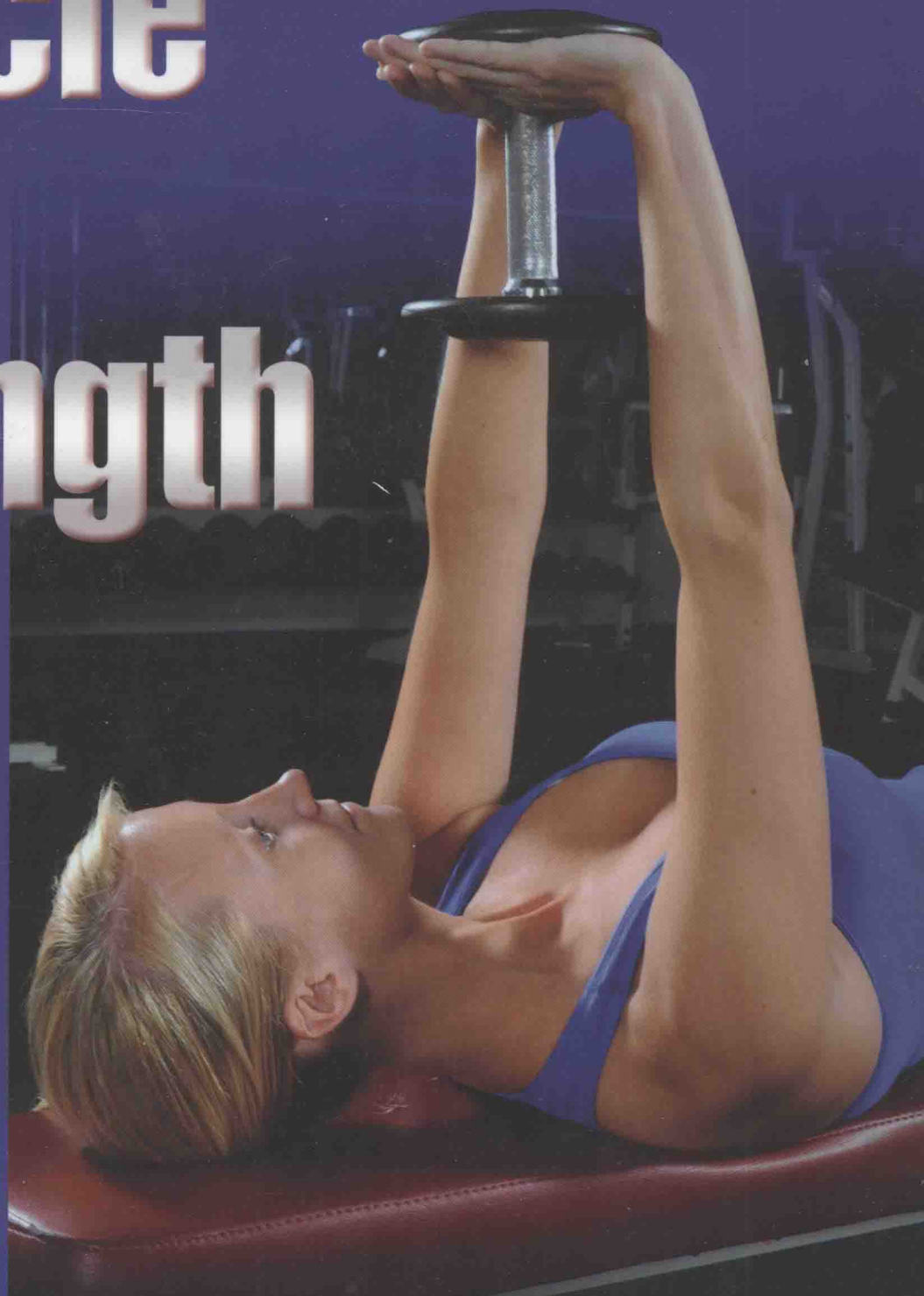


A Woman's Guide to Muscle and Strength

*Programs you need
for the
body you want*



rene Lewis-McCormick

A Woman's Guide to Muscle and Strength

运动力量训练

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Irene Lewis-McCormick



Human Kinetics

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**A Woman's Guide to
Muscle
and
Strength**

To my mother, Maire Agnes Lewis

Exercise Finder

	Pg. #	Equipment used	Exercise focus
Warm-up (chapter 4)			
Lateral stretch	46	None	Lengthens the spinal muscles
Spinal extension	46	None	Lengthen the back muscles and hamstring stretch
Standing knee flexion and extension with ankle dorsiflexion	47	None	Active stretch for the hamstrings and low back and also a balance skill
Standing figure four	47	None	Stretch the gluteals and IT Band
Front lunge with lateral squat	48	None	Warms up the large muscles of the lower body with active ranges of motion
Standing cat and cow	49	None	Stretches the spinal muscles including the neck
Standing shoulder horizontal adduction	49	None	Stretches the shoulder and middle back muscles
Seated pelvic tilt on stability ball	50	Stability ball	Lubricates the low back and focuses on pelvic tilts in preparation for exercise
Seated hip circles on stability ball	50	Stability ball	Lubricates the low back and focuses on pelvic rotation in preparation for exercise
Knee lift with medicine ball	51	Medicine ball	Warms the body up and engages the muscles of the core
Body ball reach	51	Medicine ball	Warms the body up and engages the muscles of the core
Plié with medicine ball lift	52	Medicine ball	Warm up move and works the gluteal muscles
Shoulder rotation with bands	52	Therapy band	Warm up for shoulder joint
Cool-down (chapter 4)			
Full-body stretch	56	Mat	Lengthens the whole body and allows for deeper relaxation
Bridge	56	Mat	Lubricates the spinal segments and helps with core control
Low back stretch	57	Mat	Stretches the spinal and gluteal muscles
Hamstring stretch	57	Mat	Lengthens the hamstring muscles
Spinal twist	58	Mat	Stretches the low back
Quadruped cat and cow	58	Mat	Strengthen the core muscles and lengthens the spine via lengthening the arms and legs
Child's pose	59	Mat	Stretches the low back and shoulders

(continued)

Exercise Finder, continued

	Pg. #	Equipment used	Exercise focus
Downward-facing dog	59	Mat	Lengthens the spine and stretches the posterior legs
Forward bend	60	None	Stretches the back and hamstrings
Forward bend with a twist	60	None	Stretches the low back and hamstrings adding rotation which increases the stretch intensity
Foam roller spinal alignment	61	Foam roller, mat	Lengthens and relaxes the spinal segments
Foam roller shoulder extension	61	Foam roller, mat	Lengthens and relaxes the spinal segments and allows for range of motion stretches at the shoulders and chest
Upper body (chapter 5)			
Dumbbell chest press	74	Dumbbells, flat bench	Chest, triceps, and anterior shoulder muscles
Barbell chest press	74	Barbell, bench	Chest and triceps
Dumbbell chest fly	75	Dumbbells, flat bench	Chest and shoulders
Standing cable chest fly	76	Cable machine	Anterior shoulder, chest, core and triceps
Decline barbell press	77	Decline bench, barbell	Chest and triceps
Push-up	78	Mat	Core, chest, triceps
Incline push-up	78	Mat, bench	Core, chest, triceps
Decline push-up	79	Mat, bench	Core, chest, triceps
Front raise	80	Dumbbells	Anterior and middle shoulder
Front cable raise	80	Cable machine	Core, anterior and middle shoulder
Lateral raise	81	Dumbbells	Middle shoulder
Seated shoulder press	81	Dumbbells	Middle shoulder, triceps
Dumbbell upright row	82	Dumbbells	Middle shoulder
Bent-over dumbbell row	82	Dumbbells	Middle shoulder
Straight bar upright row	83	Barbell	Core, lats, rhomboids, biceps
Lat pulldown	84	Lat pulldown machine	Lats, biceps
Pull-up	84	Pull-up bar	Biceps, shoulders, core,
Pullover	85	Dumbbells	Lats, shoulders
Shrug	85	Dumbbells	Trapezius
Rear deltoid fly	86	Dumbbells	Posterior shoulder
Seated low row	86	Rowing machine	Lats, biceps
Spinal extension	87	Mat	Spinal muscles
Pilates swimming	87	Mat	Shoulders, back, gluteals
Quadruped spinal extension	88	Mat	Shoulders, back, gluteals
Biceps curl with EZ Curl Bar	88	EZ Curl Bar	Biceps

	Pg. #	Equipment used	Exercise focus
Hammer curl	89	Dumbbells	Biceps
Preacher curl	89	Dumbbells	Biceps
Reverse curl	90	Dumbbells	Biceps, forearms
Triceps kickback	90	Dumbbells	Triceps
Triceps dip	91	Dip machine	Triceps, core
TRX chest press	91	Suspension trainer	Chest, front shoulder, core
TRX mid row	92	Suspension trainer	Middle back, core
TRX atomic push-up	93	Suspension trainer	Chest, triceps, core, abdominal muscles
TRX Y deltoid fly	94	Suspension trainer	Posterior shoulder, core
Lower body (chapter 6)			
Dumbbell front squat	103	Dumbbells	Legs
Good morning	103	Dumbbells	Hamstring, gluteals
Seated hamstring curl	104	Hamcurl machine	Hamstrings
Supine stability ball bridge	104	Stability ball	Gluteals
Stability ball gluteal squeeze	105	Stability ball	Gluteals
Front lunge	106	Dumbbells	Quadriceps
Reverse lunge	106	Dumbbells	Gluteals
Walking lunge	107	Dumbbells	Legs, gluteals
Side lunge	107	Dumbbells	Quadriceps, gluteals
Dumbbell squat	108	Dumbbells	Legs
Single-leg squat	108	Kettlebell	Quadriceps, hamstrings
Seated leg press	109	Machine	Legs, gluteals
Seated leg extension	109	Machine	Quadriceps
Seated calf raise	110	Machine	Calves
Kettlebell squat	110	Kettlebell	Legs, core, shoulders
Angle kettlebell squat	111	Kettlebell	Legs, core, shoulders
Kettlebell hip hinge	111	Kettlebell	Hamstring
Squat sequence with curtsy lunge	112	Dumbbell or medicine ball	Legs, gluteals
TRX squat	113	Suspension trainer	Legs, core
TRX single-leg squat	113	Suspension trainer	Legs, gluteals, core
TRX step back lunge	114	Suspension trainer	Hamstring, gluteals, core

(continued)

Exercise Finder, continued

	Pg. #	Equipment used	Exercise focus
TRX balance lunge	114	Suspension trainer	Quadriceps, gluteals, hamstrings, core
TRX hip press	115	Suspension trainer	Gluteals, core
TRX hamstring curl	116	Suspension trainer	Hamstrings, calves, core
Core (chapter 7)			
Abdominal progression series	122	Mat	Anterior abdominal wall
Pilates roll-up	123	Mat	Anterior abdominal wall, spine
V-sit (boat pose)	124	Mat	Abdominal wall, hip flexors
Standing Russian twist	124	Medicine ball	Core
Side plank	125	Mat	Core, shoulder complex
Supine bicycle	125	Mat	Anterior abdominal wall, obliques, hip flexors
Supine contralateral bicycle	126	Mat	Obliques, hip flexors
Windshield wipers	126	Mat	Core
Supine clocking	127	Mat	Core
Stability ball roll-out	127	Stability ball, mat	Shoulder complex, core
Oblique stability ball roll-out	128	Stability ball, mat	Obliques, shoulder complex
Plank	128	Mat	Chest, core
Push-up to plank	129	Mat	Chest, core, triceps
Supine plank	129	Mat	Shoulder complex, core
TRX plank	130	Suspension trainer	Core, shoulder complex, chest
TRX side plank	130	Suspension trainer	Core, shoulder complex
TRX pike	131	Suspension trainer	Abdominal wall, hip flexors, core
TRX crunch	131	Suspension trainer	Abdominal wall, hip flexors, core
TRX oblique crunch	132	Suspension trainer	Obliques, hip flexors, shoulder complex

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PART I

Basics of Strength Training for Women

Strength Training and the Female Body

Many women have used fitness equipment and free weights in a weight room, in group fitness classes, or at home with little or no result. The strong, toned arms and legs desired through weight training never come to fruition—even when they use the correct exercises and proper lifting techniques. The likely culprit dates back to strength training beliefs touted in the not-so-distant past, which probably affect a majority of women’s attitudes about strength training today.

Self-proclaimed fitness experts Jane Fonda, Jackie Sorenson, and Jack LaLanne dominated the exercise scene in the 1970s and 1980s. They were instrumental in the development of the fitness movement and should be thanked for that. However, they encouraged women to perform aerobic activity and to lift only light weights using a dizzying amount of repetitions. This supported the misguided concept that lifting heavy weights resulted in brawny, masculine muscles. As a result, a majority of women today are fearful that lifting heavy weights will result in muscles that are bulky like men’s. Moreover, they do not realize the positive impact that strength training will have on their bodies.

Strength training doesn’t have to mean bodybuilding. Consider the 30-something woman who comes into the gym, maybe as frequently as five days a week. She alternates cardio machines for up to 90 minutes and then leaves the facility without doing any flexibility or strength training. She typically isn’t overweight, but neither is she as toned as she desires. She is your typical example of a “skinny fat” woman. Yes, skinny and fat can coexist when women don’t perform resistance training to increase their lean musculature.

If you want to increase your muscle strength and size, sculpt your body into a well-developed form, or train for performance enhancement for a specific sport or activity, you will need to use a combination of training tools and methods. Also, the weight you lift must be heavy enough to create a physiological response in your muscle tissue; light hand weights and hundreds of repetitions just aren’t going to cut it. Machines are a good start, and group classes labeled strength training can help

you master basic strength training lifting techniques (if the instructor is trained properly, of course), but learning exercise progression and periodization training in addition to these techniques is important for success.

This book will help you examine your current level of fitness and establish training goals, detail the variety of strength training exercises that will help you achieve your goals, and teach you how to apply the training technique known as periodization to get results for life. Additionally, the book provides photos and detailed descriptions of how to perform many exercises so you can achieve fantastic fitness results.

Fortunately, today's fitness professionals know much more about strength training than those of the past. They rely on peer-reviewed research conducted in laboratories in universities around the globe, as well as practical education from certification and continuing education programs. As a result of this increased knowledge, today's strength training includes functional training (exercises that improve health and function in our daily lives), metabolic training (training that improves our capacity to burn calories), and resistance training (exercises that actually sculpt and change the musculature of our bodies).

HEALTH-RELATED BENEFITS OF STRENGTH TRAINING

Strength training is an important component of a complete exercise regimen for women. As a personal trainer, I see women who are initially hesitant to venture into the weight area of the fitness center, thinking it primarily a masculine domain. But they've since experienced the incredible benefits weight training provides, such as increased muscle strength and endurance, stronger bones, definition, and leaner bodies. Being strong and having more fat-free mass is important for health as well as aesthetics. Strong is the new skinny!

Weight training is exercise that adds resistance to the body's natural movements to make those movements more difficult and construct muscles that are bigger and stronger. I encourage clients to develop balanced fitness programs that combine aerobic exercise, which builds endurance and benefits the heart and lungs, with resistance training, which develops muscle hypertrophy and strength. Weight work can be particularly rewarding for women who have weak upper bodies. Most women haven't trained the way their male counterparts have, and have strength imbalances between their upper and lower bodies. Many women have participated in group fitness classes or walking or running programs, so their legs may be relatively strong compared to their arms, shoulders, and back, which tend to be underdeveloped. Also at issue are the increased postural issues that come with increasing age. Working out with resistance heavy enough to create a physiological response develops upper body strength, which can make many tasks of daily living such as lifting and carrying heavy objects much easier, as well as improve posture.

Exercise is also an important component of any healthy lifestyle. All overweight woman can benefit from daily, consistent aerobic and anaerobic (resistance training) exercise. Aerobic activities such as using an elliptical trainer, treadmill walking, jogging, and running burn calories more quickly than resistance training does, but resistance training burns calories longer after the exercise session has ended. For this reason, it is part of a positive general lifestyle change from inactive to active, which is where the biggest payoff is.

Metabolism and Exercise

In my role as a fitness professional, clients often ask me if they are burning fat during strength training. Ormsbee and colleagues (2007) concluded that muscle contributes significantly to resting metabolic rate, which is the energy expended to maintain all bodily functions at rest. Their research demonstrated that the body continues to use fat as a fuel source, both during and after a resistance training session. Additionally, Donnelly and colleagues (2009) stated that resistance training plays an important role in weight loss.

None of this research is a surprise, considering that both resistance training and aerobic activity play a big role in fat and weight loss as a result of an easily explained physiological condition called excess postexercise oxygen consumption (EPOC). EPOC is the measurable increased rate of oxygen consumption following strenuous aerobic or anaerobic activity, and plays a huge role in postexercise caloric consumption. This is so because exercise results in the breakdown of fat stores and the release of fatty acids (FFA) into the bloodstream. During recovery from either aerobic or anaerobic exercise, EPOC is accompanied by an elevated consumption of fuel, meaning that you continue to burn fat calories even after your exercise session is completed.

Inactivity is a major cause of many disease conditions, medical complications, overfat body composition, and obesity. Women who appear skinny, or thin, often carry the same or more amount of fat on their frames as obese women. Research has shown that resistance training creates meaningful changes in body composition (Marx et al. 2001). Thus, one of the noteworthy benefits of resistance exercise is the maintenance or increase of fat-free body mass while decreasing fat. As this research demonstrates, the quality of the tissue (fat versus fat-free) is more important than how small or large someone is, or what her clothing size indicates. For example, being a size 2 with a 40 percent body fat reading is extremely unhealthy.

There is a growing consensus in the medical community that physical activity, specifically resistance training exercise, positively affects the cardiovascular and musculoskeletal systems, and even increases bone mineral density. Significant health benefits can be obtained by being physically active on most, and preferably all, days of the week; fitness programs involving progressively increasing intensities have even greater protective benefits.

Elevated systolic and diastolic blood pressures are associated with a higher risk of developing coronary heart disease (CHD), congestive heart failure, stroke, and kidney failure. There is a marked increase in developing these diseases when blood pressure is 140/90 mmHg. People who regularly perform progressive resistance exercise training experienced about a 2 percent reduction in resting systolic blood pressure and a 4 percent reduction in resting diastolic blood pressure (Fagard 2001).

Arthritis, characterized by stiffness, pain, and loss of joint function, affects people of all ages, of both sexes, and in all ethnic groups. It may jeopardize people's physical, psychological, social, and economic well-being, depriving them of their independence. Physicians commonly prescribe exercise as a treatment for arthritis. Consistent exercise improves aerobic capacity, muscle strength, joint mobility, functional ability, and mood, without apparent increases in joint symptoms or disease. Increased lean mass can take stress off these vulnerable joints. Because the muscle tissue absorbs shock, the increased development of muscle around the