FOREWORD BY LARRY NORTH

delivering FITNESS

Your Guide to Health and Strength Training during Pregnancy

Includes 4 PULL-OUT POSTERS to Help Build Your New Body

ERINN MIKESKA, CPT AND DR. CHRISTINE QUATRO

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Brown Books Publishing Group
Dallas, Texas

Delivering Fitness

Manufactured in Hong Kong.

For information, please contact:
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16200 North Dallas Parkway, Suite 170
Dallas, Texas 75248
www.brownbooks.com
972-381-0009

ISBN 0-9744597-6-3
LCCN 2004104148
2 3 4 5 6 7 8 9 10

This book is dedicated to you,
Mothers of creation;
for your desire to maintain the temple of our Lord.

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Preface

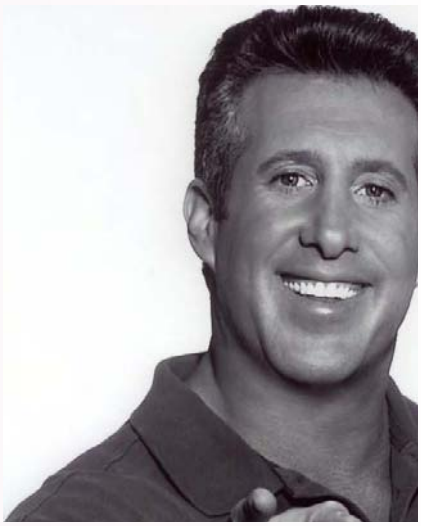
Can you imagine walking out your door and running a marathon? Yes, right now—without any preparation or training. Would you even try? Of course not! You wouldn't even begin to consider running that marathon without training and conditioning.

Well, in many ways childbirth is like running a marathon. It's every bit as arduous—some would say even more so—and the changes and stresses on your body and emotions are even greater. Yet many if not most women go through this unique time of their lives with little or no training.

So why don't more women condition for childbirth? Good question, isn't it? It's one we have asked and we've come up with a surprisingly simple answer. Many women don't condition for childbirth because they don't know how, and because the information just isn't readily available. You've probably wondered if it is even safe to work out while you are pregnant. Or perhaps you simply have no idea how much exercise is enough. And especially important, how much is too much?

This book is written to answer all those questions and provide you with safe, effective guidelines that will keep you and your unborn child at optimum health level.

Foreword
by Larry North



Hello, I am Larry North, founder of Larry North Fitness and author of many health and fitness publications. As a fitness expert, I know the value of a sensible, realistic fitness program. Erinn and Dr. Quatro have put together a great strength training program that promises success for pregnant and postnatal women. Their program is easy to follow and provides a number of modifications that make it easy to use. The exercises included are proven to improve your strength, health, and overall well-being. I can't stress enough the importance of keeping your body fit through every stage of your life. It is especially important when you are responsible for creating and helping another life. Don't you want your baby to have the best start possible? Of course, and the easiest way to do that is to give him or her the healthiest start possible.

It only takes a fraction of your day, a few days a week to ensure a healthy, happy beginning to your precious baby's life. It's a small investment of time and energy for such a rich future. My clients appreciate the life-changing strategy I use to help them start a program they can continue for the rest of their lives, and this is that type of program. You must make the decision to make a life change for yourself, your baby, and your family. If you're already a fitness enthusiast, this book will reassure you about the importance of fitness in your life as well as answer any questions that might hold you back from continuing your fitness

routine through your pregnancy. If there ever was a perfect time to stick to a fitness program, this would be it.

Delivering Fitness also offers excellent nutritional advice for you expectant mothers. As the author of *Living Lean: The Larry North Program,* and an expert in the field of diet and nutrition for those who work out, I understand the limitations and dangers of a quick-fix diet. By combining their knowledge and research, Erinn and Dr. Quatro have also provided you with a complete guide to eating right for two.

So pull those shorts over that belly, have fun, and stay fit! You owe it to yourself and your baby.

LARRY NORTH has been an expert in the fitness world for almost twenty years. He started his career in Dallas, Texas and has written such books as *Get Fit!: The Last Fitness Book You Will Ever Need,* and many more. He is also the host of a fitness radio show and has expanded his gyms to South Beach, Florida, and throughout North Texas.

Acknowledgments

We would like to take this opportunity to thank certain people without whom this book would not have been possible.

The staff of Brown Books Publishing Group: Milli Brown for taking a chance on us and giving us the creative freedom to make our vision a reality; Deepa Pillai for her hard work and insight; Alyson Alexander for all her creative abilities; and Erica Jennings for her help with the Web site.

Clay Hayner Photography: Clay for making this book come to life with all the beautiful photos and creative touches.

The staff at Miller Consulting Services: Amy Miller for her valuable input and guidance; Candy Lee for her creative genius; and Cathy Amy for bringing this book together in the initial stages.

Debbie Kasper for her relentless work on the extensive bibliography.

Barbara Hollinger for her diligence and tenacity in researching and compiling available literature on the subject of pregnancy and fitness.

Lee Scarborough for his helping hand.

Varsity Orthopedics

Your Body Fitness, Inc.

And last but certainly not least, a special thank you to our family and all of our friends for their unwavering support.

Disclaimer

The information contained in this book is based on the personal research and experience of the authors, Erinn Mikeska and Dr. Christine Quatro. It is intended for informational purposes only.

The Delivering Fitness program is designed to help you maintain your level of fitness without imposing harm on you or your baby. The guidelines, workouts, and advice are in no way intended as a substitute for counseling from your obstetrician. By using the material contained in *Delivering Fitness,* the user agrees to hold harmless its authors and Brown Books Publishing Group, and assigns no blame for any untoward occurrences during use of this book.

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Introduction

So you're pregnant and you want to stay fit. Whether it is your first child or your last one of several, you want to stay in shape, have an easier labor, and revert to pre-pregnancy weight and physique as soon as possible. If any or all of those are your goals, we're here to help.

I'm Erinn Mikeska, a certified personal trainer and fitness model. I am certified by the National Academy of Sports Medicine, the National Academy of Health Fitness, and the American Council on Exercise. I am also certified by the Cooper Clinic in pre- and postnatal fitness instruction. In addition, I hold Special Populations and Moms in Motion certification. I have been actively involved in the field of fitness and exercise science for almost ten years, and I am still just as excited and intrigued by the ever-changing advances in human health and exercise development. Dr. Christine Quatro is a pediatric orthopedic surgeon and fitness enthusiast with fourteen years of experience in pediatric and adult orthopedics and sports medicine. She is board certified and fellowship trained. Just as importantly, she has two beautiful and healthy children of her own.

A few years ago, I helped Dr. Quatro get back into shape after the birth of her first child. When she found out she was pregnant with her second child, we decided to see if the proper routine could prevent or ease some of the difficulties that she and in fact all women face in reverting to their pre-pregnancy weight and fitness level after giving birth. We worked together through her second pregnancy and after her delivery to maintain her optimal well-being and in doing so, created the routines and assembled the information presented in this book. This book is a product of our combined experience and in-depth research.

Historically, women have avoided strength training because of how they have been portrayed in muscle magazines and their fear of getting too bulky. The truth is, genes and hormones are the deciding factors in building muscle mass and development. All women produce testosterone in low levels, but the majority of women do not produce enough testosterone to get bulky muscles. Instead, strength training builds lean muscle mass and helps to tone your muscles, keeping you leaner, not bulking you up. Studies show that strength training burns fat at the site of the muscle being worked, thinning that area and making you look smaller. The American Council of Sports Medicine (ACSM) recommends including strength training in your fitness routine at least twice weekly. Strength training has proven to strengthen bones, lower blood pressure, and improve heart health.

The first chapter of this book outlines the medical aspects of our program, including the benefits of working out while pregnant and the normal precautions you should take. Included are specific guidelines to follow, and information to dispel widespread and commonly accepted myths that limit a woman's options. Dr. Quatro and I make this information easy to understand and simple to follow. We have tried to limit the information to what is truly important so you will not be likely to overlook those elements that you need to know. This first chapter may be the most important for you to completely understand, so be sure to refer back to it often. If you want to learn even more, we've also included some suggested resources and publications on various aspects of pregnancy at the end of the book.

Dr. Quatro has studied the nutritional modifications and guidelines that accompany a pregnancy. She has compiled the information in chapter two, which is strictly dedicated to nutrition. In this chapter, she outlines the caloric intake needs, weight gain distribution, and the foods, vitamins, and minerals that you need, and those you do not need. This is a very important chapter as well; refer back to it often.

Chapters three, four, and five feature workouts specially designed for each trimester. This is where you will find your pregnancy workouts. There is a workout for each trimester, and we will guide you through them safely and effectively. You may modify each workout according to your personal fitness level and current strength. The pull-out posters will guide you through each step. As you progress

through each trimester, you will benefit from the guidelines we have incorporated in chapters three, four, and five. Again, refer back to these as often as you feel is necessary. Do so until you have a good understanding of the changes occurring in your body and how the training routine will enhance your pregnancy and ease your birth experience. The book closes with a postpartum workout, again accompanied by guidelines and expectations for this stage of pregnancy that is so often a main focal point to new mothers.

Our goal is to pass our tried and tested knowledge on to you in the hope that you too will embrace the principles conveyed in this book. If you would like to read more about the information presented in this book, you can refer to the bibliography. It lists the exact journal articles or chapters from which the information was obtained. We believe that by keeping fit during pregnancy, you will feel stronger and have more self-confidence thus allowing you to enjoy your pregnancy and look forward to the birth of your child.

Chapter One

Pregnancy & Strength Training: Benefits, Precautions, & Guidelines

You're pregnant and want to continue your regular workout schedule. But you're not sure how or even if you should. Forget those worries! Personal experience combined with extensive research has shown us that not only is working out possible, it's very beneficial as long as you keep a few simple guidelines in place. After thorough review, we found that beginning an appropriate workout routine during pregnancy, including strength training, is acceptable even for a woman without previous strength training experience, if she uses our guidelines. (We do recommend adequate guidance and supervision if you have not had any previous strength training experience or it's been a while since you participated in an exercise program.) Of course, **all workouts should be approved by a licensed physician.**

This chapter explains benefits of strength training while pregnant and tells you what is safe and what is an exaggeration of the facts. The guidelines that are outlined are supported by information as presented in some of the most prestigious journals available, including *American Journal of Obstetrics and Gynecology, Journal of the American College of Sports Medicine,* and *Clinics in Sports Medicine,* as well as additional information from the most notable literature on obstetrics and gynecology. We present the most significant points from this information that reveal the truths about pregnancy and strength training.

EXERCISE DURING PREGNANCY

Working out before and during pregnancy has also proven to be beneficial in getting back in shape after the baby comes. You can usually get a doctor's release soon after delivery and begin your postpartum workouts. Women have found that they look forward to getting right back into their fitness routine; doing so has a positive effect on the new mother's self-esteem and mood.

Your fitness routine should be designed to fit you as an individual and each aspect of your individual fitness routine is equally important. The three major elements of any fitness routine are: stretching, aerobic exercise (cardio), and strength training. While this book will focus on strength training, it is important to incorporate aerobic exercise and stretching to complete your routine.

Aerobic exercise is imperative to keep your heart healthy and to build up endurance for labor. A few recommended choices for a good aerobic workout include walking (on a treadmill or outdoors if the weather permits), swimming, a low-impact aerobic floor routine, and using an elliptical trainer or stationary bike. Your cardio session during pregnancy should last anywhere from ten to thirty minutes, depending on your fitness level and ability.

A client of mine named Michelle demonstrated the benefits of working out during pregnancy. As she became aware of her growing/changing body, she searched for a way to maintain her self-confidence and some of her physique. About a month into her pregnancy, Michelle began to work out with me two to three times a week with small weights and various pieces of equipment. She continued this routine right up to three days before she delivered.

Michelle's delivery took three and a half hours and had no major complications. She attributes her "ease" and confidence during labor to being in good shape and sticking with her exercise routine throughout her pregnancy. Let's discuss just a few of the benefits Michelle received and what you can expect if you follow the *Delivering Fitness* workouts.

BENEFITS OF EXERCISE DURING PREGNANCY

Easier Labor and Delivery

During exercise, there is an increase in beta-endorphin levels. These increases are even higher during pregnancy. Beta-endorphin is a hormone that is believed to decrease your perception of pain. Women who exercise regularly showed lower perceived exertion and pain during labor and an improved course of labor. Other studies show a shorter duration of labor and fewer obstetrical complications.

Fewer Associated Discomforts

Studies show that exercise during pregnancy increases energy level and improves self-image, maternal fitness, and physical capacity. Studies also show decreases in discomforts such as back pain, hip pain, leg cramps, varicose veins, fatigue, nausea, leg swelling, hemorrhoids, and pregnancy weight gain. Exercise during pregnancy can also combat depression and fatigue.

Improved Health of Your Baby

Women who work out gain less weight and their babies typically have a smaller percentage of fat at birth. These babies also maintained lower body fat percentage into childhood. With the rate of childhood obesity being epidemic in the country, this is an added benefit you may not have considered.

Decreased Risk of Gestational Diabetes

Exercise has been used as an adjunct to treatment of gestational diabetes. It may also lower need for insulin in some patients.

Decreased Risk of Osteoporosis

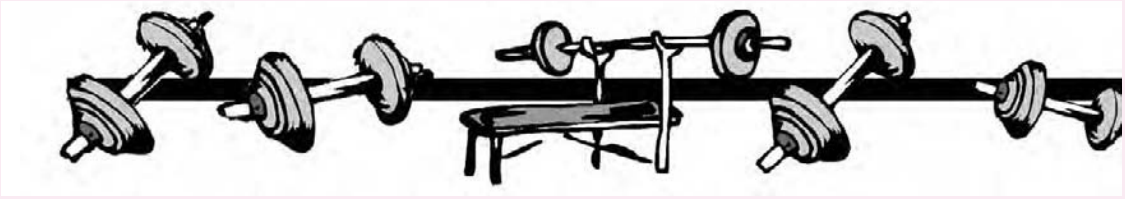
Strength training has been linked to slowing or preventing bone loss. Pregnancy can contribute to bone loss, predisposing you to osteoporosis later in life. Strength training keeps bones healthy, slowing bone loss.

Smarter Baby

Research suggests that language skills in children tested at age five are superior in children whose mothers had exercised throughout pregnancy, as opposed to those whose mothers did not exercise while pregnant.

The following table provides a more complete listing of the benefits.

BENEFITS OF EXERCISE DURING PREGNANCY



- Improved circulation
- Fewer problems with varicose veins, hemorrhoids, backaches, and muscle or joint soreness
- Increased metabolism, better weight gain control
- Enhanced balance
- Stronger bones, lessen the risk of osteoprosis
- Increased strength and flexibility
- Reduced swelling
- Improved exercise and labor tolerance
- Improved coordination
- Improved digestion and reduced constipation
- Increased endurance
- Faster postpartum recovery
- Shorter second stage of labor
- Improved body image, mood, and sense of wellbeing
- Improved sleep
- Stronger muscles most affected by pregnancy: pelvic floor muscle, abdominal, and lower back muscles
- Can decrease risk of preterm birth

STRENGTH TRAINING DURING PREGNANCY

So why is strength training so important?

Strength training, also known as resistance training or weight training, is proven to strengthen muscles as well as bones. It can be a full-body workout with full-body benefits. Weight-bearing activity is shown to burn more fat than carbohydrates, leaving energy for building your baby. Although we feel that strength training is as important as aerobic training for endurance, when done in conjunction, the results are priceless. Having strong muscles correlates with a strong mind and spirit. Through our research, we found that strength training during pregnancy drastically improves a woman's self-image, energy level, and overall attitude throughout pregnancy. More importantly, the health benefits for mother and child are significant. Yoga, water aerobics, and walking are all good forms of exercise, but

our studies show more beneficial results with strength training in conjunction with these other forms of exercise. Mothers who work out during pregnancy have an easier time staying within "normal" weight gain range, are less likely to develop gestational diabetes, and experience less swelling.

PRECAUTIONS AND GUIDELINES FOR EXERCISE AND STRENGTH TRAINING DURING PREGNANCY

HEART RATE

Your heart rate at rest increases ten to twenty beats per minute during pregnancy, so it will take less exercise to elevate your heart rate. Therefore, make sure you keep your heart rate in the "Safe Zone," which should fall between 110 and 150 beats per minute (depending on your own target heart rate [THR]) to produce positive effects for you and the baby. As your heart rate increases, so does the baby's. However, there are no studies that indicate these increases have any detrimental effects on the fetus. Be sure to check your heart rate frequently or wear a heart rate monitor with an alarm. When you check your rate and it is above your THR or if the alarm on your monitor goes off, stop exercise until your heart rate returns to the "Safe Zone."

EXERCISE SCHEDULE

American College of Obstetrics and Gynecology (ACOG) guidelines state that working out seven days a week is acceptable. We recommend that you maintain a minimum of two strength training days and a minimum of one aerobic workout per week. You can add up to two strength training days and/or up to five aerobics days if you feel up to it. Each workout should last about ten to sixty minutes. Studies show that the positive effects of exercise during pregnancy are lost if not maintained throughout all three trimesters.

CORE BODY TEMPERATURE

It is important that your core body temperature does not exceed 102 degrees Fahrenheit. Research has shown that exceeding this limit is very hard to do, but err on the side of caution—avoid high-intensity outdoor workouts during the summer months and have proper ventilation for indoor workouts. Also, do not exercise outside in hot or humid weather. (Studies show that during hot weather, indoor exercise within your THR zone should not cause your body temperature to exceed 102 Fahrenheit.)

CENTER OF GRAVITY

Your center of gravity moves forward as you grow larger, so you must accommodate this change in your workout. Use stabilizing structures as indicated during the workout—for example, a chair, wall, ballet bar, bench, or workout partner.

BLOOD PRESSURE AND BLOOD FLOW TO THE FETUS

Exercise increases your blood pressure, decreasing blood flow temporarily to the baby. But because of adaptations to exercise, this increase does not decrease the amount of oxygen flowing to the baby. The concentration of oxygen in your blood is greater during pregnancy and your breathing rate increases with exercise. Your baby will also get a greater percentage of oxygen naturally, because your body is more efficient in distributing it.

JOINT MOVEMENT

Due to the production of a hormone called relaxin along with estrogen, all of your ligaments are looser and less easily controlled during pregnancy and therefore more susceptible to injury. Relaxin helps your pelvis expand to accommodate delivery. We recommend lowering the amount of weight you lift and, if possible, have a spotter or workout partner with you. Work with a trainer at least once or twice a month to ensure you are doing the exercises correctly. Use extra caution when performing overhead exercises. Also, if you feel tired or strained, stop.

WATER INTAKE

Exercise can dehydrate you, and there can be negative effects of dehydration. Therefore, it is very important to drink water before, during, and after each workout. We will discuss this further in chapter two.

BACK AND HIP PAIN

The weight of the baby, the production of relaxin, and the change in your center of gravity will increase the curve in your back and the looseness of your pelvic joints, subjecting you to aches and strains. It is important to continue abdominal, back, and pelvic floor exercises throughout pregnancy as instructed in this book. Watch your posture during your workouts and for the rest of the day.

SWELLING

You may have an increase in swelling in your legs, ankles, feet, hands, and wrists.

In the second or third trimesters, the weight of the baby may press on a large vein in your abdomen, responsible for the flow of blood from your legs back to the heart. This is normal, but may cause swelling of the legs. Sitting or lying on your left side may decrease these effects. We recommend that you modify your exercises accordingly, and avoid exercise while lying flat on your back during your second and third trimesters.

BODY ALIGNMENT

You must protect your back and knees. Keep your head, neck, chest, spine, and pelvis in line by keeping an erect posture during exercise. This will keep your center of gravity closer to midline and you may have fewer problems with balance during your workouts.

BLOOD SUGAR LEVEL

Exercise utilizes the body's blood sugar. Therefore to maintain adequate blood sugar levels, eat a small meal 30 minutes to an hour before your workout and immediately after.

BENEFITS OF A PERSONAL TRAINER

There are several benefits in consulting with a certified personal trainer when exercising while pregnant.

A PERSONAL TRAINER WILL HELP YOU:

- Ensure proper form when performing the exercises
- Ensure use of proper balance of opposing muscle groups
- Avoid muscle strain or injury
- Set an exercise routine
- Keep workouts fun and interesting
- Lend support and motivate you to achieve your exercise and fitness goals

It is not necessary to hire a personal trainer for every workout, but try to enlist help when beginning your exercise routine and as often as you can during your pregnancy.

Chapter Two

Nutrition: Guidelines & Advice

Now that you're pregnant, the way your body functions has completely changed. You are growing another human being inside of you and your nutritional requirements will dramatically increase. You will need to consume 300 to 500 more calories per day, and you can expect to gain one-half to one pound per week after the first trimester. Your body's digestion will slow down, allowing your body to absorb more nutrients from your food. So let's discuss how you can modify your diet during this period.

CALORIC INTAKE DURING PREGNANCY

In general, your caloric intake should increase. However, giving in to the urges and cravings of pregnancy is not necessarily a good thing. Understanding how your nutritional needs change as your pregnancy advances can help you maintain a healthy weight throughout this time.

Your caloric needs will only slightly increase in the first trimester. You may be hungrier or have cravings and aversions during this period of time, but it is important not to fall off track early. Instead of giving in, maintain adequate nutrition and avoid fatty or sugary foods. Usually the cravings represent needs that can be met by eating more complex carbohydrates (whole grain breads, fruit, oatmeal, vegetables) and supplementing your diet with prenatal vitamins that contain iron and important minerals like calcium. Dr. Quatro found that her craving for fast food was usually satisfied by an apple and a turkey sandwich on whole wheat bread. Most studies show that the recommended number of calories needed for an average-sized pregnant woman is 2,500 per day after the first trimes-

ter. This amount usually is enough to supply adequate nutrition to the baby; however, there is some variation from person to person.

The second and third trimesters are the periods of growth of the fetus, and the caloric needs increase, but only by 300 to 500 calories per day depending on your activity level. That is the equivalent of a peanut butter sandwich and a piece of fruit. The cravings are your body's way of making sure it gets enough nutrients for the baby, but it is up to you to make healthy food choices. This chapter contains answers to some of the more common questions about weight issues during pregnancy, which can help you make the best choices.

The FDA recommends a daily diet comprising three to four servings of meat or other protein, six to eleven servings of breads and other whole grains, three to five servings of vegetables, two to four servings of fruits, and four to six servings of milk or other dairy products daily during pregnancy.

No one diet or food selection program will suit the needs of all pregnant women. Make your own choices within these guidelines. Refer to the chart on page 17 for suggestions.

WHY AM I GAINING SO MUCH WEIGHT?

During pregnancy, your body has changed its functioning and is developing tissue for a variety of reasons. So it would make sense that if you add 300 calories per day, or 2,100 calories per week, your weight gain should be about two-thirds of a pound per week. However, weight gain can be more than these estimates, even if you consume the appropriate number of calories. This is because, in addition to the baby's growth and development, you are experiencing the following changes:

- Enlarged breasts that begin to form a ductal system that will transfer milk to the baby.
- Development of a placenta which links the fetus to the mother's uterus and serves as a barrier to the mother's harmful waste products.
- Dramatic increase in your body's circulating fluid so as to supply water, blood, and nutrients to the baby.
- Your body's attempt to store fat as it prepares to feed an infant for a year or

more.

The following chart shows a typical weight gain distribution during pregnancy.

AVERAGE WEIGHT GAIN DISTRIBUTION

Areas of Increase	Pounds
Maternal Stores of Fat, Protein, and other Nutrients	7
Increased Body Fluid (other than blood)	3-4
Increased Blood	3-3½
Breast Growth	1-2
Enlarged Uterus	2
Amniotic Fluid	2
Placenta	1-1½
Baby	6-8
TOTAL	**25-30**

HOW MUCH IS TOO MUCH?

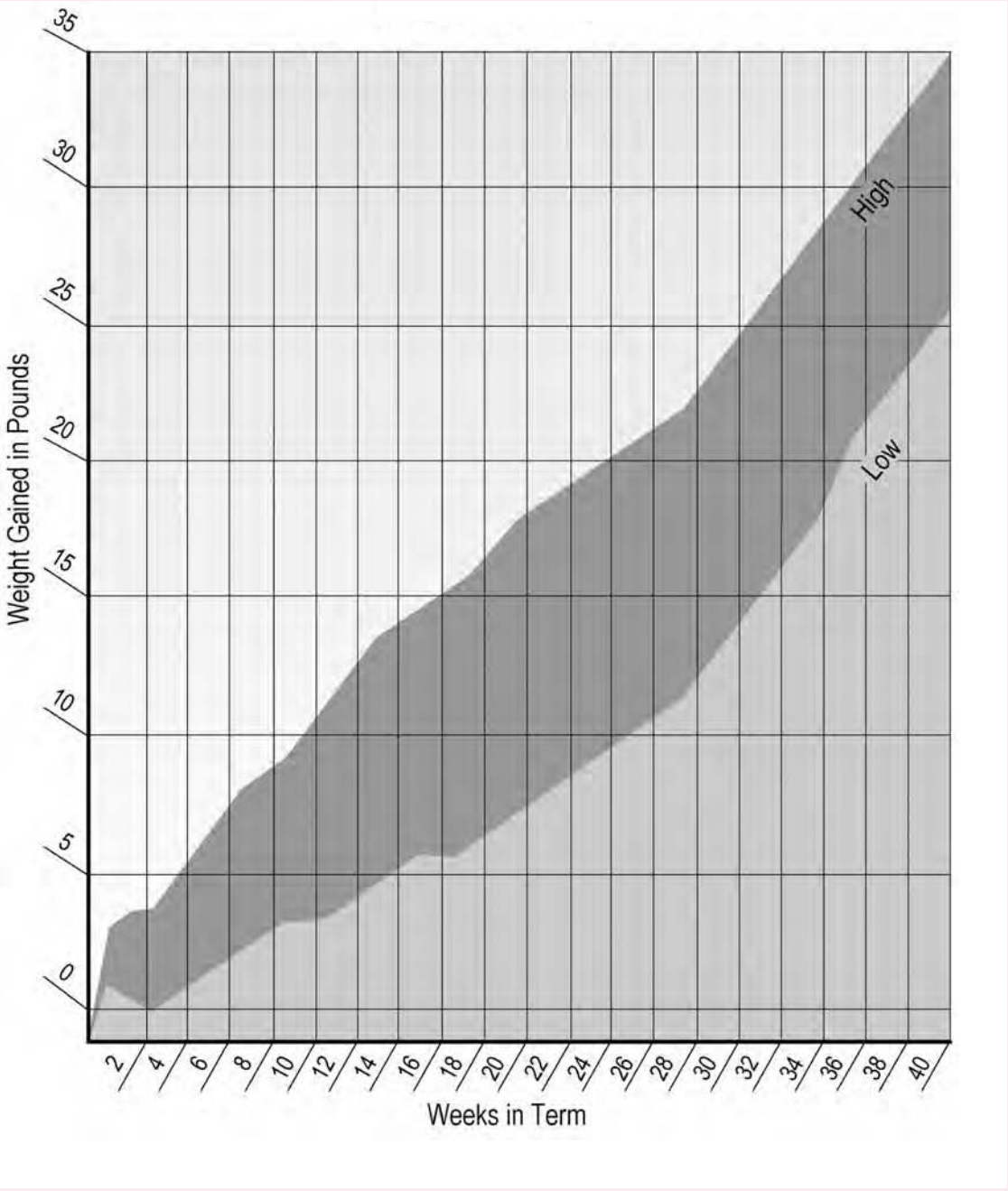
So how much weight gain is acceptable and needed during pregnancy?

Do not worry about mild fluctuations in weight, as they most likely represent fluid shifts. It is important, however, to maintain a steady overall weight gain, which usually means the baby is growing normally.

By the end of pregnancy, you will need to have gained between twenty-five and thirty pounds if your weight before pregnancy is normal, thirty to thirty-five if you are underweight prior to pregnancy, and fifteen to twenty pounds if you are overweight or obese before pregnancy. What is most important, however, is the slow and steady progression of weight gain, showing adequate daily nutrition and moderation of caloric intake.

We have provided a graph on the next page to plot your weight gain.

WEIGHT GAIN CHART



1. On the horizontal axis, find the number of weeks' gestation, which is the number of weeks since the beginning of your last menstrual period, or the number of weeks your doctor told you, based on the ultrasound testing.

2. On the vertical axis, plot your gained weight in pounds.

THE FOODS YOU NEED

WATER

Water, water, everywhere, and not a drop to drink. It may feel like that to you during pregnancy. The amount of fluid in your body increases by up to 66 percent during pregnancy, and is required to transfer nutrients to the baby. Therefore, you must increase your fluid intake, especially if you are involved in a regular exercise program. Ten to twelve cups (eighty to ninety-six ounces) of water a day should be the minimum and you should drink even more if you feel thirsty.

Also, drink plenty of fluids before, during, and after your workout sessions. Dehydration can cause mild headaches, constipation, and dizziness, and can increase your heart rate or that of your fetus. It has also been linked to premature labor.

So always keep water handy.

PROTEIN AND CARBOHYDRATES

Carbohydrates are the main source of energy for your body. Due to the dramatic increase in your metabolism during pregnancy, your body will require more energy, and therefore a higher intake of complex carbohydrates. However, avoid foods high in sugar.

It is important to keep your blood sugar at an acceptable level, because the baby uses this as his or her primary energy source. It is shown that during pregnancy, exercise can decrease your blood sugar levels. Therefore it is important to eat a meal high in carbohydrates (fruit, vegetables, or whole grain crackers) thirty minutes to one hour prior to and immediately after exercise.

A slight increase in protein will also be required during pregnancy.

TIP

- The average amount of protein required before pregnancy is 0.36 grams per pound of body weight. For example, if you weighed 130 pounds before pregnancy, you normally need about forty-seven grams of protein each day. Just use the formula:

  Body weight x 0.36 = grams of protein needed. E.g., 130 x 0.36 = 47 g

- The recommended daily allowance (RDA) for protein during pregnancy is sixty grams.

Maintaining a high-protein diet appears to have no ill effects on the baby. So if you were already on a high-protein diet, you will not need to increase your dietary protein. But an increase in carbohydrates will be required to meet the nutritional needs of your new metabolism.

IRON

Fatigue is possibly the most common symptom during pregnancy; the most common cause is iron deficiency anemia. This happens because your body is now making more red blood cells. These cells are responsible for transferring oxygen to the fetus through the placenta. It is important to get enough iron to make good cells that function well.

This problem should not be so common in the United States, where we have access to so many good foods and nutritional supplements. The pre-pregnancy RDA for iron is eighteen milligrams; during pregnancy it is thirty milligrams. It can take three months of iron treatment to gain back all the cells you need once you are anemic, so keep up your iron intake. Anemia can contribute to preterm delivery, cause difficulty with healing, and even increase risk of perinatal mortality. This is why it is important to keep up your iron intake.

Some foods high in iron include: raisins, dried beans, dark green leafy vegetables, lean meat, whole grains, fortified cereal, tofu, nuts, dried apricots, prunes, and poultry. Most prenatal vitamins contain iron, so if you cannot get enough of this nutrient in your diet, take a supplement. Keep your fiber and water intake up to avoid constipation.

Calcium

Have you ever heard about women having problems with their teeth during pregnancy, or cramping and restlessness in their legs that keeps them awake at night? These problems can be related to inadequate calcium intake. Your baby needs calcium to build bones, teeth, and other tissues. If you do not supply enough in your diet, your baby will take it from your muscles, bones, and teeth, predisposing you to osteoporosis later in life. Although we believe that the beginnings of osteoporosis may occur as a child, the problem worsens during adolescence and pregnancy. During those times, the requirements for calcium have increased, but the intake may have stayed the same.

The RDA for calcium increases during pregnancy to 1,500 mg, which is the equivalent of about five cups of milk every day. It is very difficult for many of us to add that quantity of milk to our diets, and a supplement is usually required. Unfortunately, most prenatal vitamins do not supply enough calcium. Surprised? We were, until we understood the relationship between calcium and iron. If taken together, they bind and are excreted, losing the effect of the iron, which we just learned is also essential. So the calcium must be taken separately.

- Most nutritionists recommend at least a couple of hours between doses of iron and calcium. So drink your milk or eat it on your cereal in the morning, wait a couple of hours, and take your prenatal vitamin containing iron with your mid-morning snack.
- Calcium can only be absorbed 400 to 500 mg at a time. That is why you usually cannot find a calcium tablet that has the whole day's supply in one pill. Take one 400 mg tablet three times daily and eat some food containing calcium for a total of 1,500 mg per day.
- Calcium supplements are best absorbed on an empty stomach. Supplements should be taken before meals.
- A high-protein diet does deplete some calcium, so it further increases your calcium requirement.

Not into supplements? Then consume plenty of the following daily: skim milk, low-fat yogurt and cheese, calcium-fortified orange juice, sardines (including the bones), and green, leafy vegetables such as broccoli, kale, and bok choy.

FOLIC ACID

You should get 600 micrograms of folate (folic acid) a day. Folic acid helps in preventing neural tube defects (a problem with development of the brain or spinal cord) and helps make the extra blood that must be produced in your body. You should actually start taking it three months prior to conception to ensure an adequate supply during the first trimester when the neural structures are forming. Some food choices high in folate include breads, cereals, pastas, asparagus, orange juice, lentils, avocados, broccoli, kale, bok choy, beans, wheat germ, and oranges. If you cannot get enough folate in your diet, supplement your diet with a prenatal vitamin high in folic acid.

VITAMIN B12

This is an essential vitamin that is responsible for helping make red blood cells, along with iron, to avoid anemia and support the immune system. We all know that pregnant women are more susceptible to infections, and often get colds or flu-like illnesses during their pregnancies. Along with plenty of rest, vitamin B_{12} can help boost your immunity to common infections. Foods high in vitamin B_{12} include meat, fish, poultry, eggs, milk, and other dairy products. The RDA during pregnancy is eight micrograms.

ZINC

Zinc is essential for your baby's brain and cell development. It is present in high levels in meat and dark meat poultry, whole grains, peanut butter, nuts, beans, wheat germ and tofu. You should consume fifteen milligrams a day during pregnancy.

IRON

Due to hormonal changes, the intestinal tract slows to gain nutrients for the growing fetus. This along with increased intake of iron may cause constipation. An increase of fiber and regular exercise will help to keep things moving. Increase your intake to twenty-five to thirty grams per day during pregnancy from sources like vegetables, fruits, beans, whole grain breads, or supplements.

VITAMIN B6

Vitamin B_6 or pyridoxine is essential to the production of building blocks (proteins) for your blood cells, antibodies, and hormones to deliver glucose to cells. Vitamin B^6 is found in whole grain breads and cereals, bananas, chicken, fish, pork,

avocados, and liver. The requirement goes up to 2.5 mg per day during pregnancy. It has also been used to treat nausea in the first trimester of pregnancy.

Refer to the following food and vitamin tables for specific information.

QUICK REFERENCE FOR HEALTHY EATING

Food Groups	Daily Amounts	Sample Servings	Nutritional Benefits
Dairy 	4-6 servings	8 oz. skim milk 1 cup (8 oz.) lowfat yogurt 2 oz. cheese * ¾ cup cottage cheese	Calcium, magnesium, potassium
Protein 	3-4 servings	2 tablespoons peanut butter 2-3 oz. cooked meat 1 egg ½ cup cooked dried beans 3 oz. canned fish ** 2-3 oz. fish	Magnesium, potassium, copper, iron, selenium, zinc, calcium, amino acids
Fruits 	2-4 servings	½ cup canned or cooked fruit ½ cup fruit juice 1 medium banana ½ cup dried fruit	Fiber, potassium, vitamins, chromium, magnesium, iron
Complex Carbohydrates 	6-11 servings	1 slice whole grain bread ½ bagel ½ cup cooked pasta, cereal, or rice 1 oz. ready-to-eat cereal	Chromium, selenium, energy
Vegetables 	3-5 servings	¾ cup vegetable juice ¾ cup broccoli, carrots, or other vegetables, cooked or raw 1 medium baked potato 1 cup salad	Copper, fiber, calcium, iron, vitamins
Extras		Wheat germ	Chromium

* Avoid unpasteurized milk or brie, Camembert cheeses.

** Avoid uncooked fish and sushi due to risk of food poisoning. Also avoid fish high in mercury such as mackerel, swordfish, and tuna.

NUTRIENT CHART

Nutrient	Range, Non-Pregnant Adult	Range, Pregnant Adult
Protein	0.36 body weight	0.36 body weight (weight + 10 g)
Vitamin A	5,000 IU	8,000 IU
Vitamin D	400 IU	400 IU
Vitamin E	30 IU	30 IU
Vitamin K	n/a	65 IU
Vitamin C	60 mg	70 mg
Thiamin	1.5 mg	1.7 mg
Riboflavin	1.7 mg	2.0 mg
Niacin (B_3)	20 mg	20 mg
Vitamin B_6	2.0 mg	2.5 mg
Folic Acid	400 µg	800 µg
Vitamin B_{12}	6 µg	8 µg
Calcium	1,000 mg	1,300 mg
Phosphorus	1,000 mg	1,300 mg
Magnesium	400 mg	450 mg
Iron	18 mg	18 mg
Zinc	15 mg	15 mg
Iodine	150 µg	150 µg
Selenium	n/a	65 µg
Biotin	300 µg	300 µg
Pantothenic Acid	10 mg	10 mg
Copper	2 mg	2 mg
Manganese	n/a	2.0-5.0 mg
Fluoride	n/a	1.5-4.0 mg
Chromium	n/a	50-200 µg
Molybdenum	n/a	75-250 µg

n/a = Values not available.

THE THINGS YOU DON'T NEED

CAFFEINE

Keep caffeine consumption to a minimum while trying to conceive or while pregnant. Caffeine is a stimulant and can affect the nervous system of your baby. Caffeine causes calcium to be excreted through urination, which reduces the amount available to you and your baby.

TOBACCO

With every puff of a cigarette, the womb is filled with toxins that inhibit both nutrient and oxygen delivery to your baby. Smoking causes abnormally low birth weight and can cause problems such as learning and behavioral disabilities. Smoking should be ceased before even trying to conceive. But if you're already pregnant, stop now. If you are a smoker, your need for certain B vitamins also increases.

ALCOHOL

Excessive alcohol can cause birth defects, including a major disorder called fetal alcohol syndrome (FAS). FAS results in disabilities such as mental retardation, central nervous system disorders, and other such problems. Because we are unsure how much alcohol it takes to cause birth defects, it is best to limit intake.

MEDICATION

Clear all prescription and over-the-counter medications with your obstetrician—even baby aspirin. All illicit drugs must be avoided. Even small amounts can cause serious birth defects and behavioral disorders. Some medications may be continued if essential to your health as prescribed by your physician.

PREGNANCY MUSTS


Eat a well-balanced diet


Drink ten to twelve glasses of water daily


Exercise for health and circulation


Avoid smoking


Reduce or eliminate alcohol and caffeine


Sleep eight hours each night


Do Kegel exercises


Take time for yourself each day, even just thirty to sixty minutes for your workout

Chapter Three

The Workouts: Getting Started

Before you begin your workout routine, let's go over some guidelines to be certain your workout is as safe as it is productive.

CHOOSING EQUIPMENT

First, let's make sure you have the right equipment.

YOU WILL NEED:

- Dumbbells weighing three, five, eight, or ten pounds each
- Medicine ball
- Exercise bands
- Physio ball

OPTIONAL EQUIPMENT

- Exercise mat
- Workout bench or chair
- Heart rate monitor

If you can, invest in a heart rate monitor. It is important to monitor your heart rate during every workout. A heart rate monitor is a quick, easy, and effective way to monitor the intensity and duration of your workout. There are many brands available and they can be found at most sporting goods stores. Choosing the right heart rate monitor is really a personal choice after extra options and price are taken into consideration.

You can also check your heart rate periodically by placing your index and middle fingers on your neck to find your pulse. Watch the clock for ten seconds and count

the number of beats in that ten seconds. Then multiply that number by six.

One more way to monitor your intensity is the "two-sentence" talk test. You should be able to say at least two sentences without being out of breath. Although effective, this method is the least accurate of the three.

GENERAL RECOMMENDATIONS

EQUIPMENT

We emphasize slow, controlled movement for every exercise. This will help you target the muscle group you are working on. It will also help you to prevent or lessen the risk of injury. Maintain a regular workout schedule of two to four times a week. Avoid overhead exercises with heavy weights and try to work out with a buddy or trainer to improve form.

- Be sure you understand each exercise before you attempt it.
- Ask questions via e-mail (info@deliveringfitness.com) or via phone,

1-888-349-6449.

- Hire a fitness professional if you are able to afford one. (Research the individual's references and qualifications.)
- Perform a five-minute warm-up and cooldown. Hold each stretch twenty to thirty seconds.
- Wear comfortable clothing and shoes, and a well-fitting bra for support.

SIDE EFFECTS OF PREGNANCY THAT CAN AFFECT YOUR WORKOUT

As you may well know, along with pregnancy come changes in your body and daily activity that will affect your fitness routine. First and foremost is your energy level. This is a major issue during your first trimester. Due to morning sickness (another side effect) and your body working overtime, you will be more tired than usual. Your energy level will continue to be an issue for some time after the baby comes (all those sleepless nights!). Just keep your goals in mind and remember: a workout session will only make you feel better! Later in your pregnancy, because of your increased weight and protruding belly, you may find it more difficult to get through your workouts. This is where your network of family and friends will be extra-important to offer you encouragement and motivation. We are also available to assist you for this very need. Visit our Web site at www.deliveringfitness.com.

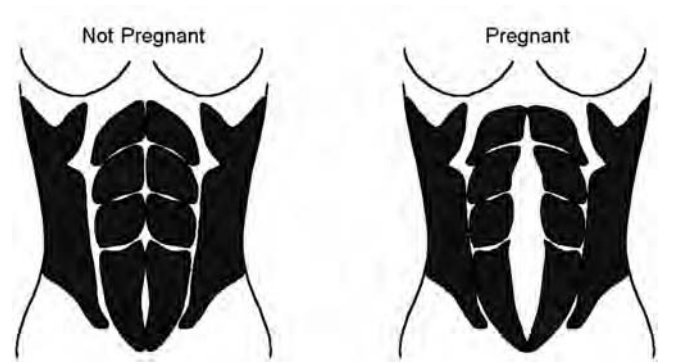
PREVENTING INJURY

For your workout, you will be using small/light weights with higher repetitions. If you are already on a fitness routine, you can probably maintain the weights you are currently using. For advanced fitness levels, it is recommended that you use eight- to twelve-pound weights or lighter for upper body exercises and under thirty pounds for lower body exercises. If you are new to exercise you will probably want to use three- to eight-pound weights for upper body exercises and around twenty pounds for lower body exercises. Your obstetrician may be able to give you further guidelines on the amount of weight you should be lifting according to your personal health level. This is not the time to increase your fitness routine. Rather, this is a time to establish or maintain a fitness routine. It is always better to be conservative and make slow adjustments instead of overdoing it, causing injury, and not being able to work out at all.

PRECAUTIONS TO TAKE DURING YOUR WORKOUT

- Monitor your heart rate and intensity level closely.
- Do not overexert yourself. Joint injury is an issue due to the production of estrogen and relaxin. However, if the exercises are done correctly with the right size of weights and the correct form, joint injury is highly unlikely.
- Stay hydrated by drinking plenty of water. Just be sure to drink water before, during, and after your workout. Early labor is a potential complication of dehydration.
- Keep movements slow and controlled.
- Do not bear down or hold your breath during the execution of an exercise (See *valsalva maneuver* in glossary).
- *Diastasis* is the separation of the abdominal muscles. A small separation is normal during pregnancy due to hormonal changes in any woman, but it can be worsened by already weak abdominal muscles or overtraining. A diagram is shown that will help you understand this condition.

DIASTASIS



If you feel this has happened, see your doctor immediately. They will guide you further on care. (See diastasis in glossary.)

WARNING SIGNS TO STOP EXERCISING

- Sharp pain in the abdominal area
- Vaginal bleeding
- Dizziness
- Excessive fatigue
- Increase in any vaginal fluid
- Swelling, pain, and redness in calf or leg
- Persistent headaches, visual disturbances
- Persistent contractions
- Severe shortness of breath
- Chest pain
- Decreased fetal movement
- Muscle weakness
- Preterm labor

If any of these symptoms occur, stop exercise and contact your physician immediately.

CONTRAINDICATIONS TO EXERCISE DURING PREGNANCY

- Risk factors for preterm labor
- Vaginal bleeding
- Premature rupture of membranes
- Some forms of heart disease
- Obstetrician does not give release
- Restrictive lung disease
- Multiple gestation
- Placenta previa after twenty-six-weeks' gestation
- Premature labor during current pregnancy
- Pre-eclampsia/Pregnancy-induced hypertension

Chapter Four

First Trimester: Guidelines & Workout

During your first trimester, you will notice many changes. Your weight gain will probably be minimal, but your hormones will be in full effect! This is a good time to sit down and write a list of goals or things you would like to accomplish during your pregnancy. You may also want to consider keeping a journal to look back at and/or share with your child in the future.

WHAT TO EXPECT

You will most likely see a drop in energy level, along with breast tenderness and back pain, but you should be able to maintain your center of balance and weight gain should be minimal. It is important to listen to your body and take the necessary precautions against possible injury during a workout, based on your fitness level at the start of your pregnancy. Your fitness level is determined by exercise experience, heart rate, and strength.

Keeping a regular workout schedule is key to your success with this fitness routine. You must work out at least twice a week and maybe up to seven days a week depending on your fitness level. Also, make sure you have a good combination of both strength and aerobic exercise in your routine. Ideally, you should aim for a minimum of two days a week of strength training plus a minimum of one day a week of aerobic training.

Due to the production of relaxin, remember to cease heavy weight training. Use three- to twelve-pound weights on upper body exercises and less than twenty pounds

on lower body exercises as well as exercise bands, a physio ball, and your own body weight from this point on. Do not overdo it, just focus on keeping you and your baby healthy!

In your first trimester, your caloric intake can increase by around 300 calories a day if you are going to work out during your pregnancy. This should include an increase in vitamins, water, protein, and complex carbohydrates. Make sure you are getting your nutrients as outlined in chapter two.

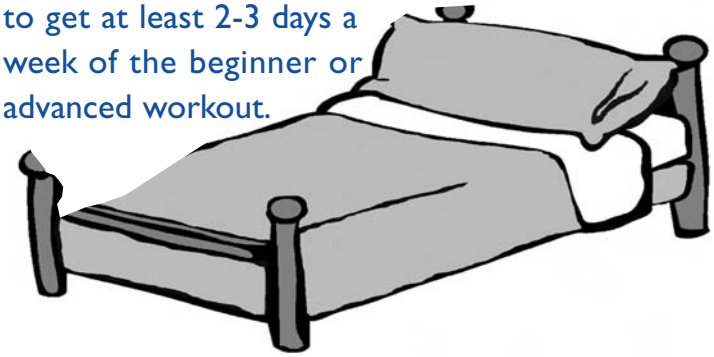
MAKE SOME ADJUSTMENTS

Remember that your core temperature should not exceed 102 degrees Fahrenheit. This is especially important during the first trimester because elevation beyond that temperature can cause an increase in the risk of certain birth defects. Make sure your workout is weather-friendly. If it is too hot outside, consider moving your workout to a shady spot or indoors. Also, be sure your workout area is well-ventilated and cool.

As we said before, you will probably notice a significant change in your energy level, which can truly affect your workout. Therefore, we recommend the Ten-Minute Energy Test to determine whether you are able to complete our suggested workout.

THE TEN-MINUTE ENERGY TEST

Find a comfortable, quiet place to lie down for approximately ten minutes. If you do not find yourself struggling to stay awake, you should begin your workout. Some days you may be too fatigued to exercise at all, but it is important to get at least 2-3 days a week of the beginner or advanced workout.



If you pass the Ten-Minute Energy Test, proceed to your workout. Your body will let you know your level of fatigue, so listen to it!

- During your workout, you should be able to carry on a two-sentence conversation comfortably. If you are unable to do this, then you need to slow down or decrease your intensity.
- Be sure to keep an eye on your heart rate after each set or before you move on to your next exercise. Your heart rate should not exceed your personal THR zone; you should maintain your low- and mid-range THR for an effective workout. Here is a simple way to help you calculate your THR:

THR

220	-	Age	=	_____	Maximum Heart Rate (MHR)
MHR _____	X	0.6	=	_____	Low end of your THR
MHR _____	X	0.75	=	_____	Midpoint of your THR
MHR _____	X	0.9	=	_____	High end of your THR

COMMON PROBLEMS

Morning sickness is a very common problem in your first trimester. It will affect many of you, and there isn't much that can be done about it. Morning sickness can be caused by a drop in your blood sugar level, so try to eat four to six small meals throughout the day. This is especially important before and after your workout.

TIP

Many of you will experience morning sickness in one form or another. This should pass as you progress to your second trimester, but there are some things that may help you through it now. Ginger helps calm the stomach. Yes, gingersnaps have ginger in them! You can also try ginger tea.

Lower back pain is also an issue in this trimester and throughout your pregnancy. Again, there is not much that can be done about this except to make sure

you have good posture and begin lower-back-strengthening exercises.

You will probably experience some major mood swings. This is due to an increase in hormone levels. Rest, eat right, and socialize. Being around other pregnant women may help you feel more at ease with what's going on in your life. Remember—always drink plenty of fluids, eat right, and get lots of rest!

ABOUT YOUR WORKOUT

Take note that the exercises do not state a specific dumbbell weight you should use. This is because everyone is going to be at a different skill level. You should determine your own skill level. Start small and work your way up, or ask a certified fitness professional.

You will notice on the first, second, and third trimester workout posters that there are three strength training days and one cardio day ("cardio" refers to your aerobic workout). The third strength training day is optional and you may repeat a day to add a fourth strength training day if your fitness level allows. Remember, it is important to get at least one aerobic workout done per week in addition to your strength training, so plan your workouts wisely.

- If you have a regular exercise routine, you can start with the *Delivering Fitness* advanced workout and continue at the same fitness level with mild modifications.
- If you are just beginning your fitness routine, start with the lowest level of the *Delivering Fitness* beginner workout and progress as your fitness level increases.

Modifications include lowering or raising the amount of weight or the number of repetitions for any exercise. You can lower or raise the reps by three to five reps per set and you can lower or raise the weight to the next smaller or larger size.

As with all exercise routines, check with your physician before beginning this routine. Here is your **First Trimester Workout!**

Chapter Five

Second Trimester: Guidelines & Workout

Welcome to your second trimester! At this stage in your pregnancy, you will see even more changes in your body and mood. You will notice more weight gain and your belly will also begin to show. To accommodate this, we will start with minor modifications and add more as you progress.

WHAT TO EXPECT

During this trimester you will probably feel much better and have more energy than you did in your first trimester. Your body has begun to adapt to the changes, and the morning sickness has probably passed. In your second and third trimesters, your caloric intake should increase by 300 to 500 more calories a day.

Keeping on your workout schedule is also very important. It is only beneficial to you if you are working out on a regular basis. It may actually be harmful to you and your baby if you are working out sporadically. Try to get in at least two or three workouts a week; of course, three to four times a week would be ideal.

Your heart rate will automatically be higher. So make sure you are still wearing your heart monitor or checking your heart rate manually and lower your intensity whenever needed. You should still target your heart rate between your low and mid-range THR throughout your workout. And make sure you are warming up and cooling down for each workout.

MAKE SOME ADJUSTMENTS

All exercises where you lie flat on your back or in the supine position must stop from this point on. In that position, your enlarged uterus can block the flow of blood through the inferior vena cava, a blood vessel that carries blood from your legs back to the heart. You will still be able to perform crunches with the use of a physio ball in the semi-reclining position. For all overhead weight lifting, we recommend performing these exercises seated and decreasing your normal lifted amount of weight.

Your center of gravity will also begin to change as your belly grows and puts more weight in front of you. Be sure to take your time with your exercises and adjust accordingly. You should be able to perform all the exercises we put in this workout, but feel free to substitute an interchangeable exercise from the previous workout if needed. You may contact our Web site, www.deliveringfitness.com, anytime you have questions regarding your workout. We can guide you through adjustments that may need to be made.

COMMON PROBLEMS

Lower back pain and leg pain are often a problem. Leg cramps can be caused by inadequate calcium or magnesium in your diet, fatigue, or pressure of your uterus on your nerves. Exercise will help to alleviate some of this. We have added a very important exercise for your lower back in this workout because it is vital that your lower back muscles and pelvic area stay strong. Strong lower back muscles can help decrease the pain sometimes felt by expectant mothers. Please take note of the suggestions about these exercises on the pull-out posters.

Constipation is also an issue that some women may need to address. Drink plenty of water and keep up a regular exercise routine to help keep your bowel movements regular. Eat some foods high in fiber daily.

You may still be experiencing mood swings. Your hormone levels are still out of whack and you may not be sleeping very well. Remember—always drink plenty of fluids, eat right, and get lots of rest!

ABOUT YOUR WORKOUT

Again, take note that the exercises do not state a specific dumbbell weight you should use. This is because everyone is going to be at a different skill level and this level should be decided by the individual. Start small and work your way up, or ask a certified fitness professional.

You will notice on the first, second, and third trimester workout posters that there are three strength training days and one cardio day ("cardio" refers to aerobic exercise). The third strength training day is optional and you may repeat a day to add a fourth strength training day if your fitness level allows. Remember, it is important to get at least one aerobic workout done per week in addition to your strength training, so plan your workouts wisely. If you started with the first trimester workout, continue with the workout you feel comfortable with. If this is your first trimester to work out, use these guidelines to help you decide which workout to start with:

- If you have a regular exercise routine, you can start with the *Delivering Fitness* advanced workout and continue at the same fitness level with mild modifications.
- If you are just beginning your fitness routine, start with the lowest level of the *Delivering Fitness* beginner workout and progress as your fitness level increases.

Modifications include lowering or raising the amount of weight or the number of repetitions for any exercise. You can lower or raise the reps by three to five reps per set and you can lower or raise the weight to the next smaller or larger size.

Also, if this is your first trimester to work out, read chapter four first. Some of the guidelines for your first trimester workout still apply to your second trimester workout.

As with any exercise routine, check with your physician before beginning this routine. Here is your **Second Trimester Workout!**

Chapter Six

Third Trimester: Guidelines & Workout

kay, ladies, you are in the home stretch now! It's time for baby showers and getting the nursery ready. You are going to need a lot of energy and although it might be hard to muster it at times, this is the most important time to stick with your workout.

WHAT TO EXPECT

At this point, your tummy has grown bigger than you ever thought it could—and it keeps getting bigger! It is going to be more difficult for you to move about freely, so your exercise is going to be more restricted. We have outlined these restrictions for you on your Third Trimester Workout Poster. You should still be able to do a basic workout and stay active right up to your delivery day!

MAKE SOME ADJUSTMENTS

Try to keep your equipment stored above knee level to avoid back strain and to make it more accessible. This may seem like a minor adjustment now, but it can make a big difference to you later. The easier it is for you to access your workout equipment, the more likely it is that you will work out. Your ligaments are still full of estrogen and relaxin, and the added weight makes it even easier to over-stretch or overdo during exercise.

Remember to stay hydrated. If you wait until you feel thirsty, your body is already dehydrated. Drink a glass of water before your workout, during your workout, and after your workout. It is very important to get plenty of water.

Avoid exercise in the supine position (flat on your back). The baby is pretty heavy now. As explained in chapter five (see p.34), there is a risk of cutting off blood flow back to the heart.

Also, as you progress, more strain will be placed on your back. We will concentrate on exercises that will keep your back strong for the rest of your term and delivery. These exercises are simple, but very effective. Do not overexert yourself. There is no need to push beyond your physical capacity. You should still be aiming for your THR (found by using the table on page 29) for thirty to sixty minutes at least twice a week and maybe up to seven times a week.

COMMON PROBLEMS

You may become short of breath more quickly now that your uterus is putting more pressure on your diaphragm. You will need to pay close attention to your posture. Sitting and standing up straight will help alleviate some of this. You may also experience swelling of the nasal passages, making breathing through your nose more difficult. Nasal strips during exercise can make nasal breathing easier.

You may also have trouble finding a comfortable sleeping position. Many women have found that sleeping on their sides with a pillow between their legs is the most comfortable. You can also try the relaxation techniques found at www.deliveringfitness.com.

Hemorrhoids are common during the third trimester and sometimes occur during labor and delivery. They can be painful and may limit sitting exercise. You may want to keep doing these exercises in the standing position if sitting causes pain. Consult your doctor for medication if an over-the-counter remedy is not working for you. Exercise may decrease the symptoms, and should be continued.

ABOUT YOUR WORKOUT

Take note that the exercises do not state a specific dumbbell weight you should use. This is because everyone is going to be at a different skill level and this level should be decided by the individual. Start small and work your way up, or ask a certified fitness professional.

You will notice on the first, second, and third trimester workout posters that there are three strength training days and one cardio day ("cardio" refers to aerobic exercise). The third strength training day is optional and you may repeat a day to add a fourth strength training day if your fitness level allows. Remember, it is important to get at least one aerobic workout done per week in addition to your strength training, so plan your workouts wisely. Continue using the workout you feel comfortable with.

Remember, you can make modifications to either workout. Modifications include lowering or raising the amount of weight or the number of repetitions for any exercise. You can lower or raise the reps by three to five reps per set and you can lower or raise the weight to the next smaller or larger size.

As with any exercise routine, check with your physician before beginning this routine. Here is your **Third Trimester Workout!**

Chapter Seven

Postpartum: How to Get Back in SHAPE!

Okay, you've done it! You have added another member to your family. Now how are you going to get back in shape? It's not as impossible as you might be imagining right now. Let's take it in small sections—make some short-term goals and make sure to reach each one before moving on to the next.

GOAL # 1: GET A DOCTOR'S RELEASE

First, it will take six to sixteen weeks for hormones to return to normal levels, and healing time will take six weeks to three months. Some women may be ready to work out within days of delivery, and most of you should be ready to work out in as little as six weeks, but if it takes you the whole three months, that is just fine too. Hopefully you used our three trimester workouts, and assuming you had a normal delivery, you should be more than ready to resume physical activity as soon as your doctor releases you. You must get a medical release from your doctor before returning to our workout program. There is no exception to this rule!

GOAL # 2: START SLOW, BUT GET STARTED!

Next, what pace should you set for yourself? Your body will not be fully back to "normal" for quite some time. It is important for you to ease back into your activity. It will be like working backwards from your third trimester to your first, and so on. You will start with light weights and fewer repetitions (think back to the last of your third trimester workouts) and work your way up. It might seem overwhelming to jump back into it, but you must take that first step. You don't

want to be celebrating your baby's first birthday and look back to discover that you haven't had even one workout session.

GOAL # 3: RETURN TO A REGULAR WORKOUT ROUTINE

Again, this is not yet the time to max out your workout. The first six months should be used to get back into the swing of things and take time for you. It is very important for you to spend some time on yourself. Your health and happiness should not be overlooked. Remember, no one is happy if mom is not happy. You are the caretaker for the family, so it is important that you stay healthy and happy. Work out at least two days a week, up to three, four, or five days a week for thirty to sixty minutes, and keep your heart rate between your low and mid-range THR for at least half of your workout.

GOAL # 4: PUSH YOURSELF!

Now, from six months postpartum on, you should be pushing yourself during every workout. You should be aiming for the mid-range to high end of your THR for at least half to most of your workout. Here's the chart again, in case you don't remember exactly what that range is.

THR					

GOAL # 5: SHARE THIS LIFE CHANGE

One last thing—pass this experience along to a friend. Tell people around you how this book has affected your pregnancy and overall experience. Make your fitness routine a part of life and share the positive effects with family and friends.

ABOUT YOUR WORKOUT

Take note that the exercises do not state a specific dumbbell weight you should use. This is because everyone is going to be at a different skill level which should be decided by the individual. Start small and work your way up, or ask a certified fitness professional.

You will notice on the postpartum workout poster that there are three strength training days and one cardio day ("cardio" refers to aerobic exercise). The third strength training day is optional and you may repeat a day to add a fourth strength training day if your fitness level allows. Remember, it is important to get at least one aerobic workout done per week in addition to your strength training, so plan your workouts wisely.

- Even if you are experienced in fitness, you should start with the *Delivering Fitness* beginner workout and continue at the same fitness level until you feel comfortable to move up to the advanced workout.
- If you are just beginning your fitness routine, start with the lowest level of the *Delivering Fitness* beginner workout and progress as your fitness level increases.

Modifications include lowering or raising the amount of weight or the number of repetitions for any exercise. You can lower or raise the reps by three to five reps per set and you can lower or raise the weight to the next smaller or larger size.

As with any exercise routine, check with your physician before beginning this fitness routine. Here is your **Postpartum Workout!**

We hope you enjoy the workouts we've put together. If you have any questions, please feel free to contact us at info@deliveringfitness.com.

Glossary

AEROBIC EXERCISE

Exercise that conditions the heart and lungs by increasing efficient intake of oxygen by the body. Also referred to as "cardio."

ANEMIA

Anemia is a decrease in the number of red blood cells in your blood which therefore decreases your ability to use oxygen. Anemia is usually due to an iron deficiency in your body. Because your baby will really start to draw on your iron reserves around week twenty, it is important that you add a supplement to your diet. This is significant in pregnancy because anemia can contribute to maternal mortality, increase the risk of pre-term delivery, and contribute to poor iron status in infants.

DIASTASIS

Diastasis is a separation of the two halves of the *rectus abdominis* muscle. This muscle is down the middle of your belly. Diastasis can happen during pregnancy due to hormonal changes.

You can check for the separation by lying on your back with your knees bent. Place your fingertips one to two inches below your belly button, fingers pointing toward your feet. Curl and lift your head and shoulders as high as you can and see if you can feel a ridge protruding from the midline of your abdomen. That is diastasis. If you have it,

take care not to make the separation worse when you do abdominal exercises. Try modified abdominal exercises. Cross your arms across your belly, gently pulling the two sides of the *rectus abdominis* muscle together as you curl up, contracting your abdominal muscles and exhaling on the lift.

DYSPNEA

Dyspnea is difficult breathing and/or shortness of breath. Normal pregnancy can cause this "air hunger" because of hormonal changes in the first trimester, and later when the growing fetus occupies an increasing amount of space within the abdominal cavity, gradually resulting in upward pressure on the diaphragm. It does not affect your ability to breathe an adequate amount of oxygen, and does not limit oxygen to the baby.

GESTATIONAL DIABETES

Gestational diabetes is a form of diabetes that occurs only during pregnancy. It affects about 4 percent of all pregnant women. It usually begins between the twenty-fourth and twenty-eighth week of pregnancy. Most often, gestational diabetes resolves after the baby is born. With treatment, most women with gestational diabetes have healthy pregnancies and healthy babies because they control their condition. Without treatment, mothers with this condition could have very large babies, which can cause problems with labor and delivery. Exercise increases the body's ability to utilize glucose, decreasing the negative effects of high blood sugar associated with gestational diabetes.

INFERIOR VENA CAVA

The large vein that runs deep in your body along the spine. It is responsible for carrying a major portion of blood from your legs toward your heart.

PREECLAMPSIA

Preeclampsia is a rapidly progressive condition characterized by high blood pressure and the presence of protein in the urine. Five to eight percent of all pregnancies are affected. Swelling, sudden weight gain,

severe headaches, and changes in vision are symptoms; however, some women with rapidly advancing disease report few symptoms. Proper prenatal care is essential to diagnose and manage preeclampsia. Any symptoms as above during exercise should be a warning sign to stop exercise and see your physician.

RELAXIN

Relaxin is a hormone produced by your body that acts to loosen your ligaments, allowing pelvic expansion to accommodate the passage of the baby through the birth canal. As pregnancy progresses, the levels of relaxin increase and affect all of your ligaments. Joint laxity is more pronounced in women who have had a prior pregnancy than it is during the first pregnancy. Loose joints may be susceptible to injury during heavy weight training. Therefore, maintain the guidelines in this book to avoid sprains.

SCIATICA

Sciatica is pain originating from the sciatic nerve. As pregnancy progresses, the baby's head presses against the nerve. This causes severe pain in the lower back, buttocks, and/or legs in some women. It may also cause tingling, weakness, and numbness down the legs as well. Since the pain is caused by the position of the baby, it will vanish only after the baby has been born. In the meantime, some relief can be obtained by lying on a firm mattress, using a hot water bottle, or performing special exercises as suggested by your fitness professional or doctor.

STRENGTH TRAINING

The use of resistance methods to increase one's ability to exert or resist force. The training may utilize free weights, the individual's own body weight, machines, and/or other resistance devices to attain this goal. Also referred to as resistance training or weight training.

VALSALVA MANEUVER

A Valsalva maneuver is an effort to exhale without letting air escape through the nose or mouth. People often use a Valsalva maneuver during some common activities, such as straining to have a bowel

movement or blowing a stuffy nose. Exercise involving the Valsalva maneuver can cause an increased intra-abdominal pressure. Therefore, holding your breath during an exertional exercise should be avoided.

VASODILATION

Vasodilation is the expansion of blood vessels in your body due to hormonal changes during pregnancy. It makes breathing through your nose difficult during late pregnancy and causes poor circulation in the lower extremities. During the third trimester, it can contribute to worsening of varicose veins, hemorrhoids, and leg swelling. Exercise increases tone of the vessels and decreases the dilation which decreases swelling, risk of phlebitis, and other discomforts.

Additional Resources

American Baby Magazine, 125 Park Avenue, New York, NY 10017, www.americanbaby.com.

American Fitness Equipment, 11201 N. Stemmons Freeway, Dallas, TX 75229, 214-352-4001, www.precorellipticals.com.

Baby Style, 865 South Figueroa Street, Suite 2700, Los Angeles, CA 90017, 1-877-ESTYLES (378-9537), www.babystyle.com.

Bravado, 41 Hollinger Road, Toronto, ON, Canada, M4B 3G4, www.bravadodesigns.com.

Delivering Fitness, 391 E. Las Colinas Boulevard., Suite 130, Irving, TX 75039, www.deliveringfitness.com.

Exercise and Fitness: A Guide for Women. Pamphlet published by American College of Obstetrics and Gynecology, 1996, www.acog.org.

Exercise During Pregnancy. Pamphlet published by American College of Obstetrics and Gynecology, www.acog.org.

Fit for 2, P.O. Box 70062 Marietta, GA 30067-0062, www.fitfor2.com.

Fit Maternity and Beyond, 108 Old McCloud Road, Mt. Shasta, CA 96067, (530)926-1017, www.fitmaternity.com.

Fit Pregnancy Magazine, Weider Publications, Inc., www.fitpregnancy.com.

Free Stuff for Babies, www.bestfreestuffonline.com.

Genius Baby, 4400 Morris Park Drive, Suite O, Charlotte, NC 28227, (704)573-4500, www.geniusbaby.com.

Getting in Shape After Your Baby is Born. Patient education pamphlet published by American College of Obstetrics and Gynecology, www.acog.org.

Mothers in Motion, 2111 Sam Bass Road, Bldg. B, Suite 1700-A, Round Rock, TX 78681,

(512)733-7637, www.mothersinmotion.com.

Pickles and Ice Cream, www.picklesandicecream.com.

Preggy Pops, 6520 Platt Avenue, #573, West Hills, CA 91307-3218, 1.866. PREGGIE (1.866.773.4443), www.preggypops.com.

Working Mother Magazine, www.workingwoman.com.

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About the Authors

Erinn Mikeska is a certified personal trainer (CPT), aerobics instructor, and fitness model. She is also a Pre & Postnatal Fitness Instructor and Special Populations Fitness Instructor. She is responsible for helping many of her clients achieve positive and dramatic results in their lifestyle, appearance, and attitude. She studied at, and is certified through, The Cooper Institute, National Academy of Sports Medicine, National Academy of Health Fitness, American Council on Exercise, and Sara City Workout-Education. In 1999, she joined the team at Your Body Fitness, Inc. YBF has since branched out and opened other fitness-related companies including yourbodyfitness.com, American Fitness Equipment, and Delivering Fitness.

Erinn is the head of the Delivering Fitness branch, which focuses on pre- and postnatal personal training. Since her primary clientele consists of women, it is a natural progression to guide them through healthier pregnancies, easier labor, and getting back into shape after delivery. As a fitness model, Erinn has been featured in such magazines as *Shape, Muscle & Fitness HERS,* and *Oxygen* Magazine.

Dr. Christine Quatro is a board-certified orthopedic surgeon and sports medicine physician who specializes in the care and treatment of musculoskeletal injuries in children and adolescents. She is a graduate of the University of Texas at Austin with a BA in biology. She received her medical degree from the University of Health Sciences—College of Osteopathic Medicine in Kansas City, Missouri. She is fellowship trained and is the owner and founder of Varsity Orthopedics and Varsity Orthopedics Physical Therapy. These practices are devoted to the care of athletic injuries in children. She has been in practice since 1995 in the Dallas-Fort Worth Metroplex.

Dr. Quatro has researched and applied information from hundreds of medical journals into this book and has simplified the information for everyday use. In addition to being a full-time orthopedic surgeon, Dr. Quatro is also a fitness enthusiast and the mother of two beautiful girls, Carolyn and Catherine. She has been involved in fitness and weight training throughout her lifetime and during both pregnancies. She is the subject and model for the exercise posters in this book.

ISBN 0-9744597-6-3