Weight Lifting

2015-2016

Grades 10-12
In 2014, the Shelby County Schools Board of Education adopted a set of ambitious, yet attainable goals for school and student performance. The District is committed to these goals, as further described in our strategic plan, Destination 2025.

By 2025,

- 80% of our students will graduate from high school college or career ready
- 90% of students will graduate on time
- 100% of our students who graduate college or career ready will enroll in a post-secondary opportunity.

In order to achieve these ambitious goals, we must collectively work to provide our students with high-quality, College and Career Ready standards-aligned instruction. Acknowledging the need to develop competence in literacy and language as the foundations for all learning, Shelby County Schools developed the Comprehensive Literacy Improvement Plan (CLIP) and the SCS Curriculum Maps for Arts Education.

Designed with the teacher in mind, the Health, Physical Education and Lifetime Wellness (HPELW) curriculum maps focus on teaching and learning in the domains of Perform, Create, Respond, and Connect. This map presents a framework for organizing instruction around the TN State Standards so that every student meets or exceeds requirements for college and career readiness. The standards define what to teach at specific grade levels, and the SCS HPELW Education curriculum maps provide guidelines and research-based approaches for implementing instruction to ensure students achieve their highest potentials.

The SCS HPELW Education curriculum maps are designed to create physically literate students by engaging them both individually and collaboratively in creative practices of applying, creating, communicating, collaborating and reflecting. To achieve these goals the curriculum maps were developed by expert arts teachers to reflect the conceptual framework of the four artistic processes: present, create, respond, and connect.

**How to Use the HPELW Education Curriculum Maps**

The SCS HPELW Education curriculum maps are designed to help teachers make effective decisions about what content to teach and how to teach it so that, ultimately, our students can reach Destination 2025. Across all HPELW disciplines, this is generally reflected in the following quarterly framework:

- **Course description**: This reflects the primary goals of the students to master basic skills and concepts that build upon previous knowledge which occurs as a result of physical activity.
State Standards: Students will be introduced to the following areas: movement, movement concepts, physical activity, fitness and personal/social responsibilities.

Essential Learnings: This section focuses on student outcomes and expectations

Effective Components of HPELW: This section provides State and Local laws,

Assessments: The educator will provide students with content, skill topics, SPIs and suggested timelines, with the appropriate assessment strategy; pre and post skill assessment, teacher observation, product and performance, self analysis, oral and or cognitive quizzes, fitness gram, pacer, student-lead peer modeling, peer observation and portfolio student growth measures.

Physical Education Vocabulary Terms: Educators are provided grade appropriate and content specific terminology used within a HPELW classroom

Essential Guiding Questions: Generally phrased similar to "I Can" statements, this portion identifies the specific performance indicators that are expected for students at a given time within the quarters/semester.

Tennessee-Shelby County Content Standards per grade band.

HPELW Quarterly Pacing Guides: SPIs, suggested timelines content skill, topic and task.

Sample Games and Activities with Literacy connections

Resources And Interdisciplinary Connections: In this column, teachers will find rich bodies of instructional resources/materials/links to help students efficiently and effectively learn the content. Additionally, there are significant resources to engage alignment with the Comprehensive Literacy Improvement Plan (CLIP) and HPELW activities are designed to strengthen authentic development of communication, listening, research, collaboration and content reading literacy in HPELW in supporting the District’ goals for improving student literacy.

Throughout this curriculum map, you will see high-quality activities, strategies and resources to support in ensure that students are able to reach the demands of the standards in the classroom. In addition to the resources embedded in the map, there are some high-leverage (technology, online)resources available for teacher use.
National Standards for K-12 Physical Education

The goal of physical education is to develop physically literate individuals who have the knowledge, skills and confidence to enjoy a lifetime of healthful physical activity.

To pursue a lifetime of healthful physical activity, a **physically literate individual***:

- Has learned the skills necessary to participate in a variety of physical activities.
- Knows the implications and the benefits of involvement in various types of physical activities.
- Participates regularly in physical activity.
- Is physically fit.
- Values physical activity and its contributions to a healthful lifestyle.

**Standard 1.** The physically literate individual demonstrates competency in a variety of motor skills and movement patterns.

**Standard 2.** The physically literate individual applies knowledge of concepts, principles, strategies and tactics related to movement and performance.

**Standard 3.** The physically literate individual demonstrates the knowledge and skills to achieve and maintain a health-enhancing level of physical activity and fitness.

**Standard 4.** The physically literate individual exhibits responsible personal and social behavior that respects self and others.

**Standard 5.** The physically literate individual recognizes the value of physical activity for health, enjoyment, challenge, self-expression and/or social interaction.

Diamond Conceptual Framework: A K-12 Road Map for Physical Education

The diamond shape helps illustrate the progression of skills and concepts taught in physical education, which are guided by national and state standards and research on physical activity and physical education.

Students should first learn the fundamental skills needed to be successful in physical activities, just as they would need to learn to read before tackling Mark Twain. Next they should experience a variety of activities with the goal of finding a few they enjoy. We wouldn't want them to go through life thinking the only way to stay healthy and fit is by running, playing basketball, and/or lifting weights. Lastly, we want them to become proficient in a few chosen activities with the hope that they will continue to participate in them throughout their lives.
SCS INSTRUCTIONAL PACING GUIDE: WEIGHTLIFTING

Grade Level: 9 – 12  
Credit: 0.5  
Prerequisite: Individual Sports I  
Category: Individual  
Fitness Components Emphasized: Skill-related and maintenance/improvement of health-related components of fitness

Course Essentials

The purpose of this course is to enable students to acquire a more than basic knowledge of how to achieve and maintain a level of physical fitness for health and performance while demonstrating knowledge of fitness concepts, principles, and strategies.

Students demonstrate knowledge of psychological and sociological concepts, principles, and strategies that apply to the learning and performance of weightlifting training.

The content should include, but not be limited to the following: safety practices, rules, terminology, etiquette, Mile run, circuit training, cross fit training, circuit run, weight training, group stretching, jog/walk activities and form running.

Understandings

The students will understand that by learning and participating in weightlifting they are building a foundation of muscle strength and endurance which are basis to maintaining a happy and healthy lifestyle in the future. The students will understand that they will be able to stay active in other ways than team sports.

Assessments

Personal Workout Sheet
Mile Run Times
Circuit Run Times
PFT Improvement Assessment

Teacher observation Pre – Testing/Goal Setting for fitness improvement
Pre-test on 12 minute walk/run, push-ups, crunches or max weight lifts on core lifts.

Rubric and Checklist
**Class Objectives:**

- The student will improve their muscle strength and endurance through weight training exercises.
- The student will gain knowledge of equipment and safety procedures with free weights and machine weights.
- The student will recognize the benefits of regular physical activity and see first hand the effects on themselves through class participation.
- The student will gain knowledge of developing a weight-training program and training principles:

**Effective Components of Weight Lifting**

- Students will improve their Cardiovascular Endurance, Muscular Strength, Muscular Endurance and Flexibility/Mobility.
- Demonstrate the ability to apply advanced motor skills and movement patterns relative to advanced eye-hand/foot coordination and high levels of strategy.
- Analyze biomechanical principles while performing physical activities.
- Participates in aerobic exercise at a medium effort, continuously for an extended period of time.
- Demonstrates a proficient level of cardiovascular fitness and identifies proper lifting and stretching techniques.
- Demonstrates a variety of stretching exercises, specific to the physical activity.
- Demonstrates proper lifting techniques of weights to increase muscular strength and muscular endurance.

**Course Description**

The weightlifting class was designed to provide each student with the knowledge needed to understand the importance of strength and fitness training. Students will understand the importance of setting goals for personal improvement and achievement, and will leave the class with a lifelong understanding of how to maintain adequate physical fitness for a healthy lifestyle.

1. Cardio-respiratory & Muscular Strength/Endurance
2. The purpose of this course is to enable students to develop an understanding of fitness concepts and design a personal fitness program while developing an individualized level of health-related activities.
3. This course will contain but not be limited to the following: safety practices, physiology of the cardiovascular system, anatomy of the muscles, concepts and principles of health-related fitness, correct techniques of executing exercises, use of various types of exercise and fitness equipment, fitness assessments, personal and group fitness exercises/activities, nutrition, consumer issues, benefits of participation, design and implementation of a personal fitness program.
4. This will be based on combined knowledge acquired in a weight training course
Standard: 1. Movement

Motor Skill and Movement Patterns: A physically educated person will demonstrate competency in motor skills and movement patterns needed to perform a variety of physical activities.

Demonstrate competency in basic and advanced skills and tactics in at least one activity from each of three of the following categories: as, dance, fitness activities, individual/dual sports, outdoor pursuits, self-defense, and team sports

Essential Learning

Student will meet this standard by demonstrating an understanding of movement concepts, principles, strategies and tactics as they apply to the learning and performance of physical activities to enhance Cardiovascular endurance, Muscular strength, Muscular endurance and Flexibility

1.3.1 demonstrate the ability to apply advanced motor skills and movement patterns relative to advanced eye-hand/foot coordination and high levels of strategy

Standard 2:

Demonstrates understanding of movement concepts, principles, strategies, and tactics as they apply to the learning and performance of physical activities.

Essential Learnings

Apply concepts and principles of human movement to the development of motor skills and the learning of new skills.

2.5 All students will utilize safe, efficient, and effective movement to develop and maintain a healthy, active lifestyle

2.6 Fitness:

All students will apply health-related and skill-related fitness concepts and skills to develop and maintain a healthy, active lifestyle

Standard 3: Physical Activity

Essential Learning

3.3.1 monitor physical activity through the use of a pedometer, heart rate monitor, and/or physical activity log or other appropriate technology

3.3.2 accumulate on most days a recommended number of minutes of moderate to vigorous physical activity outside of physical education class

3.3.3 understand the ways in which personal characteristics, personal lifestyles, and activity preferences will change over a lifespan

3.3.4 analyze the benefits of regular participation in

Instructional Philosophy:

All students will be provided with the necessary training on each specific exercise so that the exercise process can be safe and productive. Students are encouraged to remain positive with themselves, as well as with other students in order to maintain a good training atmosphere. It is important to realize that everyone begins this course, and progresses through this course at his own rate, as they reach their own individual goals. Safety is always given the first priority in this class.

TN State Standards

1. Movement
2. Movement Concepts and Principles
3. Physical Activity
4. Fitness
5. Personal and Social Responsibility
**Standard 5.0 – Personal and Social Responsibility**
A physically educated person exhibits responsible personal and social behavior that respects self and others in physical activity settings. The student will exhibit responsible personal and social behavior that respects self and others in physical activity settings.

**Essential Learning**
- respond to challenges, successes and failures in socially appropriate ways as a player or spectator
- apply etiquette and encourage others to exhibit etiquette in all physical activity settings
- provide support and encouragement for classmates
- identify the social and emotional benefits of participating in physical education (e.g., stress relief, friends, relaxation)
- implement strategies for inclusion of others into physical activities
- understand and demonstrate the importance of teamwork, sportsmanship and fair play
- exhibit appropriate cooperative learning techniques in small, medium and large group settings (e.g., serving as a leader, serving as a follower, supporting one another)
- participate in physical activity that fosters an appreciation of cultural, ethnic, gender and physical diversity
- explore new activities that meet individual fitness needs
- create self-rewards for achieving personal fitness/physical activity goals
- integrate physical activity meaningfully into daily life
- differentiate intrinsic and extrinsic reasons for participating in physical activity
- evaluate how physical activity serves as a vehicle to provide opportunities for self-expression and personal growth

**Standard 4.0 – Fitness**
A physically educated person achieves and maintains a health-enhancing level of physical fitness.

**Essential Learnings:**
- increased heart rate
- recognize the physiological indicators that accompany moderate to vigorous physical activity
- identify the components of health-related physical fitness
- identify at least one activity associated with each component of health related physical activity
### Quarter 1

<table>
<thead>
<tr>
<th>CONTENT STANDARD</th>
<th>OBJECTIVE</th>
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<tbody>
<tr>
<td><strong>1st week</strong>&lt;br&gt;Cognitive&lt;br&gt;Approximately five – 55 minute periods of time to complete</td>
<td><strong>Lesson/Information to be Covered</strong>&lt;br&gt;<strong>Orientation</strong>&lt;br&gt;Course Syllabus&lt;br&gt;Attendance Procedures&lt;br&gt;Rules and Regulations&lt;br&gt;Locks and Lockers&lt;br&gt;Uniforms&lt;br&gt;Go over rules associated with the course activities.</td>
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<td><strong>2nd Week</strong>&lt;br&gt;Cognitive/Perform&lt;br&gt;Approximately five – 55 minute periods of time to complete&lt;br&gt;Perform/Cognitive</td>
<td><strong>Identify safety issues</strong>&lt;br&gt;Explain methods of monitoring levels of intensity during aerobic activities.&lt;br&gt;Discuss safety issues pertaining to exercises, equipment and safety in general.&lt;br&gt;Review heart rate checks.&lt;br&gt;Use technology to analyze data to evaluate and monitor.</td>
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<td><strong>3rd Week</strong>&lt;br&gt;Perform&lt;br&gt;Approximately five – 55 minute periods of time to complete</td>
<td><strong>Physical fitness and wellness performance measurement</strong>&lt;br&gt;Goal setting, using a fitness journal/ selection of activities. Review basic core exercises and application to everyday movements. Use a variety of equipment. Med / stability balls, bands, BOSU, etc. Circuit training. Review of floor exercises. Practical application. Concentrate on correct techniques and body mechanics during practical application exercises. Concentrate on complex motor skills with med balls/ stability balls, etc. to improve performance.</td>
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<td><strong>4th week</strong>&lt;br&gt;Perform&lt;br&gt;Approximately five – 55 minute periods of time to complete</td>
<td><strong>Introduction to Weight Training and conditioning</strong>&lt;br&gt;<strong>Lesson/Information to be Covered</strong>&lt;br&gt;<strong>Orientation</strong>&lt;br&gt;Course Syllabus&lt;br&gt;Attendance Procedures&lt;br&gt;Rules and Regulations&lt;br&gt;Locks and Lockers&lt;br&gt;Uniforms&lt;br&gt;Go over rules associated with the course activities.</td>
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<td><strong>5th Week</strong>&lt;br&gt;Cognitive/Perform&lt;br&gt;Approximately five – 55 minute periods of time to complete</td>
<td><strong>Fitness/Strength Conditioning Mini-Lessons</strong>&lt;br&gt;Introduce the three types of weight training&lt;br&gt;Introduce heart rate checks.&lt;br&gt;Introduce body position (Stance, start, arm action,)</td>
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<td>Perform/Cognitive</td>
<td>6th Week</td>
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<td><strong>Perform/Cognitive</strong></td>
<td>Explain and demonstrate proper spotting technique</td>
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<td>Approximately five – 55 minute periods of time to complete</td>
<td>Introduction of prime mover muscles, biomechanics, Circuit training. Concentrate on correct techniques and body mechanics during practical application exercises. Concentrate on complex motor skills with med balls/ stability balls, etc. to improve performance.</td>
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| 7th Week |  |
| **Perform** | **Introduction to Resistance Training** |
| Approximately five – 55 minute periods of time to complete | Reps  Sets  Tempo  Force  Exercise  Muscle overload |

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<th>Perform/Cognitive</th>
<th>8th Week</th>
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<tr>
<td><strong>Perform</strong></td>
<td><strong>Jog/Walk Training</strong></td>
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<td>Approximately five – 55 minute periods of time to complete</td>
<td>Interval running  Incline running  Distance running</td>
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<p>| 9th Week |  |
| <strong>Cognitive /Affective</strong> | <strong>Review</strong> |
| Approximately five – 55 minute periods of time to complete | Selecting and modifying weight training and fitness activities Evaluate risks and safety factors Select and analyze fitness activities that enhance personal enjoyment Develop a fitness log |</p>
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<th>CONTENT STANDARD</th>
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<td><strong>10th week</strong></td>
<td><strong>Perform</strong></td>
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<td><strong>Lesson/Information to be Covered</strong></td>
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<td><strong>Resistance Training</strong></td>
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<td>Specialized weight-training (elastic or hydraulic resistance)</td>
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<td><strong>11th Week</strong></td>
<td><strong>Cognitive/Perform</strong></td>
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<td><strong>Isometric Training</strong></td>
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<td><strong>12th Week</strong></td>
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<td><strong>Speed, Agility, Flexibility Training</strong></td>
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<td>Speed training stations</td>
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<td>Agility training stations</td>
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<td><strong>13th week</strong></td>
<td><strong>Perform</strong></td>
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<td><strong>Position Specific Fundamentals</strong></td>
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<td>Lowers</td>
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<td><strong>14th Week</strong></td>
<td><strong>Cognitive/Perform</strong></td>
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<td><strong>Old School conditioning</strong></td>
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<td><strong>15th Week</strong></td>
<td><strong>Perform/Cognitive</strong></td>
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<td><strong>Nutrition and Weight Management</strong></td>
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<td>Food choices</td>
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<td>Cultural Influences</td>
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<td>Access to adequate food sources</td>
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<td><strong>Performance Enhancement Drugs</strong></td>
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<td>Creatine</td>
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<td>Steriods</td>
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<td><strong>17th week</strong></td>
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<td><strong>Jog/Walk Training</strong></td>
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<td>Interval running</td>
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Approximately five –55 minute periods of time to complete
Perform/Cognitive

18th Week
Cognitive/Affective
Approximately five –55 minute periods of time to complete

Incline running
Distance running

Review
Understand the role of motivation in physical activity
Understand how to apply the principles of resistance training for muscular strength and endurance

CLIP Common Core Connection

Assignments:
4 Max outs
Students will have a Critical Writing assignment every day before the start of class.
Students are required to read (Winning Every Day, by Lou Holtz).

The weightlifting class was designed to provide each student with the knowledge ... to have your Body Minder Workout & Exercise Journal in class everyday.

Research

James Grage’s Rewired 9-Week Fitness Trainer - Socializer Overview

Muscle Manifesto: 5 Principles Of The Lifting Life

Cory Gregory’s Time Frame Training Workout

Ask The Fighter Diet Girl: Nordin's Hardest Workout, Favorite Supps, And Rep Range
AEROBIC EXERCISE

Prolonged, moderate-intensity work that uses up oxygen at or below the level at which your cardiorespiratory (heart-lung) system can replenish oxygen in the working muscles. Aerobic literally means with oxygen, and it is the only type of exercise which burns body fat to meet its energy needs. Bodybuilders engage in aerobic workouts to develop additional cardiorespiratory fitness, as well as to burn off excess body fat to achieve peak contest muscularity. Common aerobic activities include running, cycling, swimming, dancing, and walking. Depending on how vigorously you play them, most racquet sports can also be aerobic exercise.

ANABOLIC DRUGS

Also called anabolic steroids, these are artificial male hormones that aid in nitrogen retention and thereby add to a male bodybuilder's muscle mass and strength. These drugs are not without hazardous side effects, however, and they are legally available only through a physician's prescription. Steroids are available in most gyms via the black market, but it is very dangerous to use such unknown substances to increase muscle mass.

ANAEROBIC EXERCISE

Exercise of much higher intensity than aerobic work, which uses up oxygen more quickly than the body can replenish it in the working muscles. Anaerobic exercise eventually builds up a significant oxygen debt that forces an athlete to terminate the exercise session rather quickly. Anaerobic exercise (the kind of exercise to which bodybuilding training belongs) burns up glycogen (muscle sugar) to supply its energy needs. Fast sprinting is a typical anaerobic form of exercise.

ANDROGENIC DRUGS

Androgenics are drugs that simulate the effects of the male hormone testosterone in the human body. Androgens do build a degree of strength and muscle mass, but they also stimulate secondary sex characteristics such as increased body hair, a deepened voice, and high levels of aggression. Indeed, many bodybuilders and powerlifters take androgen to stimulate aggressiveness in the by resulting in more productive workouts.

BALANCE

A term referring to an even relationship of body proportions in a man's physique. Perfectly
balanced physical proportions are in a much-sought-after trait among competitive bodybuilders.

BARBELL
Normally measuring between four and seven feet in length, a barbell is the most basic piece of weight-training and bodybuilding equipment. Indeed, you can train every major skeletal muscle group in your body using on a barbell. There are two major and types of barbells used for exercise in common use, adjustable sets (in which you can easily add or subtract plates by removing a detachable outside collar held in place on each side by a set screw) and fixed barbells (in which the plates are either welded or bolted permanently in place). Fixed weights are arranged in variety poundages on long racks in commercial bodybuilding gyms, the approximate poundage for each one painted or etched on the bar. Fixed weights relieve you of the problem of changing plates on your barbell for each new exercise. While fixed barbells and dumbbells are normally found in large commercial gyms, adjustable barbell and dumbbell sets are more frequently used at home.

BASIC EXERCISE
This is a bodybuilding exercise, which stresses the largest muscle groups of your body (e.g., the thighs, back, and/or chest), often in combination with smaller muscles. You will be able to use very heavy weights in basic exercises in order to build great muscle mass and physical power. Typical basic movements include squats, bench presses, and deadlifts.

BENCHES
A wide variety of exercise benches is available for use in doing barbell and dumbbell exercises either lying or seated on a bench. The most common type of bench, a flat exercise bench, can be used for chest, shoulder, and arm movements. Incline and decline benches (which are angled at about 30-45 degrees) allow movements for the chest, shoulder, and arms.

BIOMECHANICS
The scientific study of body positions, or form, in sport. In bodybuilding, biomechanics studies body form when exercising with weights. When you have good biomechanics in a bodybuilding exercise, you will be safely placing maximum beneficial stress on your working muscles.

BMR
The basal metabolic rate is the speed at which your resting body burns calories to provide for its basic survival needs. You can elevate your BMR and more easily achieve lean body mass.
through consistent exercise, and particularly through aerobic workouts

**BODYBUILDING**

A type of weight training applied in conjunction with sound nutritional practices to alter the shape of one's body. In the context of this book, bodybuilding is a competitive sport nationally and internationally in both amateur and professional categories for men, women, and mixed pairs. However, a majority of individuals uses bodybuilding methods merely to lose excess body fat or build up a too thin part of the body.

**BURN**

This is a burning sensation that you feel in the muscle that you are training. This burn is caused by a rapid buildup of fatigue toxins in the muscle and is a good indication that you are optimally working a muscle group. The best bodybuilders consistently forge past the pain barrier erected by muscle burn and consequently build very massive, highly defined muscle.

**BURNS**

A training technique used to push a set past the normal failure point, and thereby to stimulate it to greater hypertrophy. Burns consist of short, quick, bouncy reps 4-6 inches in range of motion. Most bodybuilders do 8-12 burns at the end of a set that has already been taken to failure. They generate terrific burn in the muscles, hence the name of this technique.

**CARDIORESPIRATORY FITNESS**

This is the Physical fitness condition of the heart, circulatory system and lungs that is indicative of good aerobic fitness.

**CHEATING**

A method of pushing a muscle to keep working far past the point at which it would normally fail to continue contracting due to excessive fatigue buildup. In cheating you will use a self-administered body swing, jerk, or otherwise poor exercise form once you have reached the failure point to take some of the pressure off the muscles and allow them to continue a set for two or three repetitions past failure.

**CHINNING BAR**

A bar attached high on the wall or gym ceiling, on which you can do chins, hanging leg raises, and other movements for your upper body. A chinning bar is analogous to the high bar male
gymnasts use in national and international competitions.

**CIRCUIT TRAINING**

A special form of bodybuilding through which you can simultaneously increase aerobic conditioning, muscle mass, and strength. In circuit training, you will plan a series of 10-20 exercises in a circuit around the gym. The exercises chosen should stress all parts of the body. These movements are performed with an absolute minimum of rest between exercises. Then at the end of a circuit, a rest interval of 2-5 minutes is taken before going through the circuit again. Three-five circuits would constitute a circuit-training program.

**CLEAN**

This movement consists of raising a barbell or two dumbbells from the floor to your shoulders in one smooth motion to prepare for an overhead lift. To properly execute a clean movement, you must use the coordinated strength of your legs, back, shoulders, and arms.

**COLLAR**

A clamp is used to hold plates securely in place on a barbell or dumbbell bar. The cylindrical metal clamps are held in place on the bar by means of a set screw threaded through the collar and tightened securely against the bar. Inside collars keep plates from sliding inward and injuring your hands, while outside collars keep plates from sliding off the barbell in the middle of an exercise.

**CUT UP (OR CUT)**

A term used to denote a bodybuilder who has an extremely high degree of muscular definition due to a low degree of body fat.

**DEFINITION**

The absence of fat over clearly delineated muscular movement. Definition is often referred to as “muscularity,” and a highly defined bodybuilder has so little body fat that very fine grooves of muscularity called “striations” will be clearly visible over each major muscle group.

**DENSITY**

This is the hardness of the muscle, which is also related to muscular definition. A bodybuilder can be well defined and still have excess fat within each major muscle complex. However, when he has muscle density, even this intramuscular fat has been eliminated. A combination of muscle mass and muscle density is highly prized among all competitive bodybuilders.

**DIPPING BAR**
Parallel bars set high enough above the floor to allow you to do dips between them, leg raises for your abdominal, and a variety of other exercises. Some gyms have dipping bars, which are angled inward at one end; these can be used when changing your grip width on dips.

**DIURETICS**

Sometimes called “water pills,” these drugs and herbal preparations remove excess water from bodybuilder’s system just prior to a show. This reveals greater muscular detail. Harsh chemical diuretics can be quite harmful to your health, particularly if they are used on a chronic basis. Two of the side effects of excessive chemical diuretic use are muscle cramps and heart arrhythmias (irregular heart beats).

**DUMBBELL**

Essentially, a dumbbell is a short-handled barbell (usually 10-12 inches in length) intended primarily for use with one in each hand. Dumbbells are especially valuable when training the arms and shoulders, but can be used to build up almost any muscles.

**EXERCISE**

Movements such as (e.g., a seated pulley row, barbell curl, bench press, or seated calf raise, etc...) that you perform in your workouts.

**FAILURE**

That point in an exercise, which you have fully fatigued your working muscles. They can no longer complete an additional repetition of a movement with strict biomechanics. You should always take your post-warm-up sets at least to the point of momentary muscular failure, and frequently past that point.

**FLEXIBILITY**

A suppleness of joints, muscle masses, and connective tissues, which lets you, move your limbs over an exaggerated range of motion, a valuable quality in bodybuilding training, since it promotes optimum physical development. Flexibility can only be attained through systematic stretching training, which should form a cornerstone of your overall bodybuilding philosophy.

**FORCED REPS**

Forced reps are a frequently used method of extending a set past the point of failure to induce greater gains in muscle mass and quality. With forced reps, a training partner pulls upward on the bar just enough for you to grind out two or three reps past the failure threshold.

**FORM**

This is simply another word to indicate the biomechanics used during the performance of any bodybuilding or weight-training movement. Perfect form involves moving only the muscles specified in an exercise description, while moving the weight over the fullest possible range of
motion.

<table>
<thead>
<tr>
<th>FREE WEIGHTS</th>
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<tbody>
<tr>
<td>Equipment such as: Barbells, dumbbells, and related equipment. Serious bodybuilders use a combination of free weights and such exercise machines as those manufactured by Nautilus and Universal Gyms, but they primarily use free weights in their workouts.</td>
</tr>
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<table>
<thead>
<tr>
<th>GIANT SETS</th>
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<tbody>
<tr>
<td>Performing a series of 4-6 exercises, done with little or no rest between each movements, and a rest interval of 3-4 minutes between each giant sets. You can perform giant sets for either two antagonistic muscle groups or a single body part.</td>
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<table>
<thead>
<tr>
<th>HYPERTROPHY</th>
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<tbody>
<tr>
<td>This means increase in muscle mass and an improvement in relative muscular strength. Hypertrophy is induced by placing an “over-load” on the working muscles with various training techniques during a bodybuilding workout.</td>
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<table>
<thead>
<tr>
<th>INTENSITY</th>
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<tbody>
<tr>
<td>The degree of effort that you put into each set of your workout. The more intensity you place on a working muscle, the more quickly it will increase in hypertrophy. The most basic methods of increasing intensity are to use heavier weights in good form in each exercise, do more reps with a set weight, or perform a consistent number of sets and reps with a particular weight in a movement, but progressively reducing the length of rest intervals between sets.</td>
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<tr>
<th>ISOLATION EXERCISE</th>
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<tr>
<td>In contrast to a basic exercise, an isolation movement stresses a single muscle group (or sometimes just part of a single muscle) in relative isolation from the remainder of the body. Isolation exercises are good for shaping and defining various muscle groups. For your thighs: squats would be a typical basic movement. While leg extensions would be the equivalent isolation exercise.</td>
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<tr>
<th>JUICE</th>
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<td>A slang term for anabolic steroids, e.g., being “on the juice.”</td>
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<tr>
<th>LIFTING BELT</th>
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This is a leather belt 4-6 inches wide at the back that is fastened tightly around your waist when you do squats, heavy back work, and overhead pressing movements. A lifting belt adds stability to your midsection, preventing lower back and abdominal injuries.

**MASS**

The size of the entire physique, or the size of each muscle group. As long as you also have a high degree of musculature and good balance of physical proportions, muscle mass is a highly prized quality among competitive bodybuilders.

**NUTRITION**

The applied science of eating to foster greater health, fitness, and muscular grains. Through correct application of nutritional practices, you can selectively add muscle mass to your physique, or totally strip away all body fat, revealing the hard-earned muscles lying beneath your skin.

**OVERLOAD**

The amount of weight that you force a muscle to use that is over and above its normal strength ability. Applying an overload to a muscle forces it to increase in hypertrophy.

**PEAK**

The absolute zenith of competitive condition achieved by a bodybuilder. To peak out optimally for a bodybuilding show, you must intelligently combine bodybuilding training, aerobic workouts, diet, mental conditioning, tanning, and a large number of other preparatory factors.

**PLATES**

The flat discs placed on the ends of barbell and dumbbell bars to increase the weight of the apparatus. Although some plates are made from vinyl-covered concrete, the best and most durable plates are manufactured from metal.

**POWER LIFTING**

A second form of competitive weightlifting (not contested in the Olympics, however) featuring three lifts: The squat, bench press, and deadlift. Power lifting is contested both nationally and internationally in a wide variety of weight classes for both men and women.

**PUMP**
The tight, blood-congested feeling in a muscle after it has been intensely trained. Muscle pump is caused by a rapid influx of blood into the muscles to remove fatigue toxins and replace supplies of fuel and oxygen. A good muscle pump indicates that you have optimally worked a muscle group.

<table>
<thead>
<tr>
<th><strong>REPETITION (REP)</strong></th>
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<tbody>
<tr>
<td>Each individual count of an exercise that is performed. Series of repetitions called “sets” are performed on each exercise in your training program.</td>
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<table>
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<tr>
<th><strong>RESISTANCE</strong></th>
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<tbody>
<tr>
<td>The actual amount of weight that you are using in any exercise.</td>
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<tr>
<th><strong>SET</strong></th>
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<tbody>
<tr>
<td>A grouping of repetitions that is followed by a rest interval and usually another set. Three to five sets are usually performed of each exercise.</td>
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<tr>
<th><strong>SPOTTERS</strong></th>
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<tr>
<td>Training partners who stand by to act as safety helpers when you perform such heavy exercises as squats and bench presses. If you are stuck under and weight or begin to lose control of it, spotters can rescue you and prevent needless injuries.</td>
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<tr>
<th><strong>STEROIDS</strong></th>
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<tr>
<td>Prescription drugs which mimic male hormones, but without most of the androgenic side effects of actual testosterone. Many bodybuilders use these drugs to help increase muscle mass and strength.</td>
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<tr>
<th><strong>STRETCHING</strong></th>
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<tr>
<td>A type of exercise program in which you assume exaggerated postures that stretch muscles, joints, and connective tissues, hold these positions for several seconds, relax and then repeat the postures. Regular stretching exercise promotes body flexibility.</td>
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<tr>
<th><strong>TESTOSTERONE</strong></th>
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<tr>
<td>The male hormone primarily responsible for the maintenance of muscle mass and strength</td>
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</table>
induced by heavy training. Testosterone is secondarily responsible for developing such secondary male sex characteristics as a deep voice, body hair, and male pattern baldness.

**TRISETS**

Series of three exercises performed with no rest between movements and a normal rest interval between trisets. Trisets increase training intensity by reducing the average length of rest interval between sets.

**WEIGHT TRAINING**

An umbrella term used to categorize all acts of using resistance training. Weight training can be used to improve the body, rehabilitate injuries, improve sports conditioning, or as a competitive activity in terms of bodybuilding weightlifting.

**WORKOUT**

A bodybuilding or weight-training session.
Dumbbell Exercises for Weight Training

Dumbbell exercises are very popular weight training exercises which are done using a pair of dumbbells that you'll find in any commercial gyms and which are affordable enough to buy yourself as part of your own home gym setup.

Dumbbell exercises are widely used because they provide key benefits:

**Low cost**
You'll only need a small monetary investment if you intend to workout using dumbbell exercises. While the sight of dumbbells is ubiquitous in commercial gyms everywhere they are affordable enough for you to buy for your own personal home gym.

**Versatility**
It's absolutely amazing how many weight training exercises you can perform using a single pair of dumbbells. Using this lone piece of fitness equipment will allow you to perform upwards of 75 different dumbbell exercises and in the process target every major muscle group in your body.

**Targets stabilizing muscles**
Another key benefit associated with using dumbbell exercises is the fact that they are very effective at targeting various stabilizing muscles in your body (also called core muscles). Although these muscles are not as visible as their bigger neighbors it is nonetheless important that
these are not forgotten or neglected.

DUMBELL EXERCISES

Abdominal Dumbbell Exercises

Back Dumbbell Exercises

Shoulders Dumbbell Exercises
Legs Dumbbell Exercises

Chest Dumbbell Exercises

Bicep Dumbbell Exercises

Tricep Dumbbell Exercises
Barbell Exercises for Weight Training

Barbell exercises are a staple in weight training and require the use of a bar on which you place a variety of different weight plates on both ends. You'll find barbells in any commercial gyms but they are also very popular in people's home gyms as well.

There are many reasons why barbell exercises are so popular. Here are the main ones:

Target groups of muscles together
Contrary to strength exercises in which you can pinpoint specific muscles to target, barbell exercises will allow your muscles to grow together. This is caused by the fact that barbell exercises do not place you in a fixed position but rather will require the use of various muscles in order to A - perform the motion and B - maintain your balance.
Abdominal Barbell Exercises

Back Barbell Exercises

Shoulders Barbell Exercises

Legs Barbell Exercises
Chest Barbell Exercises

Bicep Barbell Exercises

Tricep Barbell Exercises

Forearm Barbell Exercises
Strength Exercises for Weight Training

Strength exercises are weight training exercises that require the use of specially designed fitness equipment where each piece of equipment will allow you to perform only one exercise (or a few variations of an exercise). Or in other words, there is one strength machine designed for each strength exercise that you'll want to do.

Strength machines are most commonly found in commercial gyms although some people do make the investment for home-gym setups.

Here are the key benefits to using strength exercises:

Easy to use and saves you time

The primary reason why strength exercises are so popular is because they provide their users with outstanding ease of use. For most machines you'll only have to sit down on the machine's bench, select the weight desired using a small baton and begin working out.

This is dramatically easier to use when you compare it to barbell exercises for which you'll have to change the configuration of weight plates between each exercise. You'll also save on downtime between exercises which will allow you to maximize the time spent actually working out.
**Lets you pinpoint specific muscles**
Because strength machines are specifically built for each strength exercise, you'll be placed in positions to target very specific muscles while working out. Contrary to freeweight exercises (such as barbell or dumbbell exercises) where you'll need the input of various stabilizing muscles to help you keep your balance, strength exercises lets you focus exclusively on the muscles you want to train.

**Reduced risk of injury**
Finally, because you'll never be out of balance (being securely seated) while using strength exercises you should see a lower risk of injury that could occur otherwise from picking up weights from the floor or walking with weights in your hands. Also these kinds of exercises are better suited for people that like to workout alone since they don't require the use of a spotter.

**Abdominal Strength Exercises**

**Back Strength Exercises**
Shoulders Strength Exercises

Chest Strength Exercises

Arms Strength Exercises
Legs Strength Exercises

CHEST EXERCISES

Chest exercises are weight training exercises that are designed to strengthen the muscles located in the area of your chest.

The muscles located inside your chest are called the pectoral muscles (pectoralis major and minor) and chest exercises are usually divided into two groups: upper chest exercises or lower chest exercises.

Your chest muscles are solicited whenever you are engaged in a pushing motion with your arms and will usually solicit the help from neighbouring muscles, specifically the trice and the deltoid muscles. Because of the sheer number of pushing motions involved in day to day activities (pushing the shopping cart, closing the car door, etc.) and because the chest area is one of the most visible part of a person's anatomy chest exercises form an extremely popular type of weight training exercises.

Chest exercises are predominantly performed using a workout bench and a barbell but many can be performed using dumbbells, strength equipment or even without using any equipment at all (such as the pushup). The most notable chest exercise is the bench press in which you lie on your back on a workout bench and push a barbell up and down towards your chest. Also well known is the strength exercise known as the pec-deck fly in which you use a gym-type equipment and pull your arms towards each other.
Dumbbell Chest Exercises

Barbell Chest Exercises

Band Chest Exercises

Ball Chest Exercises
Strength Chest Exercises

Bowflex Chest Exercises

SHOULDER EXERCISES

Exercises are weight training exercises that are designed to strengthen the muscles located in your shoulders.

The muscles located in your shoulders are called the deltoids. Deltoids are actually made up of three major muscle strands:
1 - the front head located in front of your shoulders (anterior head)
2 - the rear head located at the back of your shoulders (posterior head)
3 - the outer head located between the front and rear heads (lateral head)
Your shoulder muscles are solicited whenever you are involved in pulling, pushing, or raising motions. Pulling something towards you will require the input from your rear deltoids. Pushing something away from you will require the input from your front deltoids. Raising something up the sides of your body will require the input from your outer deltoid muscles.

As with most fitness exercises, shoulder exercises will often times require the help of neighbouring muscles. In most cases, shoulder exercises will need input from either your triceps, biceps and/or back muscles.

Finally, shoulder exercises can be performed using a wide variety of fitness equipment. Notably, you may use a standard barbell, a pair of dumbbells, an exercise ball or commercial gym-type equipments.

Dumbbell Shoulder Exercises

Barbell Shoulder Exercises
Band Shoulder Exercises

Ball Shoulder Exercises

Strength Shoulder Exercises

Bowflex Shoulder Exercises
Bicep Exercises for Weight Training

Bicep exercises are weight training exercises that are designed to strengthen the muscles located in front of your upper arms.

The muscles located in your upper arms are called the biceps brachii, or biceps for short. Biceps are actually made up of two main muscle strands:
1 - the long head located on the outside of your upper arms and
2 - the short head located on the inside of your upper arms.

Your bicep muscles are solicited whenever you are engaged in a pulling motion where you are curling your elbows and when you are engaged in the rotation of your forearms. As such, bicep exercises will usually require the use of neighbouring muscle, notably the inside forearm muscles as well as the back of your shoulders (rear deltoids). Because upper arms are prominently positioned on your body and are visible when you are at the beach bicep exercises they tend to receive a great deal of attention at the gym and are extremely popular.

Bicep exercises can be performed using a wide variety of fitness equipment but most of them can be done using a simple set of dumbbells. The most known bicep exercise is the dumbbell bicep curl in which you use a pair of dumbbells and you pull them up by curling your elbows.

Dumbbell Bicep Exercises
Barbell Bicep Exercises

Band Bicep Exercises

Ball Bicep Exercises

Strength Bicep Exercises
Total Gym Bicep Exercises

For more information on bicep exercises please visit:

Tricep Exercises for Weight Training

Tricep exercises are weight training exercises that are designed to strengthen the muscles located at the back of your upper arms.

The muscles located at the back of your upper arms are called the triceps brachii, or triceps for short. Triceps are actually made up of 3 main muscles trands:
1 - the long head (located nearest your back),
2 - the lateral head (located nearest your shoulders) and
3 - the much smaller medial head.

Your tricep muscles are solicited whenever you are engaged in a pushing motion where you are extending your elbows. As such, tricep exercises will usually require the help of neighbouring muscles, notably the chest, shoulder and inner forearm muscles. As is the case with bicep exercises, because upper arms are predominantly positioned in the human body and because they are visible at the beach, tricep exercises are very popular in gyms everywhere.
Tricep exercises are performed using a wide variety of fitness equipment, ranging from dumbbells, barbell and gym-equipment. The most commonly used tricep exercise is the tricep extension in which you push a dumbbell up above your head while keeping your upper arms still. Another well known tricep exercise is the tricep kickback in which you kneel down on one knee on a workout bench and push a dumbbell back while keeping your upper arm still and perpendicular to the floor throughout.

**Dumbbell Tricep Exercises**

![Dumbbell Tricep Exercises](image1)

**Barbell Tricep Exercises**

![Barbell Tricep Exercises](image2)

**Band Tricep Exercises**

![Band Tricep Exercises](image3)

**Ball Tricep Exercises**

![Ball Tricep Exercises](image4)
**Strength Tricep Exercises**

**Total Gym Tricep Exercises**

For more information on tricep exercises please visit:

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**Leg Exercises for Weight Training**

Leg Exercises are weight training exercises that are designed to strengthen the muscles located in your lower body (i.e. thighs, buttocks, hips, calves).

The following muscle groups make up the majority of muscles found in your legs:

1. The **Quadriceps** are found in front of your thighs, below your hips and above your knees.
2. The **Hamstrings** are found at the back of your thighs, again below your hips and above your knees.
3. The **Gluteals** are the muscles located in your buttocks.
4. The **Hip Flexors** are located on the sides of your hips.
5. Finally, the **Calves** are located at the back of your legs, below your knees and above your ankles.
Your leg muscles are involved whenever you are walking, rising up or walking down a flight of stairs, lifting yourself or objects from up the floor. All in all, the muscles in your legs are involved throughout your day-to-day activities. Rising yourself up from the floor will require the quadriceps and the glutes to work together whereas your calves will be involved whenever you push on your toes to raise yourself up. Finally your hip flexors will be solicited whenever you are raising your legs up or pushing or pulling them to either sides of your body.

As with most fitness exercises, leg exercise will require the assistance of neighbouring muscle groups. In most cases, performing leg exercise will either require the help from either your back or abdominal muscles, and oftentimes both at the same time.

Finally, leg exercises can be performed using a variety of different workout equipment, whether you work out at home or at a professional commercial gym. For example, there are plenty of leg exercises for which you would only need one of the following equipment type: a barbell with accompanying weight plates, a pair of everyday dumbbells, an exercise ball (also called swissballs) and finally isolated gym-type equipment custom-built for exercises in particular.

Dumbbell Leg Exercises
Barbell Leg Exercises

Ball Leg Exercises

Strength Leg Exercises

Band Leg Exercises
Stretch Exercises for Weight Training

Stretch exercises are exercises that are designed to increase the flexibility of your muscles by elongating them. While they are not weight training exercises per se they should be allowed into your workout regimen because they have been shown to decrease the risk of injuries associated with physical activity.

There is considerable debate raging today as to whether stretch exercises are more effective when conducted before working out with weight training exercises of afterwards. The former side argues that it is essential to stretch beforehand in order to loosen the muscles and their tendons while the latter side argues that stretching before working out actually results in small tears in the muscle tissues which in turn increases the chance of injuries. They argue that stretch exercises are most effective when performed after working out, in the cool down period.

Whenever you decide to do them (before or after), here are some key points to remember for effective stretching:

**Always warm up before stretching**
If you are stretching before exercising make sure to loosen or warmup your muscles beforehand a little. This warm up period will result in your muscles being properly prepared for their small elongations and will reduce the risk of small tears in your muscle tissues from developing.

**Slowly increase your stretch and hold for 10 seconds minimum**
It is very important never to bounce or abruptly stretch your muscles while stretching. Rather it is recommended to slowly increase the pressure on your muscles and to hold the stretch for a minimum of 10 seconds before letting go.

**Never hold a painful stretch**
Stretch exercises are not designed to be painful. Quite simply, if you are stretching a muscle and
the process hurts it means you are not doing it correctly or that your muscle is not properly disposed.

**Upper Body Stretch Exercises**

![Upper Body Stretch Exercise Image]

**Lower Body Stretch Exercises**

![Lower Body Stretch Exercise Image]
