come to rely on him or her as a friend, confidant, psychologist, technician, problem solver, time manager, and businessperson. You are in business to make money and once you get started your current customers must become a constant source of referrals for new business. Your professionalism and your clients' excellent results will speak volumes about your expertise. When friends start to notice a client's improvements, naturally your customer will brag about the great trainer they have found and the wonderful job that you have been doing for them. Your business will grow quickly. They will also relate any negative experiences. Your business can go down the drain in a hurry if word gets out that you're negative, overbearing or miss appointments. Always do the right thing, and be especially aware of your language and actions for legal and ethical reasons. Never swear, curse or make statements that can be perceived as sexual harassment and always ask for permission, preferably in writing, before touching a client. Never make sexual advances or touch a client in an inappropriate way, especially in today's litigation crazy world. You may be sued, or worse yet, arrested for sexual assault.

What Age Groups Can I Train?

The training routines in this manual are universal and apply to children as young as 12 years old or seniors (at a lower intensity level and for shorter periods), and can be adapted to any individual's training. The only caveat is that kids who have not yet achieved puberty will not be able to add significant muscle mass, but they will improve strength levels. Overweight teens or clients of any age will be able to lose fat by applying the weight loss training routines in this guide.

A significant factor to consider if you are catering to minors as your client base is the unfortunate and very real and serious chance that an allegation of sexual abuse or inappropriate touching may be made by the child. ***More than one adult or a parent must always be present when a minor is training and at no time should you be alone with any minor client.*** Any harassing, sexual or cursing language in the exercise area must also be avoided.

Professionalism

Clients that come to you may be very sensitive emotionally, especially about a weight problem or other physical insecurity. Put new clients at ease and never talk down to or belittle anyone you train. Dress professionally when training clients in a pressed, collared golf shirt and nice, new looking solid color sweat pants or shorts. Never show up at an appointment in sloppy or dirty attire. The clean, well-dressed image that you present shows off your professionalism to the client. **Be sure to use deodorant and mouthwash before every appointment.**

Insurance & Liability

In order to determine a client's readiness for physical exercise, they must fill out a health questionnaire and waiver before you train them (see following page). You can make copies of the one below and have your clients fill it out. Just add their name and your name. The completed form should be kept in your files. Always protect yourself from any potential legal suit by purchasing a good insurance policy in case something does go wrong. The cost is \$179 annually for a \$1,000,000 policy. You can contact K&K Insurance at kandkinsurance.com for more information and a policy. Let your insurance agent know that each customer fills out a waiver form and health questionnaire. Read the waiver to each client and go over it with him, or it may not be considered valid in court if you ever have to go. Use common sense in every situation, and if you think someone is going to cause a problem in the long run decline to take that person as a customer. There are plenty of people who will want to be trained by you and you won't have to explain to a potential client about a negative rumor they heard. That would start your relationship off on the wrong foot. Remember that your customers will quickly become lifelong friends.

First Aid & CPR

Another aspect of a trainer's responsibility is to take a CPR course and know basic first aid. If someone does have a cardio-vascular accident, you may be able to help him or her (always call 911 in case of a medical emergency). It is recommend that you take a CPR class for your client's benefit, although you will probably never have to use it. If a client develops a minor muscle strain or excessive soreness the recovery formula is RICE – rest, ice, elevation and compression for the sore area. After completing this certification course, you will be able to train anyone with confidence and safety.

Your clients must fill out all the forms below when you enroll them. READ THE

**PHYSICAL ACTIVITY QUESTIONNAIRE AND WAIVER FORM OUT LOUD
TO THE CLIENT AS HE OR SHE FILLS IT OUT.**

PHYSICAL ACTIVITY QUESTIONNAIRE FOR: _____

READ CAREFULLY AND CIRCLE YES OR NO IF IT APPLIES TO YOU.

YES NO 1. HAS YOUR DOCTOR EVER TOLD YOU HAVE HEART TROUBLE?

YES NO 2. DO YOU FREQUENTLY HAVE PAINS IN YOUR HEART OR CHEST?

YES NO 3. DO YOU OFTEN FEEL FAINT OR HAVE SPELLS OF DIZZINESS?

YES NO 4. HAS A DR. EVER SAID YOUR BLOOD PRESSURE WAS TOO HIGH?

YES NO 5. HAS YOUR DR. EVER TOLD YOU THAT YOU HAVE A JOINT OR BONE PROBLEM, LIKE ARTHRITIS, THAT CAN BE AGGRAVATED BY EXERCISE?

YES NO 6. DO YOU HAVE BACK OR NECK PROBLEMS?

YES NO 7. IS THERE A GOOD PHYSICAL OR PSYCHOLOGICAL REASON NOT MENTIONED HERE WHY YOU SHOULD NOT FOLLOW AN ACTIVITY PROGRAM IF YOU WANTED TO?

YES NO 8. ARE YOU OVER AGE 65 AND NOT ACCUSTOMED TO PHYSICAL EXERCISE?

IF YOU ANSWERED:

YES TO ONE OR MORE QUESTIONS:

If you haven't recently done so, consult with your doctor by phone or in person, before increasing your activity level! Tell him what questions you answered yes to on survey. After medical evaluation, seek advice from your doctor as to your suitability for: unrestricted physical activity, probably on a gradually increasing basis; restricted or supervised activity to suit your needs, at least initially. If your doctor is aware of the problem, put your initials and a note next to the question(s) you answered "yes" to, explaining why it is OK to proceed with caution.

NO TO ALL QUESTIONS:

If you answered accurately, you have reasonable assurance of your present suitability for: a graduated exercise program. If you have a temporary minor illness, like a cold, postpone increased activity.

WAIVER/RELEASE FORM

YOU AGREE TO THE TERMS OF THIS RELEASE FORM. TRAINING AND EXERCISE ARE STRENUOUS ACTIVITIES. YOU, THE GUEST/CLIENT/MEMBER, ARE AWARE THAT YOU ARE ENGAGING IN PHYSICAL EXERCISE AND THAT THE USE OF EQUIPMENT, TRAINING AND INSTRUCTION, COULD CAUSE INJURY TO YOU. YOU ARE VOLUNTARILY PARTICIPATING IN THESE ACTIVITIES AND ASSUME ALL RISKS OF INJURY THAT MIGHT RESULT. YOU AGREE TO WAIVE ANY CLAIMS OR RIGHTS YOU MIGHT OTHERWISE HAVE TO SUE _____, OR ANY AGENT, EMPLOYEES OR INSTRUCTORS, OR _____, FOR INJURY TO YOU AS A RESULT OF THESE ACTIVITIES. IT IS ALWAYS ADVISABLE AND RECOMMENDED TO CONSULT YOUR PHYSICIAN BEFORE UNDERTAKING THIS OR ANY EXERCISE PROGRAM.

SIGNED (PARTICIPANT): _____ DATE: _____

ADMINISTERED BY: _____

PERSONAL TRAINING AGREEMENT

THIS AGREEMENT is made and entered into this ____ day of _____, 20__ by and between
_____ and _____.
(Client's name and address) (Trainer's name and address)

WHEREAS _____ and _____ wish to enter into this agreement in order to define their respective rights, duties and obligations.

NOW THEREFORE in consideration of the terms, covenants, conditions and mutual promises contained herein, and other good and valuable consideration, it is hereby stipulated and agreed as follows:

1. _____ will provide personal training to _____.
2. For this service rendered by _____, _____ will pay \$_____, or \$_____ for each of ____ training sessions at the rate of ____ training sessions per week.
3. The training period will begin on ____ / ____ /20__ and end on ____ / ____ /20__.
4. _____ provides _____ with a 24 hours notice of cancellation or client will pay for the training session in full.

Sessions may be rescheduled with 24 or more hours notice.

By signing below, the undersigned stipulate and agree that they have completely read this agreement, that the terms are fully understood and voluntarily accepted by both parties and that this agreement is not signed under duress.

\$_____ is payment amount received by _____ from _____.

Payment represents full / partial payment with payment schedule as follows: \$_____ due on ____ / ____ /20__ and balance, \$_____ due on ____ / ____ /20__.

By signing below, the parties hereto have executed this agreement as of the day and year first written above.

_____ (Client's name)	X _____ (Client's signature)
_____ (Trainer's name)	X _____ (Trainer's signature)

SETTING UP YOUR BUSINESS

If you decide to go into business for yourself, you will need to go to the County Clerk's office and file a "Doing Business As" certificate, or D.B.A. You will be asked to select a name for your business. Try choosing a name that describes your business, like, "Barb's Personal Fitness Training," or, "Ed's Home Exercise Training," so that when people read your business card they know exactly what you do.

You will be assigned a tax identification number, which is usually your social security number and you can write off your business expenses against your income at tax time. You may be required to file quarterly tax statements if you are making a lot of money because the government doesn't allow you to keep their money longer than you are entitled to. Start keeping track of your expenses and keep all of your receipts. Keep a record of all of all training fees received and if you know any accountants, talk to one about setting up your business. Perfect record keeping is good business.

As soon as you get certified have some business cards made with your phone number and drop them off everywhere you go. Pass them out to all your friends and family, stick them on bulletin boards and make sure to tell everyone you meet about your new business. Ask your contacts if they know anyone who might be interested in having a personal trainer. That's probably how you'll find your first customer!

Basic Rate

Set your rates up as a *per session* fee, for example: \$25 per one half-hour session. The rule of thumb for training fees is a minimum of \$1 per minute, so a thirty-minute session would be priced at \$30. Make up some flyers to distribute to potential clients. Try to be as consistent as possible in pricing so that each client pays the same amount or you may wind up in trouble if they begin to compare rates. Don't be afraid to raise your fees as you get busier. You are running a business and are entitled to make a profit from your efforts even though you may have developed friendships with your trainees. Since now they have become your friends, they will understand your need to raise prices from time to time.

MARKETING YOUR BUSINESS

Supplying your services to potential customers requires a marketing strategy and advertising. You may want to publicize in local penny savers, newspapers, the Internet (craigslist.com is free), and fitness magazines to develop your client base. They are inexpensive ways to get customers. When you finally secure your first customer ask for referrals and get a testimonial letter you can add to your brochure. Hairdressers, hospital workers or restaurant employees always come into contact with a lot of chatty people who like to gossip. They will be your best references. If you can start with a client who works in any of those fields, your business will really take off.

Your best income and long term financial security will come from having each client sign and pay for a long term training contract. Have them pay all the fees up front and let them know that your cancellation policy is at least twelve hours notice or they will be billed for any scheduled workout missed. If they miss and you haven't been paid yet for that session, chances are you won't be. If you have already received the money for the cancelled session, you simply deduct the charge as if the individual had trained. Create pre-paid packages that will be more economical for the customer than your regular daily rate. If you charge \$25 per 25-minute session, a good package would be \$2500 for 105 training sessions. That's only nine months of training at the rate of three appointments per week. Some clients may quit before they use all their paid training up. You may opt to retain their payment in case they resume working out. Decide how to handle refunds and let the customers know about your policy when they sign up.

It is in your best interest to give clients a written copy of all your rules so you both know what your obligations are at the initial consultation. Have them sign it and keep a copy on hand. This will prevent misunderstandings and hard feelings in the future. Take a look at the fun "Personal Trainer's Ten Commandments." You can use this sheet and print copies to hand out to clients to review. Both of you will be referring back to it from time to time. *Always let the customer know the rules up front.*

You must strive to make it to all your scheduled appointments on time. Most trainers, unless they work at a particular health club, will spend the bulk of their time driving to and from appointments. Invest in a day planner and a cellular phone so that you can double check with clients to make sure they remember their appointment. There will always be cancellations. Expect at least one cancellation per workday. Cancellations are OK if you are being paid for them anyway. You can take a coffee break or workout yourself.

Credit Card Processing

It is important to charge for each month in advance so that you can plan your daily appointments. Clients are used to paying health club fees one month in advance. The ability to process credit cards will greatly enhance your income. Ask your bank about getting a credit card machine when you open your business account, especially if you own a gym or open a training salon. If you don't have a location all you'll need is a

virtual terminal to handle charge card orders. That is an online banking system that allows you to process credit cards. You'll want to get a business web site, too. You can post tips for your clients on the site and add interesting information about client successes. Testimonials can also be placed there.

Virtual Terminal

To get a free web site and set up a virtual credit card processing terminal do a web search on *free website*. You can add **PayPal** to your site for accepting client payments by credit card. You'll be able to have clients log on to your web page and pay by credit card or **PayPal** over the Internet. The cost is minimal per transaction. You can write the client's credit card information on a form and enter it onto the virtual terminal yourself when you get to a computer. The money will automatically be deposited into your business bank account.

Here's a technique for you to generate more business. Go to **Anywho.com** and do a search based on the most exclusive and prosperous streets in your city. Put ** in the Anywho last name box to get all the names on each street. Drive around to find the wealthy neighborhoods in your town or go to the library and look up the average income of each street in the **Haynes Directory**. This directory will give you the names and numbers of everyone who lives there. Mail them a personalized letter describing your business and follow up with a phone call (see the script at the bottom of the manual). Call and announce that you're inquiring to find out if they have had a chance to look at the personal trainer mailer that you sent, because you have some openings available. Ask for a no cost, no obligation appointment where you can present them the benefits of having a personal trainer come to their house. You're likely to accumulate several interviews. **Bring your questionnaires, contracts, waivers and Ten Commandments of Personal Training so you can sign prospects up as new clients.**

Once you start training someone in a particular neighborhood, ask if you can use him or her as a referral. Call all their neighbors and let them know that you train their neighbor (use their name) down the street. It will provide them with social proof that you will do what you say you'll do for them.

Developing Assistants

When you get too busy you should develop an assistant to pick up your overload. Find a fit young guy or gal and introduce them to your current clients as your new assistant by saying, "They will be training you and I will be still be designing the programs." The assistant should accompany you on a several sessions with the client before you hand them off. Pay your new helper about one-half of the regular fee you charge. You will leverage your time and make money even while you're at another appointment. Eventually groom two or three helpers so you don't have to train anyone and give yourself a promotion to management. Try to market your training service to a local health club, especially to a new club opening up. They may welcome your help with their staffing problems.

Training Format

There are several formats to consider when structuring your personal training service. While most clients will prefer a one-on-one setting, it can be expensive and may eliminate a large part of the fitness population who cannot afford \$150 per week in training fees. A solution that has worked well for many trainers is to offer group-training sessions in addition to one-on-one. You can utilize group training in a commercial gym or someone's home, or any space really, without any equipment at all, doing calisthenics. The group size can vary from two to six people. The key is to set up several stations and have the clients rotate around the room until they have completed several circuits. This is a much lower cost solution for the average trainee and you will earn more money per hour by charging six people \$20 than one person \$50 for the same time slot. Some salons in busy office buildings offer 10-minute training sessions to executives who can keep their shirt and tie on during the workout. Ten minutes of brisk exercise, combined with parking further away and using the stairs at work are great ways to enhance fitness for the average businessperson. These ideas may provide you a new way to look at your options and services.

QUESTIONNAIRES

Here are the questionnaires that your clients should fill out and sign. The first one should be filled out during your initial conversations with the customer. Read each question to the client and make sure they understand it. Have them tell you the answer verbally, then let them check the appropriate box.

The second assessment form should be used as a measuring stick after several weeks of training to determine whether or not you are meeting their expectations. Sometimes people may not feel comfortable telling you that they don't like some aspect of their training because they like you, but you may lose them if the issues are not addressed. And you will be unaware there is a problem until they suddenly stop showing up for training with you. That's the hard way to find out they are not happy, so use these assessment sheets and administer them frequently.

The feedback from questionnaires can help guide the direction of your business. Keep a training log for each client including the date, time, exercises, sets, reps and any additional items like illnesses, injuries or supplements. You will be able to show a steady progression to the client as you review the workouts. When you get a glowing response, always ask the client for a referral. Inform them that there is always room for one of their friends in your schedule. If someone is not satisfied with his or her training, be flexible and let him or her know that the workout is for him or her, so you can make any changes they want. Never be dogmatic or pig headed. What do you care if they like leg presses more than squats? Just give them what they want. Training is customer service, and keeping your customers happy is your number one priority. Your livelihood depends on it.

THE TEN COMMANDMENTS OF PERSONAL TRAINING

1. Thou shalt always be ready to train at thy appointed time.
2. Thou shalt call at least twelve hours ahead to cancel or pay full price for thy missed session.
3. Thou shalt do all that the trainer tells thou with no murmuring.
4. Thou shalt eat the way thou are commanded to by thy trainer.
5. Thou shalt not bounce any checks lest thou pay a \$25 fee for it.
6. Thou shalt tell all of thy friends about the wonderful things thy trainer has done for thou.
7. Thou shalt not use foul language or take the name of God in vain.
8. Thou shalt cheerfully and joyfully attend thy training sessions, and reflect lovingly upon them.
9. Thou shalt get good results and blessings if thou doest all thy trainer commands thee.
10. Thou shalt have curses (fat and weak) if thou failest to follow any of thy trainer's commands.

Thy mark _____ This day _____

PERSONAL TRAINING ASSESSMENT FORM

WEIGHT: DESIRED WEIGHT: BY (DATE):
WOULD YOU DESCRIBE YOURSELF AS (CIRCLE ONE): ACTIVE OR
SEDENTARY?

HAVE YOU BEEN ABLE TO ACHIEVE GOOD RESULTS WITH TRAINING AND
DIET IN THE PAST? (CIRCLE ONE)
YES NO NEVER TRAINED

IS YOUR JOB PHYSICALLY DEMANDING OR DO YOU SPEND A LOT OF TIME
SITTING? (CIRCLE ONE) ACTIVE SITTING

WHERE ARE YOU ON THIS SCALE?

LEAN 1 2 3 4 5 6 7 8 9 10 FAT

WHAT DO YOU WANT FROM A FITNESS PROGRAM? (LOSE WEIGHT, TONE
UP, ETC.)

HOW MUCH TIME CAN YOU DEVOTE TO TRAINING EACH WEEK (HEALTH
EXPERTS RECOMMEND 3-5 HOURS OF EXERCISE PER WEEK FOR OPTIMUM
RESULTS)? 1 2 3 4 5 HOURS

ARE YOU WILLING TO FOLLOW ALL INSTRUCTIONS TO THE LETTER
(INCLUDING EATING SUGGESTIONS), FOR 8-12 WEEKS IN ORDER TO
ACHIEVE YOUR GOALS?

DID YOU KNOW THAT NUTRITION IS AT LEAST 80% RESPONSIBLE FOR
WEIGHT GAIN OR LOSS, EVEN WHEN EXERCISING (BED RIDDEN OPTIFAST
PATIENTS ROUTINELY LOSE 100 POUNDS WITHOUT EXERCISING)? YES
NO

WHAT SERVICE DO YOU EXPECT FROM A PERSONAL TRAINER?

PERSONAL TRAINING REVIEW SHEET

DO YOU FEEL LIKE YOU'RE GETTING THE RESULTS YOU WANT FROM YOUR TRAINING (ALTHOUGH, THEY'RE NEVER FAST ENOUGH)? YES NO

IF NOT, WHAT DIRECTION DO YOU FEEL WE SHOULD MOVE IN? (EXAMPLE: MORE MOTIVATIONAL TALKS, NEW EXERCISES, ETC.)

WHAT DO YOU LIKE ABOUT YOUR TRAINING PROGRAM (EXAMPLE: PACE, EXERCISES ETC.)?

WHAT DO YOU DISLIKE ABOUT YOUR TRAINING?

WHAT WOULD YOU LIKE TO CHANGE IN YOUR WORKOUT?

WHAT DO YOU WISH TO KEEP THE SAME?

WHAT AREAS DO YOU FEEL YOU WOULD LIKE TO FOCUS ON?

DO YOU PREFER SPONTANEITY OR A ROUTINE THAT YOU CAN SETTLE INTO?

LIST ANY "MUST" OR "MUST NOT" DO'S:

WHAT OTHER SERVICE WOULD YOU LIKE FROM YOUR PERSONAL TRAINER?

SUGGESTIONS:

FITNESS DEFINITIONS

Fitness is a combination of aerobic, strength, flexibility, and cardio-vascular endurance that allows one to perform physical activity free from injury, well above sedentary levels. Fitness should also include excellent health, but does not, necessarily.

The general components of fitness are: 1.) Agility; 2.) Cardio vascular / cardio respiratory endurance; 3.) Dynamic balance; 4.) Explosive strength; 5.) Flexibility; 6.) Freedom from disease; 7.) Freedom from injury and stress; 8.) Limit strength; 9.) Local muscular endurance; 10.) Percent body fat; 11.) Preventative past lifestyle; 12.) Speed endurance; 13.) Starting strength; 14.) Static balance; 15.) Strength endurance; 16.) The mirror and before & after photos (most important for clients).

Strength is defined as one's capacity to apply maximum muscular force within structural, anatomical, physiological, biochemical, psychoneural, psychosocial, and environmental constraints.

Limit strength is the muscular force that an individual can apply to an object eccentrically, statically, or concentrically, over a given unit of time, or for a number of repetitions, usually one. An example is a one-rep maximum on the bench press.

Starting strength is one's capacity to enervate a muscle's cells all at once, immediately, such as in throwing.

The **six components of strength** that can be augmented through weight training are: 1.) Eccentric or deceleration strength; 2.) Transition or static strength; 3.) Pushing off or concentric strength; 4.) Speed strength; 5.) Limit or absolute strength; 6.) Maximum force applied to the object.

Agility is the ability to change physical direction of the body in a short period of time using explosive strength, dynamic balance, limit strength, and starting strength, like when a football player executes a play.

Flexibility is not as important as strength in a stretched position. Flexibility in athletics is more important than in every day situations.

Proprioceptive neuromuscular facilitation (PNF) is a form of resistance training that builds strength in a stretched position.

There are four technologies of fitness equipment: 1.) Constant resistance devices that keep the resistance on a muscle uniform throughout the range of motion (like a bench press machine); 2.) Variable resistance devices (like Nautilus machines) which vary the resistance through the range of motion; 3.) Accommodating resistance devices (like Hydra Fitness and Life Fitness) that control the speed of contraction; 4.) Static resistance, or isometric, which contract the muscles without movement.

There are eight *fitness technologies*: 1.) Heavy weight resistance training; 2.) Light resistance machines like exercise bikes, rowers, and stair climbers; 3.) Psychological techniques like hypnosis or mental imagery; 4.) Therapeutic techniques like ice, heat, massage, ultra sound, and whirl pools; 5.) Medical support such as Chiropractors, drugs, and medical monitoring; 6.) Bio-mechanics or skill training; 7.) Diet; 8.) Supplements.

The causes of over training or over use syndrome is either too great a frequency, or too great an intensity or duration of exercise over a given period of time, to allow for systemic and/or localized recovery.

A pump in a muscle as experienced when blood is shunted away from the spleen and organs and toward working muscles during exercise, thus providing oxygen and nutrients, and removing waste products and carbon dioxide.

Lactic acid build up and connective tissue trauma cause post exercise muscle soreness. *Hydroxyproline* is an enzyme released from connective tissue that causes delayed onset muscle soreness (DOMS) from about 24 to 48 hours. It can be reduced by using a whirlpool or warm bath immediately after training, or through massage, or by over the counter anti-inflammatory agents. Easing into an exercise routine as a precaution reduces or eliminates delayed onset muscle soreness.

THE AEROBIC vs. ANAEROBIC TRAINING EFFECT

Systole and Diastole are the upper and lower values on a blood pressure test, with normal values ranging from 60 to 80 Diastole to 90-139 Systole. It is a measure of the efficiency of the heart and circulatory system. The five components of cardiovascular endurance are: 1.) Heart rate; 2.) Stroke volume; 3.) Ejection fraction of the left ventricle; 4.) Maximum oxygen uptake; 5.) Gas exchange efficiency of the lungs. An ideal resting blood pressure reading is 125/70. Blood pressure rises during exertion and drops while resting. Some trainers use electronic blood pressure cuffs to take regular readings for their clients, which is something you may want to add to your service menu.

There are two basic types of energy systems utilized by the body, Aerobic and Anaerobic. Each energy system produces Adenosine Triphosphate (ATP) which is used by the muscles to contract.

The Aerobic System can utilize carbohydrates, proteins or fat to supply an unlimited amount of ATP as long as oxygen is present. The Aerobic system provides medium to very long duration energy production with low to moderate power (less than 85% of maximum output). The by-product of this system is heat, water and carbon dioxide.

The Anaerobic System can only utilize carbohydrates for ATP production. This system does not use oxygen in the metabolization of its fuel source. The Anaerobic System provides short duration (45 - 70 seconds) and high power. The by-product of the metabolization of glucose (glycolysis) in this system is heat and lactic acid, the cause of muscle soreness immediately after exercise. Muscle soreness 24 to 48 hours after

exercise is due to torn muscle fibers and connective tissue. Adequate warm-up and cool-down stretching exercises can reduce this type of soreness.

Aerobic capacity is the ability of the body to collect and transfer oxygen from the air through the lungs and blood to the working muscles. This is related to cardio-respiratory endurance and is referred to as Maximal Oxygen Consumption or VO₂ max. Aerobic Capacity reduces at about 10% per decade after 30 years of age.

The Anaerobic Threshold is defined as that point where the body can no longer meet the oxygen demand and it's anaerobic metabolism is accelerated. This point varies on an individual basis and is dependent on fitness level. For healthy individuals, this occurs between 50% and 66% of their maximal working capacity. This would be equivalent to running faster than half speed.

The lungs are where oxygen and carbon dioxide are exchanged. In the blood stream, oxygen is traded for carbon dioxide. Aerobic activity enhances heart strength. The result is a greater volume of blood per stroke. This is referred to as Stroke Volume or the amount of blood ejected from each ventricle of the heart during one stroke. Cardiac Output is a measure of the amount of blood pumped through each ventricle in one minute. Vital Capacity is the volume of air that can forcibly ejected from the lungs in a single expiration. Aerobic activity has a positive effect on vital capacity, stroke volume and heart output. Note: arteries carry oxygen rich blood away from the heart and veins carry blood and carbon dioxide toward the heart.

ADAPTATION TO STRESS

There is a way to coax your clients into peak condition that is based on scientific research. You are going to apply the 1930s Endocrinologist *Hans Selye's* **General Adaptation Syndrome (GAS)** system to your clients' training program to produce superior results for them than conventional cookie-cutter training methods do. Selye's theory established how the body passes through three universal stages during the physiological and psychological stress of exercise:

1. **Alarm Reaction** - the body prepares itself for fight or flight by secreting adrenal hormones and dilating blood vessels. Muscle soreness, sunburn and blisters are alarm reactions.
2. **Adaptation Stage** - the body adapts to the stress by growing stronger. Suntan, calluses, added muscle size, endurance and strength result.
3. **Exhaustion Stage** - the individual becomes mentally and physically exhausted (overtrained) and must rest before resuming the cycle all over again. Planned rest periods are generally unnecessary because clients will miss scheduled training sessions for many reasons, which builds automatic rest days into the system.

A random training system based on Selye's adaptation principle that applies unique demands on the muscular and nervous system will cause an adaptive stimulus response, and improvement in strength and stamina. By varying the training sequence, exercises, style, volume, intensity, sets and repetitions, while lifting regularly and continuously, breakthroughs and improvements can become regular occurrences for your clients.

THE MUSCULAR SYSTEM

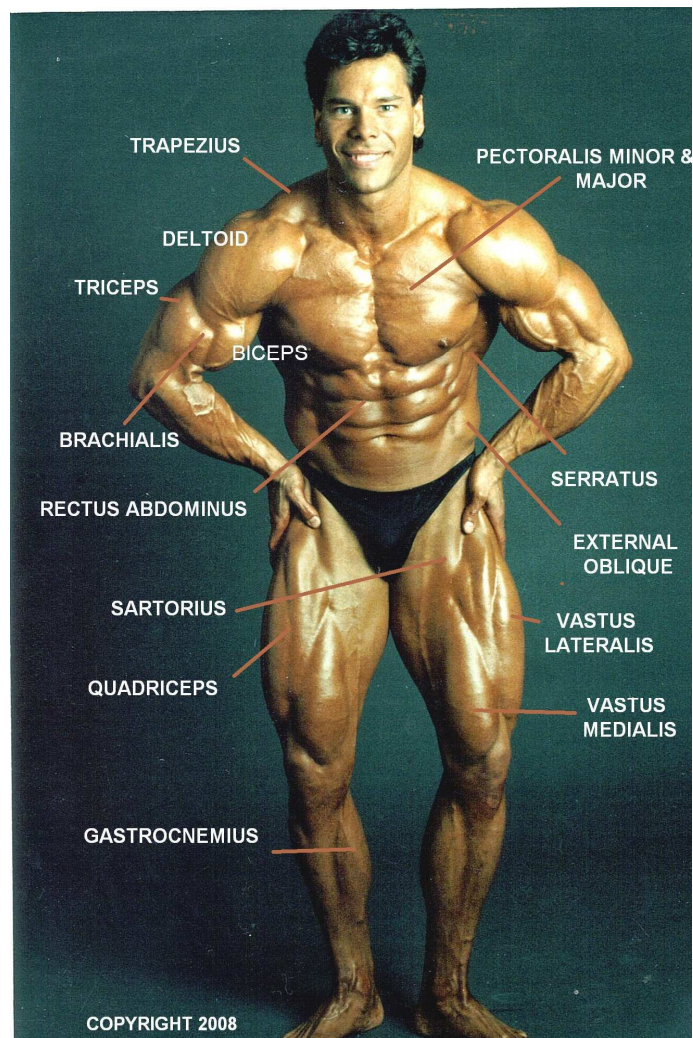
As a trainer, you will need to know the basic muscle groups of the body. Here is a synopsis of the major muscle groups and how they work. Let's start at the top and work our way down.

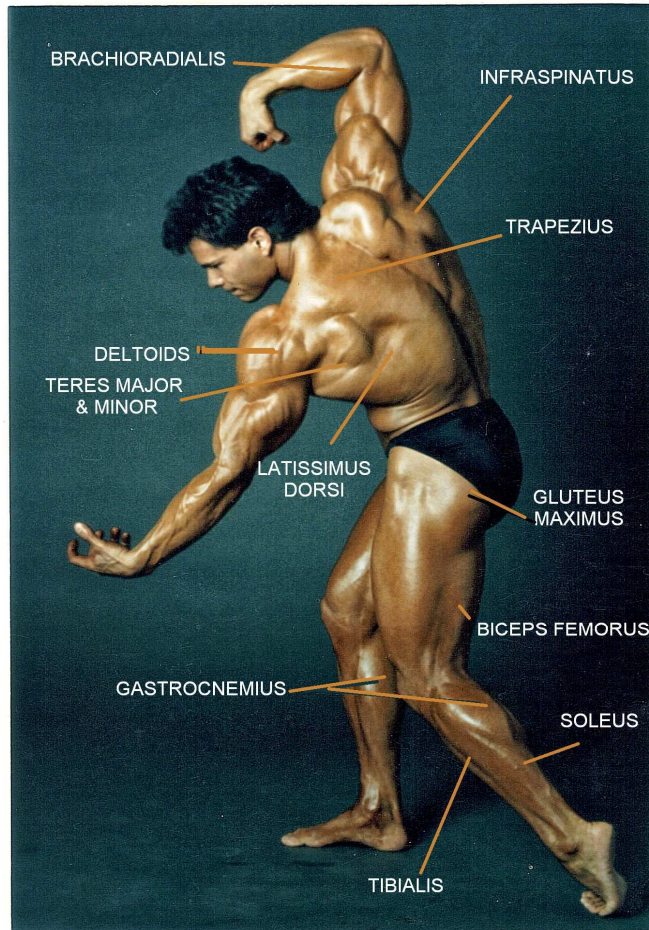
The muscles in the sides of the neck are called the sterno-mastoids, which hold the head up and rotate it. In the front of the body, beneath the neck, there are the pectoralis major and minor (commonly called pecs) or chest. Their job is to help push objects forward and away from the body. The deltoids, which cap each arm and attach it to the shoulder joint, are a three-headed muscle with the anterior, lateral and posterior heads. The deltoids raise each arm to the side and overhead. Beneath that, on the front of the arm are the biceps, which curl the arms up, and on the back of the arm are the triceps, which straighten or extend the arm. The forearm is made up of the brachialis on the top and the extensor carpi on the palm side of the forearm that pulls the hands and fingers closed.

Below and behind the neck are the trapezius muscles or "traps." These are responsible for the shrug motion. Down the back below the traps, there is the Latisimus Dorsi that gives the back its V-shape. Other muscles included in the upper back are the rhomboids, Teres major and minor, sub-scapularis, super-spranatis and infra-spranatis that hold the arm and shoulder joint together and are involved in pulling or rowing moves. They are generically referred to as the *rotator cuff*. Beneath those muscles are the spinal erectors or lumbar, located in the lower back. They keep us upright or work when returning to standing position after bending over in a toe touch. The gluteus maximus is the buttocks, used in extending our legs backward. The biceps femorus are located under the glutes, commonly called hamstrings, which kick the heel up towards the buttocks. The gastrocnemeus and the soleus make up the calf muscles and allow us to stand on tiptoe and jump.

This condensed lesson should be enough to help you answer questions about what a particular exercise or muscle group does. Here is a rule to help you determine which muscles a machine or exercise works even if you have never used or seen the machine or exercise before: *muscles always pull*. Individual muscle fibers twitch, or shorten. This is called a *concentric contraction*, which causes pushing or pulling. *Static contractions* are isometrics, where a muscle or group of muscles pushes against an immovable force. The third type of contraction is *eccentric, or negatives*, a controlled lowering of a weight. ***Remember the rule, muscles always pull on levers (bones) by shortening to cause movement, even when the exercise requires pushing a weight.***

Please study the following diagrams and memorize the major muscle groups mentioned above.





TRAINING SYSTEMS

The customers that come to you will want a specific result, either weight loss, muscle building, or cardio-vascular fitness. Some will want a combination of all three. Each type of training involves different techniques, exercises and often, pieces of equipment. Each system will be covered in detail.

To understand training systems you need to know the most basic gym language and definitions. A **rep** or **repetition** is an exercise movement performed by lifting a weight from the start, or bottom of a movement, to the top, and back down again. A series of single repetitions done in quick succession and then terminated is called a **set**. Exercise routines are traditionally comprised of combinations of sets and reps. Other variations of sets and reps include partial range reps, isometric (no movement) reps, and peak contraction (squeezing a muscle at the top) reps. All these elements have a place in a well rounded training regimen.

Sets can become more elaborate, also. A super set is when a trainee performs two sets for the same or different muscles without resting in between them. Tri-sets are three sets

performed in a row with no rest. Circuit training is one ***giant set*** performed with no rest at all until the prescribed number of sets is complete.

It is a good idea to briefly explain sets and reps to your customers because they may not be familiar with the concept, especially if they have never been in a weight room before. You are most likely intimately familiar with the basics of exercise because you have probably been working out for a number of months or years. The personal fitness trainer should be an inspiration and example to clients. It is hard, although not impossible, to get training clients if you are 50 pounds overweight yourself. Being out of shape doesn't help sell your services or showcase your abilities, although there are some excellent trainers who looked as though they have never set foot in a gym.

Split Training

Split training means splitting the body into separate muscle groups, which are trained on alternating days, so that muscle recovery is maximized and growth can occur. The adaptive growth response actually occurs during rest periods between workouts. For example, biceps and triceps could be trained on day 1, chest and back on day 2, and legs on day three. After a rest day the cycle can start all over. Split training is primarily used for building muscle mass, and should never be utilized for weight loss or toning clients because weight loss routines are light, high volume routines that do not require recovery periods. Toning routines are whole body sessions involving light, or medium weight, pumping sessions spread out over alternating days of the week.

INTENSITY vs. VOLUME

The Nautilus Company and a Mr. Universe, Mike Mentzer, came up with a high intensity, one set per body part training system (HIT). They touted the system as the only way to train for muscle mass increases or anything else, for that matter. While Mike lobbied for hard, short and infrequent training, which is correct up to a point, many trainees were thriving and growing on longer duration, high volume, low intensity routines. Nautilus centers limit a person's training session to twenty minutes so that each gym can accommodate a greater number of members. The shorter session is still the best method for scheduling more appointments, but a variety of high and low intensity regimens will be applied to clients with different goals.

Thirty minutes of quality exercise with a trainer is about the right amount of exercise time regardless of the client's goals. Cardiologists now believe that it is the amount of *calories* expended during activity that determines the effectiveness of training on heart soundness more than any other factor. About five hundred calories burned from exercise daily is the optimum target for heart health and thirty minutes of fast weight training reaches that level nicely. Clients can be encouraged to perform additional stationary bike or treadmill work before or after your training session by themselves for weight loss or cardiovascular benefits. You can schedule twice as many appointments following the thirty-minute guideline than traditional hour-long training sessions. More than thirty

minutes will probably mean that the client is shooting the breeze instead of training. You will have to manage each client and move him or her as quickly as possible, pushing them through the workout (without letting them feel rushed) feeling well trained and happy if you want to be successful. Remind them of their next appointment with a smile as they go. End every session on a positive note by telling them how well they did. Recap their workout and emphasize the high points or any breakthrough they had.

If a client desires to add more muscle, train them with forced reps, heavy weights and use high intensity training (HIT) after breaking them in for a week or so. There is a class of proteins that protect muscle cells from the by-products of exertion, heat damage, formaldehyde, alcohol, and lactic acid. These are called, not surprisingly, ***protector proteins***. They require about a week or so to fully develop. During the break in period, the size and number of muscle, heart, and lung cell mitochondria are also increasing. That is why stamina and endurance increases rapidly after commencing training. It is also why muscular adults are leaner than those with little muscle tone are. Mitochondria convert chemical energy into muscular movement. There is a slight amount of muscular tension at all times in the muscles to maintain the body's 98-degree temperature.

MUSCLE FIBER TYPES

There are three major muscle fiber types. Fast twitch provides explosive strength and has the greatest capacity for hypertrophy (i.e.: muscle growth). Intermediate twitch fibers allow medium speed contractions, usually in the twelve to twenty repetition ranges with a medium weight. Slow twitch, or endurance fibers, provide contractions during twenty-five rep plus exercises performed in slow, continuous fashion while weight lifting. They make long term endurance and aerobic sessions possible. The slow and intermediate muscle cells have less capacity for growth than fast twitch. Each type is laced throughout the muscle, and research has shown the ability of one type to transform into another type because of specific training.

It is necessary to understand muscle fiber types in order to develop a routine for each individual's goals. The three basic muscle fiber types are called ***fast*** (pennate), ***medium*** (bi-pennate) ***and slow twitch fibers*** (fusiform).

Fast twitch fibers are responsible for explosive movements such as sprinting, moving heavy weight, boxing, football etc. They will grow, or ***hypertrophy***, to a much higher degree than medium or slow twitch muscle fiber and will respond best to 70% of one rep maximum weight or above. Muscle cells can also split or divide, but they mainly enlarge. Heavy, explosive sets in the 1 - 12-repetition range builds muscle sarcomere mass.

Medium and slow twitch muscle fibers don't have the capacity for great size increases that fast twitch muscle fibers do. Examples of athletes with a lot of slow twitch fibers are marathon runners, tri-athletes or endurance competitors like Tour De France cyclists. They are lean and defined, but not heavily muscled. Women do not usually wish to develop a lot of muscle mass, so it is best to avoid training fast twitch muscle fibers by

employing light weights and long duration training. Following is a profile for how to train for different goals.

Physical trainers generally refer to only fast and slow twitch muscle fibers. Muscle fibers can actually change from fast to slow twitch and back again, depending on training modality. That is an important point if you are training a strength or endurance athlete for a specific goal. A football player should always train explosively for short duration. A marathon runner should only train slowly for long periods. A bodybuilder would lift heavy weights for explosive, medium interval training. A fat reducing routine for someone who doesn't want added muscle mass requires extremely light, high repetition, longer duration training.

WEIGHT LOSS

Weight loss is the trainer's biggest market group. You can do more for your business by helping one obese person trim down quickly than almost anything else. People notice dramatic improvements and it's a great conversation starter, which means referrals for you.

SPOT REDUCING

For years scientists and exercise physiologists said that there was no such thing as spot reducing. Arnold Schwarzenegger, in his book, *Encyclopedia of Modern Bodybuilding*, said, "Scientists tell us there is no such thing as spot reducing. But there is something that looks like spot reducing." He then went on to detail how it works in real life. Training an area like the abdominals made them more defined. He was right.

Studies have shown that when you increase blood flow to a muscle group during exercise, the high level of adrenal hormones in the blood stream act forcefully on the fat tissue surrounding the working muscle. This increase allows the proximity fat deposits to be broken down quickly and used as an energy source by the working muscle.

An effective way to take advantage of this new information is to train the area or muscle group several times a day for five to ten minutes with a moderate resistance, pumping routine. This will work particularly well for the thighs, hips, and abdominals. A good way to get quick results for clients is start them off by training the body part they wish to reduce, and finish the workout with it, too.

AB TRAINING MYTH

Many infomercials for stomach training equipment talk about training the upper and lower abs. Always remember this: ***any sit up, crunch, or leg raise works the abdominal muscles from top to bottom.*** To prove this, do a little experiment. The next time you do any ab exercise, reach down and touch the stomach muscles to see where they tense up. You may be surprised to find that they are hard as a rock from top to bottom, no matter what exercise you do (that is, if you have any ab muscles).

The only part of the midsection that you can isolate beside the abs is the obliques, or love handles on the sides. Lying side leg raises and side crunches for 3-5 sets of 20 to 40 reps are the best remedy (in addition to diet), for them. ***Note: Never allow your clients to do side bends because they can compress the disks in the lower back.***

STRETCHING

A basic stretch for the lower back should be performed after a few minutes of warm up exercises or treadmill before the hard part of their routine. They can also be performed at the end of the session. Have the client lie on his or her back and draw their knees into the rib cage. They can also hold one leg at a time if that is easier for them. Have them hold the stretch for 1-2 minutes. They should take a deep breath as they start and exhale as they pull in, gradually relaxing the muscles and pulling in the slack as they exhale. Very basic, not too fancy, but effective. The reason to have clients do it after a warm up is because the muscles, tendons and ligaments will become more flexible after the body is warm.



You can use any other kind of stretch that you think will be effective for them, while keeping in mind that untrained individuals can't do the same things you and I can. The European strength athletes actually use sleeping bags or saunas as a warm up to save energy for training. While this may not be practical for you to use with clients, a few minutes on the bike or treadmill will work nicely.

Overweight people sometimes have lower back problems that stretching and ab exercise improves quickly. If they don't have any, a stretch routine done for two or three minutes before hitting the weights will keep clients from developing a backache.

BMR

Basal metabolic rate, or BMR, is the number of calories that are required to maintain a person's current body weight based on average body composition. This assumes that the activity level remains constant. To calculate basal metabolic rate, use the formula below.

BMR is 10 x weight, multiplied by the number equal to the client's activity level shown here.

Sedentary	Light	Medium	Heavy
BMR * 1.45	BMR * 1.60	BMR * 1.70	BMR * 1.88

The energy value in a calorie (kcal or cal.) is defined by science as *kilocalories*, or the heat energy required heating one liter of water one degree Celsius. Both protein and carbohydrates contain 4 calories per gram. Fat energy is 9 calories per gram. A diet goal for a daily consumption of 2000 calories would be:

60% of food intake from Carbohydrates (1200 calories, or 300 grams).
30% of food intake from Protein (600 calories, or 150 grams).
10% of food intake from Fat is (200 calories, or 22 grams).

Exercise automatically increases calorie requirements. The table below shows the approximate amount of calories required for a 150 pound person performing an activity for an hour.

Consuming more calories increases weight and fewer calories causes weight loss.

Activity	Calories used	Activity	Calories used
Aerobics	640	Stationary Bike	650
Running	520	Ski Machine	570
Walking	250	Swimming	490
Stair Climber	370	Football	370

WEIGHT LOSS TRAINING

The body fat percent considered good for men is 8-12 %, while 12 to 16% is considered good for women. *Clinically* obese values for men are 30% and for women are 35%. *Chronically* obese numbers for men is 25% and for a woman is 30%. ***Diet is most effective when combined with exercise for fat loss.***

Weight loss training involves high volume, high repetition or duration exercises, sometimes incorporating as many as 100 repetitions per set with very light weight. Circuit training with a moderate resistance also works well for some individuals when weight loss is the goal. The primary focus for weight loss should always be diet, although exercise and diet go hand in hand whatever the goal may be. Most people in the over weight category will need to start with an ultra light, short, low intensity work load in order to fully gauge their degree of cardio-vascular fitness, or lack of it. The first session duration should be no more than ten minutes of actual exercise. Overweight people may have underlying health problems such as cardiovascular disease or other unknown conditions that may be exacerbated by exercise. Always have them sign off on the health questionnaire and waiver form and explain to them that you are going to start off very easy and gradually increase the training volume over the first few weeks.

The following is group of exercise routines designed to meet any trainee's needs. A sample high volume exercise program for women whose exercise goal is to lose weight from the lower body is outlined below. It is a high repetition system designed to develop definition by training primarily slow twitch muscle fibers, which have little capacity for growth or hypertrophy, so that your female clients don't have to worry about gaining too much muscle bulk. This training will also increase the number and size of mitochondria

in the muscle cells, which are responsible for burning fat and transforming it into energy. You can educate your clients about the role of increased mitochondria in weight loss. High rep exercise should be combined with endurance training on cardio-vascular equipment such as the stationary bicycle or treadmill. ***Avoid the Stairmaster because the intensity level is too high for fat burning purposes.*** Thirty minutes to one hour each day will produce great weight loss results and excellent cardio-vascular fitness for anyone.

For your female clients who wish to lose weight work up to 100 reps at a quick cadence. Start them out at 10-20 reps the first day, then 20-30 the next until you get in the range of 50 to 100 reps with ***extremely*** light weights. Make them lift the weights with a one count up and a one count down rhythm for best weight loss results. They may need to stop and rest for several seconds at during the set, which is perfectly acceptable, but try to keep breaks brief – only the time necessary for them to continue on and complete the rep goal.

Emphasize lower body training for women and upper body for men. An upper body weightlifting weight loss program for women should be one set of a compound bench press movement; a pulldown or row movement; any kind of shoulder exercise with light weight and ultra high reps for the upper body. An large amount of upper body exercises is not recommended for women because upper body muscles are smaller than lower body muscles and will not burn as many calories.

Exercises like standing leg kickbacks, standing side leg raise, top end squats and top end lunges, all with no weight, are particularly effective for women. If you have an inner and outer thigh machine at your gym, put them on it every time they train, but continually mix up the other exercises to alleviate boredom. Have weight loss clients work abs at the beginning and the end of the workout. Only perform one set of each exercise, because after 50-100 reps, they'll be begging to move on to something else. The entire routine should take no more than thirty minutes.

For those clients attempting to add muscle mass, some of the mass training handout's exercises are the same as the weight loss handouts, but the execution is different. **Weight loss routines are high volume, light weight and low intensity, while muscle building routines are high intensity, low to medium volume systems that employ progressively heavier training loads.** Here are some tried and proven routines to meet any needs that your trainees may have. You may make copies and hand them out to your clients. **Execute this routine just as it is written after building up to the prescribed number of reps. Change up the exercises each training session so that boredom does not set in.**

VOLUME ROUTINE FOR WEIGHT LOSS HANDOUT

WORK UP TO ONE SET OF 100 REPS ON EACH EXERCISE, AND THEN INCREASE THE WEIGHT. MAKE AN EFFORT TO WORK BACK UP TO 100 REPS AGAIN.

WARM UP ON THE BIKE OR TREADMILL FOR 5 MINUTES.

1. CRUNCHES
2. REVERSE CRUNCHES
3. SIDE LEG RAISE
4. LOW BACK STRETCHING
5. SQUATS
6. LUNGES
7. LEG KICKBACKS
8. STANDING CALF RAISES
9. ROWING
- 10.DUMBBELL PRESS
- 11.DUMBBELL CURL & PRESS

TRY TO MOVE AS QUICKLY AS COMFORTABLE FROM ONE EXERCISE TO THE NEXT WITH AS LITTLE REST AS NECESSARY. KEEP A CONVERSATIONAL PACE. YOU CAN USE THIS ROUTINE SEVEN DAYS PER WEEK AND VARY THE EXERCISE LIST.

EATING FOR WEIGHT LOSS HANDOUT

Individuals go on and off diets all the time. Losing weight temporarily and then gaining the weight back once off the diet is referred to as yo-yo dieting. The key to losing weight and keeping it off is to incorporate healthy eating habits into one's life. *Diet* usually conjures up feelings of deprivation, which is why diets are difficult to hold or maintain. Some fad diets are too low in calories. A menu too restrictive in calories (a fast) can have adverse effects because the body will go into a starvation mode, which causes the internal systems to slow down. Metabolism slows to a pace that will conserve energy. Muscle loss tends to occur as the body cannibalizes its own muscle, which is protein, for energy. By making a few minor adjustments in one's daily eating pattern, changes in physical appearance and overall health will result, without taking drastic measures.

Studies have shown that athletes can develop the ability to use about 50% fat and 50% glucose for energy during aerobic exercise. That is the best fat burning ratio attainable. An excellent system for fat loss that includes aerobics is to circuit train with weights, employing an out of breath pace for added cardiovascular benefits. The latest research indicates that the body burns fat for up to four hours after a heavy resistance workout. There is no residual fat burning observed after an aerobic session. You simply burn the amount of calories that the treadmill workout used up.

Another way to attack fat is through food group choices. If you burn 500 calories per hour during an aerobic or weight training session, that equals a ***calorie dense*** McDonald's meal of a burger, fries and a diet soda. A better way to remove unwanted fat is to avoid fast food and concentrate on foods that are lighter in calories per gram like rice, rice cakes, reduced calorie bread, vegetables, salads, oranges, apples, potatoes, yams. There are so many low calorie snack foods available today that you should be able to satisfy your cravings without unwanted calories. It's a less energy and time intensive method for losing unwanted fat and you can eat this way on a continual basis.

Most dieters have discouraging weight loss results when consuming pasta, cereal, milk and sugar in their diets while trying to lose fat. Try the suggestions and the menu choices mentioned below. High protein, low carbohydrate meal replacement drinks are also excellent meal substitutes and add convenience when you are on the go. Pack chicken or turkey breast sandwiches with mustard on reduced calorie bread for work or school. Limit your bread intake to four slices per day and don't eat carbohydrates before bed. If you are starving at night eat egg whites or plain albacore tuna with vegetables to quiet your belly grumbling.

Note: Weight readings on the scale may not change much initially if you are gaining muscle mass while reducing food intake, but adding muscle will help you lose fat and weight in the long run.

Here are the most frequent reasons that a dieter doesn't lose fat, as opposed to weight.

1. Menu is too high in calories from calorie dense foods like snack foods, pizza, desserts, pasta, bread, and dairy products.
2. Activity and exercise levels are too low, or non-existent.
3. Slow thyroid. *Check by taking your temperature as soon as you wake up each morning. If your temperature is below 98.6 degrees for 7 days in a row, bring the results to the attention of your physician. He can run further tests. About one in two Americans has an under active thyroid.*
4. Fewer than 20 grams of protein are consumed for breakfast. Protein regulates insulin levels. When a high sugar or carbohydrate meal is consumed for breakfast, insulin levels in the blood become elevated. In the presence of insulin, fat is stored for energy, not broken down. Hypoglycemia all day long is the result
5. Too much fat is consumed. Watch butter, cream, salad dressing, and fried foods.
6. Too much sugar is consumed. Did you know that juice manufacturers are allowed by the FDA to put sugar in juice and label it *un-sweetened*? They complain that much of the sugar was leached out during processing. The average adult consumes too much sugar. Every American eats 50 lb. per year according to researchers!
7. Studies show that many Americans eat their heaviest meals at night rather than at breakfast. The pattern of eating too much right before bed or munching on midnight snacks can be broken after twenty-one days of abstinence and will become a habit. If you eat for the activity level that follows a meal, then you'll know not to eat the most before bed. All you're doing is sleeping and storing fat and energy. Try no food after 6:00 p.m. for the next three weeks.
8. Alcohol slows down the metabolism and is processed like sugar by the body raising insulin levels and causing fat storage.
9. Too few meals or calories are eaten per day. The body goes into a starvation mode, where it uses muscle for energy needs while conserving fat. Eat at least three staggered meals per day. Never skip a meal, unless it's at night.
10. Too many in between meal snacks are consumed.

There are the ten main reasons why people who want to lose weight or fat don't. If each one of the causes of weight gain is systematically eliminated, the symptoms (adipose tissue) will go away.

FOOD GROUP ANALYSIS

PROTEIN: Steak, eggs, chicken, fish, turkey, milk, cheese, ham, any seafood, beef, or pork. These are what replace broken down muscle and organ proteins, and add a little (0.1% per training session) more back into the muscles than there was before exercise.

CARBOHYDRATES: There are complex (slow absorption) and simple (fast absorption) carbohydrates, also called high and low glycemic index carbs: bread, oats, rice, barley, rye, all vegetables, apples, potatoes, yams are all examples of low glycemic (good) complex carbs. However, people trying to lose weight don't get good results with bread or dairy products even though they are low glycemic foods, because they are too calorie dense, and they also contain estrogen like compounds. **DON'T EAT LIST:** Candy, cookies, sugar, cake beer, liqueur, wine are of the simple, high glycemic variety, and should be limited because of the effects they have on insulin production and fluctuating energy levels. Insulin also interferes with fat loss and growth hormone (GH) production. GH is a fat burning hormone.

LOW GLYCEMIC INDEX CARBS: Whole grain rye bread, yogurt, apples, oranges, peaches, plums, pears, grapefruit, oatmeal, whole wheat bread, pasta, baked beans, peas, kidney beans, lima beans, sweet potatoes, yams, soy beans and potatoes. Limit pasta, yogurt and bread when reducing.

NO MORE FATS: Greasy foods, hamburgers, cheese, red meat, bacon, ham, pork, oils, butter, egg yolks, mayonnaise, cooking oils, whole milk, ice cream, pizza, salad dressing, cream sauces, doughnuts, potato chips, chicken wings, nuts of all kinds, peanut butter.

ELIMINATE ALL SUGAR: White table sugar or refined sugar is more dangerous than any other FDA approved food additive on the market. It warrants a special warning because of its negative effect on fat loss and contribution to heart disease. Sucrose or refined sugar is an ingredient in almost every processed food you purchase.

Here is another good reason to avoid sugar -- it can cause hypoglycemia. ***Hypoglycemia*** is a condition where the blood sugar drops below the normal level because of sugar consumption. The pancreas shoots insulin into the blood stream, the hormone responsible for dealing with excess blood sugar. In as little as 20 minutes your blood sugar and energy level drop to lower than the pre-sugar food levels. The insulin continues to scavenge blood glucose until your liver is forced to release its stored glycogen in a futile attempt to maintain normal blood sugar levels. This begins a crash cycle that causes a craving for more sugar. A previously mentioned method to help regulate insulin is by consuming 20 grams of protein for breakfast and by avoiding sweetened foods and sugar in coffee.

SAMPLE WEIGHT LOSS MENU

BREAKFAST: 5-10 egg white or egg beaters veggie omelet, and rice cakes or low cal toast or English muffin plain, grapefruit juice, coffee black, and a multiple-vitamin/mineral.

LUNCH: 6-8 oz. Broiled fish, or skinless chicken or turkey breast, salad or vegetable dish, dry baked potato or yam, or rice. A small helping of melon or strawberries for dessert.

DINNER: 6-8 oz. Broiled fish, or skinless chicken or turkey breast, salad or vegetable dish, dry baked potato or yam, or rice. A small helping of melon or strawberries for dessert.

SNACKS: Plain rice cakes or popcorn, no butter.

Meal substitutes are 8 to 10 oz. of non-fat cottage cheese. Calories are approximately 1500 and carbohydrate intake is about 150g. Protein is about 150g. This menu works if it is followed. Drink at least a gallon of water per day.

Fast food and restaurants must be avoided while trying to lose weight. Although many restaurants now offer low calorie-high protein fare that is perfectly in line with fat loss goals. The key to losing weight and keeping it off is to incorporate healthy eating habits into one's life, like not eating after a certain hour. Anything done consistently over a period of three weeks becomes habituated, which is why diets are difficult to start and maintain in the beginning.

There are times when a starvation diet too low in calories can cause the body to cannibalize muscle instead of fat. The body will go into a starvation mode that causes the internal systems to slow down. Metabolism slows to a pace that will conserve energy. Muscle loss tends to occur as the body cannibalizes its own muscle, which is protein, for energy. This usually happens on a total fast and generally does not occur with a reduced calorie regimen. Fasting for fat loss does not work because muscle is depleted before the fat.

By making a few minor adjustments in one's daily eating pattern, changes in physical appearance and overall health will result without taking drastic measures. At least 100 grams of carbohydrate daily are necessary for proper brain function, while 100 grams of protein will keep the body from consuming muscle.

An effective diet may not work well for everyone. A person's size, metabolism, lifestyle, and goals will determine the proper nutrients required for providing adequate energy. A sedentary person will require a different eating pattern than a long-distance runner. A

runner needs plenty of carbohydrates for sustained energy. A bodybuilder needs extra protein for building muscle and fewer carbohydrates when he or she wants to get lean and defined. Some basic knowledge of nutrition can help one to make the correct choices to achieve personal goals. Carbohydrates are necessary in the diet for proper brain, heart, muscle, and vital organ functions.

There are three classifications of carbohydrates: monosaccharides, disaccharides, and polysaccharides. These are glucose, table sugar or sucrose, and complex carbohydrates or starches, respectively. Carbohydrates are converted to glucose in the body. The brain is a voracious glucose consumer. A problem occurs when the carbohydrates consumed are more than enough for immediate energy. The excess is stored as fat.

Proteins are the "building blocks" of the body. Protein is broken down by the digestive system into amino acids which are used for building cells. Protein is the most important muscle building, insulin-regulating hormone. Your body can break down protein for energy if it needs to, but can not make proteins out of carbohydrates or fats.

Another well-known category of nutrients is fats. Fats act as a secondary source of energy after carbohydrates. Excess calories are stored in the body as fat. This can cause high blood pressure, heart disease, cancer, and other problems. Some fat is necessary to maintain healthy skin and hair, but fat intake must be kept at a reasonable level.

Although nutritional requirements will vary based on one's activity levels, here are a few guidelines towards becoming physically fit. First, exercise three to five times a week for thirty to forty minutes. Second, eat five to six smaller meals a day but limit fat intake to 10 to 20% of total calorie intake. Third, drink plenty of water. Fourth, eat only complex carbohydrates, and not simple sugars.

Proper nutrition can prevent various health problems. Cholesterol levels tend to be lower in individuals who exercise regularly and eat foods low in saturated fats. Those with tendencies towards high cholesterol levels should avoid saturated fats that are found in animal products. Regular exercise can prevent, as well as reduce, high blood pressure. Heart and lungs are also beneficiaries of regulated physical exertion. By adding exercise that includes a muscle building program, one's body will actually burn more calories even while sitting still. Muscles require more calories to maintain; therefore, a greater amount of calories are burned on muscular people than poorly muscled individuals. The bottom line is to avoid fad diets and develop healthy habits like exercise.

LAST DITCH WEIGHT LOSS EFFORT

When one of your client's is unwilling to follow a diet plan or their lifestyle does not allow them to pay attention to a strict menu, they may be a candidate for a commercial weight loss meal plan system. These popular companies put together calorie controlled meals and package them for use when convenient by the customer. Your clients can

consume pre-packaged meals until they reach their weight loss goals. You also may become affiliated with a company that sells meal replacements. This system may help clients that are unable to adhere to a normal menu modification program. Although expensive, it may be the best solution for many clients who otherwise could not lose weight using conventional methods.

WEIGHT LOSS TIPS HANDOUT

Although nutritional requirements will vary based on activity levels, here are a few basic guidelines for losing weight. In a nutshell: Exercise three to five times a week for thirty to forty minutes, eat five to six smaller meals a day, limit fat intake to 10 to 20% of total calorie intake, drink plenty of water, eat complex carbohydrates, and limit simple sugars. Proper nutrition can prevent various health problems. Cholesterol levels tend to be lower in individuals who exercise regularly and eat low amounts of saturated fats. Those with tendencies towards high cholesterol levels should avoid saturated fats that are found in animal products. Regular exercise can prevent or reduce high blood pressure. Heart and lungs are also beneficiaries of regulated physical exertion. By adding exercise that includes a muscle building program, one's body will actually burn more calories even while sitting still. Muscle requires more calories to maintain; therefore, more calories are burned. Avoid fad diets while developing healthy habits like exercise.

Make a list of things that you do in your every day routine from the time you get up, until the time you go to bed. If you get up for a midnight snack, add that to the list. Write down whether or not you eat breakfast, what you eat, and if it changes on weekends. Map your entire day. Write down everything, including donuts at work or cookies and milk during coffee breaks. Once you've committed it to paper, you can start to analyze the problem areas, which tend to be habitual behaviors that are causing you to eat poorly during the day. The key to changing the behavior is becoming aware of what it is that you need to change.

This menu represents some common dietary problems.

7am: No breakfast.

10am: Coffee break with 1-2 donuts, coffee with cream and sugar.

Noon: Lunch at the office cafeteria, usually a cheeseburger, or spaghetti, pint of milk, cake or pie for dessert.

2pm: Coffee with cream and sugar, cookies or left over donut

5pm: Dinner, could be pizza, chicken wings, or hot dogs & hamburgers, or leftovers. Ice cream for dessert.

8pm: Beer and buttered popcorn or potato chips.

10pm: Slice of cake or pie.

Now dissect the pattern, which is a good representation of the standard Western menu. First, by skipping breakfast and then eating a high sugar meal at morning break, the metabolism started to slow down. By consuming all that sugar, the blood insulin levels skyrocketed, and remained high, driving the sugar into storage areas of the body, muscles and the liver. Any excess was instantly stored as fat. It caused an energy surge, followed by lethargy. Lunch was high in fat and sugar, again giving a temporary energy surge, followed by a slump and drowsiness. The afternoon break gave another slight boost in energy, but lethargy set in and the rest of the night was spent soaking up calories in front of the tube, virtually inactive. That cycle assures no energy and plenty of fat storage.

This is called unconscious or programmed eating. It comes from being wisely denied desserts and sweets as a child, and finding out that as an adult you can consume anything as much and as often as you want. It is automatic behavior, so reprogramming yourself to consume certain foods or less food has got to become as ingrained and unconscious as your present automatic behavior. You have got to attack the problem from an unconscious perspective, and re-program yourself to enjoy healthy, energizing foods.

The way to reprogram yourself is to consciously eat less and select low calorie, low fat and sugar free foods for at least twenty one days. At the end of three weeks, the new eating pattern should stick. You will also have seen a great improvement in the way you look and feel, which will reinforce the positive changes you have made. It will be easy to maintain your new menu.

GOAL SETTING HANDOUT

Actions taken or not taken shape your life. Goals are power. They're like a map. With them, you know exactly where you're going. Without goals, you will be tossed around by events like a leaf blown by the wind. You can let events control you, or you can start to control events this moment, by writing down your goals. Make a commitment to do something *right now* to take charge of your destiny. Take action this minute by writing down your goals and following through!

Old actions and behaviors I want to replace (example: procrastination, pessimism, and negativity):

If I keep doing what I'm doing now, where will I be in one year?

In five years?

In ten years?

New, positive goals (think BIG). Think about: career; relationships; finances; environment; contribution; lifestyle; education; health.

If I change one thing in a positive way now, where will I be in one year?

In five years?

In ten years?

PROGRAMING WEIGHT OFF HANDOUT

There are many causes to weight gain, like pregnancy, illness, etc, and better reasons to lose it. Weight problems are often behavior related and must be solved through automatic sub-conscious changes combined with some education about foods and their effects on body fat levels. Sometimes, weight sneaks up on you, and one spring day, you realize that you're too chubby. It went on without any effort on your part, but you did something on a consistent basis in order to gain the weight. It felt good to put on the weight and now through mental programming it will feel even better to drop it. Get to the point in your life where something absolutely must change and you must change it and you will change it.

Maybe you've been overweight all your life and now you are going to change all that. Perhaps your Doctor told you to lose some weight, without telling you how to lose it. Whatever the reason, once you've made the decision, how do you find the motivation to follow through? In my experience, it comes down to the habitual behavior that you follow each day, or your routine. Get leverage on yourself by committing your weight loss goals to friends and family. Make a pledge to lose weight by a certain date.

If you try to change just one thing like eating habits, you may be successful in the long run. If your morning starts with you eating a bowl of Honeycombs, then that's the first thing you must alter. If it starts with no breakfast, then its time to add a healthy meal instead. By looking at what it is you do in your daily routine, you can analyze what to change.

Dieting is really about altering those daily behaviors that have brought to the brink of frustration. By moving toward new habits that reinforce your new lifestyle changes, you will achieve your goals. It is also about gearing up for an intense offensive for at least eight weeks in order to put the plan into permanent effect. Step by step you will alter the way you use food and avoid situations that cause you to eat, while substituting new, uplifting habits that allow you to become the person you really want to be. By doing these things you may not be happy forever, but you'll be happy about the way you look, and comfortable with whom you are.

MASS TRAINING

Mass building is accomplished with brief, heavy, high intensity training with long rest periods between sets and workouts.

Mass Training Routine

Muscle building requires multiple set, high intensity (HIT), split training to *positive failure*, or until another rep cannot be performed. Train each body part once per week. You may utilize a three-day, or a four-day split. Here is a powerful three-day split system for muscle building clients.

LEGS

Quadriceps: leg press, squats, hack squats, leg extensions. Choose one exercise and do 5-8 sets of 12 to 6 reps.

Hamstrings: seated, standing or lying curl. Choose one exercise and do 5 sets of 12 to 6 reps.

Calf: standing, seated, donkey calf raise, toe presses. Choose one exercise and do 5-8 sets of 12-6 reps.

BACK & CHEST

Chest: bench press, incline bench press, flat fly, incline fly, pec dec, machine press. Choose one exercise and do 5-8 sets of 12 to 6 reps.

Back: bar, dumbbell or cable or machine rows, pull downs, chins. Choose one exercise and do 5-8 sets of 12 to 6 reps.

Trapezius: bar or dumbbell or machine shrugs. Choose one exercise and do 3 sets of 12 to 6 reps.

DELTOIDS & ARMS

Deltoids: bar, dumbbell or machine overhead press, or dumbbell side raises. Choose one exercise and do 5 sets of 12 to 6 reps.

Triceps: pushdowns, lying or overhead extensions, dips, close grip bench press. Choose one exercise and do 5 sets of 12 to 6 reps.

Biceps: bar, dumbbell, cable, machine or preacher curls. Choose one exercise and do 5 sets of 12 to 6 reps.

An effective four-day split grouping is thighs & hamstrings; back & abdominals; chest & calf; deltoids & arms.

Rest 1 minute between sets. This is an every other day routine, but may be modified to suit your schedule. Sleep 8 hours a night for recovery and follow a high protein diet by consuming five small meals a day.

Take every set to failure and try some partial reps after completing all you can in the full range. Flex the muscles after training them for a minute or two. Muscles adapt quickly to a common stress, so increase the weight or reps every session and vary the exercises constantly, especially if you've been training for several years. This creates an unusual demand on the muscular and nervous systems and keeps you from hitting a plateau, which means stymied progress. Do not exceed the recommended the recommended number of sets because it will lead to overtraining.

ARM MASS BUILDING ROUTINE HANDOUT

The most common mistake bodybuilders make in attempting to build bigger arms is over training them. They do too many sets and train them too often. The arms are used in every upper body exercise, and therefore receive tremendous stimulation, which makes them prone to over training. Over training makes the arms shrink, not grow. Do only 5 to 8 sets each for biceps and triceps, and only three for forearms.

There are literally hundreds of arm exercises, so use them all, but not in the same workout. Choose only one exercise and do 5-8 sets, which is enough to stimulate growth without overtraining. Work the arms only once every 2-3 days. Remember that you train them on every time you grab a weight.

Record in your notebook the time you start and end, the exercise, weight, and the number of sets and reps performed. Since you may not do the same exercise again for several weeks, you will need a reference guide.

Best exercises:

Triceps: pushdowns, lying or overhead extensions, dips, close grip bench press. Choose one and do 5-8 sets of 12 to 6 reps.

Biceps: bar, cable, dumbbell or preacher curls. Choose one and do 5-8 sets of 12 to 6 reps.

Biceps and triceps exercises are good super set combinations (one exercise combined with another with no rest in between).

Forearms: reverse curls and wrist curls with a bar, dumbbells or machines. Choose one and do 3 sets of 12 to 6 reps.

Rest 2 - 3 minutes between sets or super sets. Sleep 8 hours a night for recovery, and follow a high protein diet.

Intensity techniques: add partial (strongest range) reps after completing as many traditional full range reps as possible, then try a controlled holding and lowering set, without resting, in between each series.

LEG MASS ROUTINE HANDOUT

Choose one exercise from the list and do the recommended sets for that day. Train legs once every 5 to 8 days. Rest 2 to 3 minutes between sets for mass.

Quadriceps: leg press (use one or two legs) squats, hacks squats, lunges, and leg extensions. Pick one exercise and do 7-10 sets of 12 to 6 reps.

Hamstrings: any kind of leg curl, or stiff leg dead lift, or top end dead lift. Do 5-7 sets of 12 to 6 reps.

Calf: standing, seated, donkey calf raise, toe press, one leg calf raise. Choose one and do 5-8 sets of 12 to 15 reps.

Hang from a chinning bar and stretch after you have completed your training. Remember to stretch the low back, too.

Intensity techniques: add partial (strongest range) reps after completing as many traditional full range reps as possible, then try a controlled holding and lowering set without resting in between each series.

MASS DIET HANDOUT

To build mass you need to eat at least 1 gram of protein per - pound of desired body weight, per - day. If you want to weigh 200, then you have to eat 200 grams of protein each day. Let's see what kind of menu would deliver the 200 figure. First, some rules. Eat once every three to three-and-a-half hours. It takes that long for the last meal to move out of the stomach. If you eat too soon, the food that you've already eaten will stop digesting, and the whole thing starts all over again. Protein can actually remain in the intestines undigested for as long as two days.

7:00 AM: 12 egg whites (50 g. prot.), 4 slices of toast, large orange juice, multi-vitamin/mineral tab, 3 liver tabs, 3 amino tabs, digestive enzyme.

10:00 AM: Snack: 8-10 oz. cottage cheese or a protein drink. 3 liver and 3 amino's. If this meal is eaten before training, add a banana. Provides about 30-g. protein.

1:00 PM: 8 oz. chicken or steak, 2 baked potatoes or 1 cup pasta, salad or steamed vegetables, 3 liver, 3 amino's, enzymes. Provides about 50-g. protein.

4:00 PM: Snack: same as AM snack.

7:00 PM: Supper: Same meal as lunch.

10:00 PM: 5 egg whites.

This menu allows about 200 grams of protein, about 40 grams of fat, and about 350 grams of carbohydrate. Total calories are roughly 3000.

If you can be this meticulous about eating, then you will reap the rewards of increased muscle mass. Use creatine and DHEA every day after each meal, but cycle them on a two-week on, two week off schedule for greatest benefit, and so you don't develop a tolerance to them. Don't let yourself get hungry during the day, and modify the schedule based on your daily routine. Eat every three hours, except when sleeping.

MASS SUPPLEMENT STACK HANDOUT

1. Creatine, load 5 grams 4 times per day for 5 days, then drop to twice a day. This can produce gains of 5 pounds of muscle in 3 days!
2. DHEA, 100 mg. 3 times per day, including one tab 1/2 hour before training, one before breakfast, and one at night. Elevates testosterone levels in the body.
3. Flaxseed & Fish Oil, are both good fats, or lipids, which are testosterone precursors, the building blocks of testosterone in the body.
4. Tribulus, try 100 mg. twice daily to boost testosterone levels.
5. Digestive Enzymes, one or two tablets with each meal for maximum utilization.
6. Whey or Egg Protein Powder, use one or two scoops 3 times per day between meals for best results.
7. Multivitamin/Mineral Pack, take one packet daily for good health. Everyone should be taking a multi-vitamin/mineral anti-oxidant supplement, especially hard training athletes.
8. Desiccated Liver Tablets; take 5-10 tabs 1 hour before training for endurance. Before steroids, athletes used liver tabs to get big. They still work.

Follow a high protein diet of about 1-gram of protein per pound of desired body weight to gain muscle. Anyone who follows this program should be able to pack on 10 pounds of muscle in 2 to 4 weeks, while losing five pounds of fat at the same time.

NUTRITIONAL GUIDE FOR INCREASING MASS

Protein and supplement intake is of paramount importance for building increased muscle size. Timing is as crucial as what is consumed. Here are some supplements that can accelerate the muscle building process. Ten-50 grain desiccated liver tablets and three-1000 mg amino acid tabs three times daily will increase protein levels in the body. Consuming a high protein, high calorie meal or protein/sugar drink prior to, and immediately after a workout will elevate protein and insulin levels during training. Protein and glucose uptake by the muscles is elevated during and after workouts. Additionally, testosterone and growth hormone levels increase during intense exercise, creating an even more anabolic (muscle building) state. Adding 2-4 tablespoons of creatine and 100 mg. of DHEA or one of the testosterone boosters before exercising will create even more rapid muscle growth. Always consume 2000 mg of flaxseed oil and 2000 mg of fish oil one hour before training sessions because muscle-building hormones are assembled from the good fatty acids that they contain.

TONING TRAINING

Do not train to failure when toning, only pump the muscles with an easy weight. Train the entire body each session because the toning client will tend to miss at least 1 training session per week.

TONING TRAINING ROUTINE HANDOUT

Here is a routine for a man or woman who wants to trim down and focus on the upper body and abdominals. Train the entire body on an alternating three-day a week schedule training as a circuit with little or no rest between exercises. Select one exercise per muscle group from the following list for each training day. Rotate them from session to session. That keeps the routine exciting, while each exercise builds strength for the next session's exercise.

ABDOMINALS: Crunches or reverse crunches. Do 3 sets of 20.

QUADS: Leg extension, squats, leg press, hack squats. Choose one and do 3 sets of 8 reps.

HAMSTRINGS: Any leg curl. 3 sets of 8 reps.

CALF: Toe press, seated calf raise, standing calf raise, donkey calf raise. Choose one and do 3 sets of ten reps.

BACK: Pull downs, bar row, cable row, dumbbell row, chin-ups. Again, choose one and do 3 sets of 8 reps.

CHEST: Bench press, incline press, flies, pec dec, machine press. Choose 1 and do 3 sets of 8 reps.

SHOULDERS: Over head press, side dumbbell raise, upright row, shrugs. Choose one and do 3 sets of 8 reps.

TRICEPS: Close grip bench press, dips, pushdowns, triceps press, and dumbbell kickbacks. Choose one and do 3 sets of 8 reps.

BICEPS: Bar curls, dumbbell curls, preacher curls, or machine curls.
Choose one and do 3 sets of 8 reps.
Rest one minute between sets.

Follow a balanced low-fat diet while increasing protein levels slightly. Breakfast should include 20-30g. of protein. Eliminate fast food, junk food, alcohol and late night snacks. Always include a multivitamin/mineral supplement.

SPECIAL TRAINING PROBLEMS

Occasionally you will have individuals that don't seem to be responding well to the training protocol previously described for achieving their goals. You may have tried everything. If it is a woman who wants to lose weight and you have used the high volume approach and cardio, first check her diet. She's either cheating or pregnant! If everything looks OK, cut down the reps and use a slow continuous tension system or step up the cadence of the reps. This change may be enough to shock her body into responding again. Add a little more cardio to the routine as well. If she has been using the bike, put her on the treadmill and vice-versa. Move the routine around and try everything until you get her results! That's why she hired you in the first place. Flexibility is the key to being successful with tough problems.

If a trainee wants to add mass, but is not making progress check protein levels. The lack of results is almost always related to diet rather than training whenever someone fails to respond to what you are doing in the gym. Stress how important diet is to each client and make sure they follow through every day with their eating when you are not around to monitor them.

CHALLENGES

If a client has been in a wheelchair or is otherwise limited in his or her capacity to exercise, you will have a special challenge requiring an innovative approach to his or her training. The individual may not be able to grasp a bar or have access to equipment. They usually have limited range of motion on exercise movements.

Your best bet is to use your hands as resistance on their limbs by employing a variety of techniques, including isometrics. Get their permission first before you start pushing and pulling on them all over. Don't work them too hard the first few sessions. Try to make them feel comfortable with you and the movements. Experiment with high reps, partial range training, low reps, and apply resistance anywhere you can. Mimic nautilus machine pullovers, curls, side dumbbell raises, rowing, bench presses, shoulder presses, hammer curls, flyes, and shoulder shrugs, as if you were the machine. You both may be surprised at how much you can do together.

There is a line of motorized exercise equipment that moves the arms and legs through different exercises automatically. Individuals who use this equipment actually lose weight *even though they are not exerting any force*.

Even a non-responsive leg will improve in muscle tone if it is pumped rhythmically by an outside force. You can move a person's legs manually to mimic leg extensions or leg presses. This low level of stimulation will actually build muscle tone even though there may be no feeling in the legs.

Manipulation training works especially well if a short range of motion limits a limb. Stretching and gradually increasing range of motion drills will bring about dramatic

increases in his or her ability to perform every day movements with relative ease. Six months of strength training usually will cause strength to triple and movement to skyrocket. Increased muscle mass, fat loss in overweight people and weight gain in thin people will be the result.

AEROBICS

An aerobic component of training can be accomplished by stepping up the pace at which one-weight trains. Studies have shown that fat burning is increased for up to eight hours after high resistance training with weights. There is no residual fat loss effect with low intensity aerobics, employing a piece of cardio equipment like a treadmill. But the calories burned during the activity help weight loss over the long run.

The goal for heart fitness is to keep the heart rate at about 70% of your maximum heart rate for 20 minutes at least 3 times a week. The formula for figuring out your maximum heart rate is 220 minus age. If a client is 20 years old, the maximum heart rate is 200 beats per minute. 70% of 200 is 140, so 140 beats per minute is the proper training zone.

Adults should get a total of 30 minutes or more of physical activity every day. For fitness benefits adults should do 20 to 60 minutes of continuous aerobic activity, three to five days a week at 60 to 90 percent maximum heart rate using the major muscle groups.

To determine if the client is in the zone:

Have them walk normally for 5 minutes, walk briskly for 5 minutes, and resume the normal pace for another 5 minutes.

Stop and take the pulse in the wrist. **Never use the neck, a piece of fat may become loose and cause a stroke or the client may pass out.**

Count the beats for 10 seconds and multiply the number by 6.

Target heart rate chart:

20 years: 100-150 beats per minute
25 years: 98-146 beats per minute
30 years: 95-142 beats per minute
35 years: 93-138 beats per minute
40 years: 90-135 beats per minute
45 years: 88-131 beats per minute
50 years: 85-127 beats per minute
55 years: 83-123 beats per minute
60 years: 80-120 beats per minute
65 years: 78-116 beats per minute
70 years: 75-113 beats per minute

Never take the pulse by pressing on the neck-always use the wrist. You may dislodge a piece of fat and cause a stroke when using the neck as a pulse point or the client may pass out.

Some trainees may not be able to do much more than walk on the treadmill.

In that case, just stand next to them and provide some lighthearted chat. You will keep them entertained and provide the best pace for cardio-vascular fitness and weight loss. If they can hold a conversation without becoming breathless, then they are generally training at the right pace.

The elliptical machines are the next step in cardio equipment. They replace the knee damaging, anaerobic (using sugar for energy instead of fat) Stairmasters, and provide a great aerobic workout. If you have access to one, incorporate it into your client's training. The best way to keep clients excited about training is to rotate the treadmill, stationary bike, and elliptical trainer. **The treadmill, stationary bike, and elliptical trainer are low intensity in comparison to the Step machines.** Clients can try a different unit every day to avoid boredom.

Fast running is anaerobic hard on the joints and lower back. Try to discourage it. Walking at a fast pace up an incline is much more effective when the goals are weight loss and training longevity.

FIRST DAY TRAINING NEW CLIENTS

Once you have had the client fill out the health questionnaire, waiver, personal training assessment form and Ten Commandments of Personal Training handout, it's time to train the client. Where do you begin? First of all the diets, questionnaires and routines above are designed to be handouts you can provide to your clients. Make sure to distribute those forms so you can help educate clients about fitness. It also will project an image of professionalism. Refer back to the handouts now and then while you train.

Take it Easy

Some trainer certification programs advocate fitness tests, but the physical activity questionnaire negates the need for a standardized fitness test, if answered honestly. **Since you only have to determine whether your client has the ability to execute the routine that you are providing, the fitness test should be his or her actual first workout as your client. You'll know exactly how much they can tolerate if you just pay close attention to their response to the initial training session.** Start out with one set of each exercise with an extremely light weight. This initial session should last no more than ten minutes if the client has never trained or has not recently worked out. Have your client perform only ten reps per set of each exercise with an empty bar even if they can do more, unless they are already an advanced strength athlete. They have the rest of their lives to lift a thousand pounds if they desire, but let them know that both of you must understand their training level today, so that you can establish a proper training schedule for them. If they are already advanced exercisers and have been training regularly, then you can jump right in at their intensity level. They will have to tell you what they are used to doing and you can keep them motivated while making impartial suggestions.

Observe your client's physiology during the initial session and continually ask for their feedback about how they feel. Ask if they are dizzy, short of breath, etc., especially if they are seniors or severely overweight. You don't want someone to pass out, which can easily happen to an unconditioned individual. **If a client's skin color turns pale or grayish, stop the workout immediately and have them sit down and get a drink of water.** Better to err on the side of caution.

SPOTTING

It is important to be concerned with correctly spotting clients. A ruling in a court case from the Superior Court of New Jersey mandated that spotters are liable for injuries sustained to weightlifters, even if the injury occurs because of equipment lying around on the floor. In this case, a spotter was sued for negligence after a person was injured by a weight *lying next to the bench*.

The defendant (spotter) volunteered to spot the plaintiff during weight training. When the plaintiff (weightlifter) put his dumbbells on the floor, his left index finger was smashed when the weight in his left hand came into contact with a weight on the floor. The plaintiff provided expert testimony to the court citing various standards of care, including

those from the National Strength and Conditioning Association, that says: ***It is a spotter's obligation to examine the area around the weightlifter to ensure other objects, including other free weights, are not within the area of activity.***

The defendant filed a motion for a summary judgment saying that he should not be held liable to the injured lifter. The motion was denied. The court ruled in favor of the plaintiff and decided that, "a reasonable jury could conclude, "The defendant voluntarily assumed a duty by 'spotting' for the plaintiff. Incorporated in that duty of care is the obligation to ensure the area around the weight bench was clear of any hazards."

By ruling this way, the court mandated that spotters have an obligation to inspect around the area where weight-training activities occur to determine if there are weights or objects in the area that could cause injury. Even volunteer spotters may have liability under certain circumstances and that a person who assumes a duty to another needs to ensure that duty will be adequately performed. Those who provide spotting activities even as volunteers should become familiar with the obligations imposed upon spotters by written standards of care and guidelines pertaining to the activities. The best way to see how to spot correctly is to observe others training in the gym and to look at exercise photos in books and magazines. Exercise videos are also a good source of spotting pointers.

Usually the person training will tell you how they want you to spot them. Your job is to keep them from getting injured by the weight. The general rule for spotting on a specific exercise is that you provide just enough lift to keep the weight moving -- don't let it stall. If it gets stuck keep it going up smoothly. When spotting someone doing squats, you may have to put your arms under their arms and around the front to lightly stabilize them and help lift if they stall. **Never spot squatters from the hips or waist or they may bend at the waist and fall forward with the weight bar rolling dangerously over their neck and head.**

TECHNIQUE and FORM

Exercise technique is as varied as individuals. You have an obligation to teach clients correct exercise form that will not cause injury. Throwing weights around in a sloppy manner will not *build* much muscle, but may *tear* a muscle. The key to continued progress is to vary the lifting count. A very slow count of up to ten seconds up and ten seconds down with a heavy weight for about 5-8 reps is excellent for building muscle mass. Bob Gruskin, NABBA-USA President and trainer of sixteen Mr. Americas and a dozen Mr. Universes including the great Jeff King, always had his champions use a strict, painfully slow up and down lifting technique. Their success speaks volumes for this system.

At the other end of the spectrum is the fast, explosive technique where the weight is lifted at a one count up and one count down cadence. Top pro bodybuilders like Arnold Schwarzenegger, Shawn Ray and Bob Cicherillo employ this system with excellent results. As long as your clients are controlling the weight instead of the weight controlling them, you can utilize any cadence. A variety of training speeds will produce

better results than the same lifting speed employed all the time. If a weight is obviously too heavy, lighten it. Sometimes clients will try to lift more than they are capable of for their ego's sake. You must advise them that proper form with a lighter weight will yield greater muscle building benefits.

Certain exercises may cause injuries and damage to joints over a prolonged period of months and years. Particularly traumatic exercises are upright rows, behind the neck presses and pull downs, full range pullovers, full sit ups, Roman chair sit ups or leg raises, deadlifts and full range stiff legged deadlifts. Avoid these exercises for the sake of client longevity. Hyperextensions where the body is extended up past parallel to the floor are also injurious and should never be performed past parallel. Dumbbell flyes with excessive weight may wrench the client's arms down too quickly and dislocate the shoulder or tear a muscle. **Always spot clients from their wrists when they do flyes, not the elbow.**

GET YOUR FIRST CLIENT TODAY!

By taking action and writing down the names and numbers of twenty people you know you could have your first client signed up today. The key is to call each person on your list and inform them that you are a certified personal trainer now, and that you are accepting new clients. Some of these people may even be looking for a trainer, but do not know how to find one.

CONTACT LIST

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17. NAME _____
PHONE _____

18. NAME _____
PHONE _____

19. NAME _____
PHONE _____

20. NAME _____
PHONE _____

CLIENT ENROLLMENT FORM

Your Company Name
Your Company Street
Town, State and Zip
Your Phone Number
Your e-mail address

Personal Training Enrollment Form

Today's Date: ____/____/____ Start Date: ____/____/____ Time _____

Training Location _____

Amount \$ USD Payment Method: Check ____ Money Order ____ Credit Card ____

Credit Card Information (if Payment Method is Credit Card)

Accepted Cards: Visa Mastercard Amex Discover

Number _____ Exp. Date _____

Customer Billing Information (as it appears on credit card)

First name _____

Last name _____

City _____

State/Province _____

Zip Code _____

Country _____

Phone _____

E-mail _____

Client name and full mailing address (if different)

First name _____

Last name _____

Address _____

Note: There is a 24-hour cancellation policy. If the client cancels 24 hour or more before the training session, the client will not be billed for the missed session. If the client cancels less than 24 hours before the training session, the full fee will be charged.

ENROLLED CLIENT CONTACT LIST

CLIENT NAME	PAYMENT AMOUNT & DATE	ADDRESS, PHONE, E-MAIL
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		
16.		
17.		
18.		
19.		
20.		
21.		
22.		
23.		
24.		
25.		

PT Telemarketing Script

After the second or third training session with a new client (while they're still enthused about training), ask if you can use them as a referral. Call all their neighbors and let them know that you train their neighbor down the street (let the prospects know your client's name and house number). All you're trying to do over the phone is get a face to face appointment so that you can close them. Don't try to close them over the phone. See the phone telemarketing script below. This system is a powerful business generator when implemented as written.

This telemarketing phone script for works well when used as a tool for generating face to face appointments. It's also great for informing old clients about your new specials. Keep in mind that a phone call is always an interruption. Smile while you talk, it comes across on the phone. Keep the conversation short and to the point.

Salesperson: "Hi, is Joe there?"

Customer: "This is Joe."

Salesperson: "Joe Shmoe?" You've now used their name twice - people's names are important to them.

Customer: "Yes"

Salesperson: "How are you today?" (Gives you an idea of their availability.)

You: "This is (Name) from (company or business name). "Have you heard of us?"

Customer: "Yes, " or "No."

Make a big, exciting positive statement about your company or special no matter what their answer.

You: "Who we are is (company or personal trainer) and what we do is (positive statement), and what that means to you is (you'll save money - get great results - lose weight for vacation - say anything that motivates them to invite you over)."

Ask permission to ask them a question:

You: Can I ask you a question? They will always say "Yes."

Is (saving money - getting in shape - losing weight) something that would be important to you? They will tell you if it is important or not. If none of your pitches is important to them ask them, “What is most important to you in a personal trainer or fitness routine?”

They will tell you.

If they say, “convenience,” reinforce how convenient your scheduling system is. If they say, flexibility,” key in on how you can accommodate any schedule. If they say “privacy,” tell them how private your facility is.

Once they have told you what is most important to them let them know that their choice is a major benefit of your service.

Give them appointment options by saying, “Is Wednesday at three or Saturday at noon better for me to stop by? Then listen for their response. They will give you an alternate time or hang up. If you can get them to commit to an appointment, you have won the battle. The hardest part of getting clients is having them actually meet you.

The action you are trying to get the person to take is to set up an appointment to hear you outline all the benefits of your service. You must then employ the sales techniques below to close the client.

PT Sales Script

Write down a list of benefits associated with your personal training service and memorize it. You must constantly *test close* during your meeting with a client. A test close is an opinion-asking question that provides options like, “In your opinion, would a three month or yearly training membership work better for you if you were going to join today?” A *closing* question is a decision making question like, “Are you joining for six or twelve months?” Or, “Are you paying by credit card or cash?” They may be ready to sign up. Sign them up and work out the details later.

You must frequently use the key words “**or**” or “**because**,” because those words induce a sales mentality in the customer. Studies have shown that these words can induce a low-level trance in the American consumer, making him or her more receptive to your sales presentation.

A sales person needs to develop a pattern of answers that almost force the individual into purchasing a membership. Getting the customer to commit to a series of minor actions will make them feel compelled to sign up at the end. Avoid yes or no closing questions.

When you meet the potential client say hello in a friendly voice and use a test closing question: “Hi, I’m (name), thanks for inviting me over.” “Are you ready to enroll in our three-month or yearly training package special today?”

If the customer says yes, have them fill out the paper work and decide on the type of training plan. Set the schedule after they sign up. Many are ready to join without any sales pitch.

If the customer says, “I just want some information.” Start your sales script. **Always use the exact script language.**

Initiate the conversation by asking, “How did you hear about our salon (unless they were a prospect you telemarketed)?”

Ask them the question: “What’s most important to you in a personal training salon?”
Listen for their response.

If they say, “convenience,” reinforce how convenient your scheduling system is. If they say, “flexibility,” key in on how you can accommodate any schedule. If they say “privacy,” tell them how private your facility is.

You answer: “Then you’ve come to the right place. The benefits to you are...” (always sell positive benefits and emotional reasons, never logical reasons for buying) that we have the (most private – most convenient – most flexible scheduling – whatever they say, state it back to them as a positive benefit).

If they have come to your salon, show them around and have them actually try each piece of equipment. Hand them a bottle of water as you start the tour. It will induce the reciprocation process. Since you have given them something of value, they will feel compelled to reciprocate by purchasing a personal training package. Walk them over to the best, showcase equipment and let them sit in it and experience its action, while pointing out the benefits of your service over any other available services.

Escort them to a quiet area or office dedicated to closing sales. All paperwork should be on a clipboard ready for signing. The salon floor should be uncluttered, bright and exciting with popular, but not annoying, or blaring music.

Overcoming Objections

There are many methods for overcoming objections. Use the following list in this order until all their objections are overcome.

The first method is to ignore the objection. If they say “That price is too high”, ignore it and continue the presentation.

You can dismiss it quickly by saying, “Why don’t we go over your special discount in a minute.”

You can also reflect their objection back to them by restating their objection as a question, “Too high?” That will prompt them to give you more information about their objection. Finish by asking, “Is there any other reason not mentioned here why you wouldn’t get started today?” When they tell you their objection, use the system for overcoming objections in this order for each of the new objections. If the client says, “Well, I’ll have to check with my wife/husband,” ask them, “What would they say if they were here now?” Then get on with the paperwork.

The third option is to overcome the objection by saying something like; “The price is half as much as the average training rates in this city.” If your rates are higher than average say, “Isn’t it true that you get what you pay for?”

A final resort if you are losing the sale (which only works if you have developed good rapport) is to say, “I’ll have to check the health questionnaire and see you can qualify.” It puts prospects on the defensive and causes them to explain why they are qualified.

When filling out the paperwork and contracts, always ask the questions and fill in the answers yourself. When it comes time to sign contracts, never use the word “sign,” instruct new clients to “just write your name by the X’s.”

When everything is completed, congratulate the new client for making a wise choice and talk about how they have taken the first step toward meeting their future fitness goals. Projecting the satisfaction and value the client will experience (by hiring a personal trainer) into the future will calm any potential buyer’s remorse.

SUMMARY

A rule to remember as you establish yourself in the industry and build a steady client base is **put the welfare and feelings of your clients above your natural inclination to push them hard during their workouts or they may quit training or become injured.** The vast majority of your clients will not require high intensity training and will achieve fabulous results without ever training to failure. Intensity is an excellent technique for mass building. Low intensity, long duration, high volume workouts are best for losing fat, especially when coupled with diet. Remember that high intensity and heavy weight builds bulk, high volume (amount) training and light weights burn fat, with little mass increase. Understand the correct method to apply to your client's objectives, and be flexible enough to change as their needs and goals change.

Counseling the client on proper diet and nutrition principals is very simple. When trying to build muscle and lose body fat, you must consume more protein and fewer fats and carbohydrates. You now have many excellent handouts that you may give your clients explaining nutrition and losing weight.

To recap, for those wishing to add muscle mass or bulk, the exercises employed are often the same as for weight loss, but the execution is different. Weight loss routines are light weight, high volume, low intensity, and mass routines are high intensity, low to medium volume with progressively heavier weights. Toning routines are low intensity pumping affairs. You now have exercise and diet handouts to give clients that will produce results for anyone, and they are flexible enough to meet special needs that trainees may have.

You are going to be able to make positive, life changing improvements in your clients' lives. There is nothing so rewarding as seeing someone lose eighty pounds because of the help you have provided. Just use common sense. Don't place yourself into a compromising situation by promising more than you can deliver. Make the client realize that he or she is the person responsible for the results, and you are only there to coach and help them, and if you work together as a team, the benefits of training will accrue.

I can't wait to hear from you about how your new business is doing!

God bless.

Gregory Ladd, President
American Muscle & Fitness

AMFPT PT FINAL EXAM

Hand your exam in to the instructor, or mail your answers, name and mailing address to: American Muscle & Fitness, 1436 State Road, Webster, NY 14580, USA. You can also email your answers to exams@amfpt.com and amfpt@aol.com. You will be notified by e-mail, phone or mail with your score. **Please do not copy sections from the manual and submit them as your exam essay answers** because it is automatic failure. In addition to having thorough and correct length essay answers, you must get all multiple choice answers correct to receive an "A." Each wrong multiple choice answer drops your score one full letter grade. Four answers wrong equals automatic failure. The essay answers are there to provide you with three practical scripts that can help you in your training business. They are designed so that you can demonstrate your understanding of the material presented in this course.

Your essays must be in your own words. Short quotes are usually used only to back up statements or conclusions that you make in your essay. You may quote from *any* source as long as you use footnotes, or clearly cite the source, and as long as your essays are not made up entirely of quotes, graphs and routines taken from other sources. You can make reference to the different handouts that your clients would receive from the manuals by name. **Each essay answer must be at least 300 words in length.** An "A" or higher score will be noted on your letter of recommendation. **Duplicate or copied exams are reason for automatic failure. By submitting your exam you attest that you are submitting your own work under penalty of perjury.**

Good luck!

Gregory Ladd, President

Place an "x" next to the correct multiple choice answer.

1. What *should* you have each client do before starting training?

1. Fill out a health questionnaire and waiver
2. Fill out a personal training questionnaire
3. Sign the Ten Commandments of Personal Training
4. All of the above

2. To set up your business what do you need to get at the county clerk's office:

1. BBA
2. DAD
3. DBA
4. FDA

3. The V-shaped muscles of the back are:

1. Pectorals major and minor
2. Quadriceps
3. Latissimus Dorsi
4. Biceps

4. The chest muscles are the:

1. Triceps
2. Teres major and minor
3. Rhomboids
4. Pectorals major and minor

5. The deltoids:

1. Raise the arm
2. Pull the arm down to the side
3. Curl the forearm up
4. Draw the rib cage to the hips

6. To stand on tiptoe the muscles used are the _____.

1. quadriceps
2. hamstring
3. gastrocnemius
4. glutes

7. Muscles always _____ to cause motion.

1. Push on levers
2. Pull on levers
3. Bend
4. Straighten

8. What are the three basic muscle fiber types?

1. Fast, medium, slow
2. Super, supercilious, noncilious
3. Cornea, patella fumorate
4. Sharp, medium, dull

9. A weight loss routine should be _____.

1. High intensity
2. Low volume
3. High volume
4. None of the above

10. High volume training increases the number and size of _____.

1. ATP
2. Mitochondria
3. Glucose
4. Insulin

11. The stationary bike, elliptical trainer and treadmill are better choices than the stair climber is because they are_____.

1. High intensity
2. Low intensity
3. Automatic
4. Manual

12. Clients want to be _____ during a training session.

1. abused
2. badmouthed
3. listened to
4. cursed at

13. A trainer should find out the client's _____ history before training him or her.

1. health
2. driving
3. address
4. work

14. Fast twitch muscles are trained with _____ weight.

1. heavy
2. light
3. Both of the above
4. None of the above

15. Volume, when applied to training, means_____.

1. amount
2. size
3. sound
4. loudness

16. For losing fat which is the best method?

1. Diet
2. Diet and exercise
3. Exercise
4. Cardio

17. The best response to training comes from_____.

1. Using the same exercises all the time
2. Using different exercises every workout
3. Using only machines
4. Using only free weights

18. When taking someone's pulse you should never use the_____.

1. wrist
2. neck
3. chest
4. stethoscope

19. Sugar causes a rise in blood_____.

1. alcohol
2. hormones
3. enzymes
4. insulin

20. To build muscle clients should eat more _____.

1. protein
2. carbohydrates
3. fats
4. H₂O

21. Before touching a client, a trainer must get _____.

1. A lawyer
2. their phone number
3. permission
4. help

22. A personal trainer must never _____.

1. help a client
2. ask for referrals
3. discuss steroids with clients
4. schedule appointments

23. A personal trainer is a _____.

1. fitness technician
2. emergency medical technician
3. nurse
4. medical doctor

ESSAY QUESTIONS

FOR EACH QUESTION WRITE AT LEAST A 300 WORD ESSAY BASED ON THE PT MANUAL READING MATERIAL outlining the routines, sets, exercises and schedule you would recommend for the client. Assume each client is in good health. Check your grammar and spelling. Exam answers may be e-mailed to exams@amfpt.com and amfpt@aol.com. **Your essays must be in your own words. Please do not copy sections from the manual and submit them as your exam essay answers.** Essays may be longer than 300 words.

Model your routines after this example:

MONDAY -BACK & CHEST

Bench Press 3 sets of 8 reps

Pulldowns 3 sets of 8 reps

TUESDAY -LEGS

Leg Extension 3 sets of 8 reps

Etc.

Diets can look like this model:

Breakfast - 7am: Eggs, Toast, Juice

Lunch - 12 noon:

Dinner - 5pm

Supplements -

Etc.

Explanations are: **The reason I recommend this is because ... it increases the number and size of mitochondria; trains slow/fast/intermediate twitch muscle fibers; etc.**

1. Design a routine for a forty-year-old woman who wants to lose 20 pounds of fat without "getting too big." What will you do to help her lose the weight? **Include routines, sets, reps, exercises, diet and supplements you recommend. How many days per week should she train? Note that you cannot include a low rep, multiple set, bodybuilding-split routine as your answer. Explain your reasons for making these recommendations. (300 words or more)**
2. Design a routine for a twenty-year-old man who wants to gain weight and build muscle. **Include routines, sets, reps, exercises, diet and supplements you recommend. How many days per week should he train? Explain your reasons for making these recommendations. (300 words or more)**
3. Design a routine for a thirty-year-old man who wants to tone up. **Include routines, sets, reps, exercises and diet and supplements you recommend. How many days each week should he train? Note that you cannot include a bodybuilding-split routine as your answer. Explain your reasons for making these recommendations. (300 words or more)**

You can also mail your exam to the USA headquarters:

American Muscle & Fitness

1436 State Road

Webster, NY 14580