

Strength & Conditioning Packet

Unit 4- Putting it all together... (Final)



Over the course of this unit we will review all the benefits of Core, Flexibility, Strength training and Training variables. Sports Specific Training and warm-ups / cool downs will also be discussed. You will also be instructed to create your own workout from start to finish.

Directions for completing packet:

Packets will be distributed at the beginning of each unit and are due upon the completion of the unit. The four worksheets at the back of the packet are due_____.

NO late work will be accepted.

All work turned in after the due date will result in a zero.

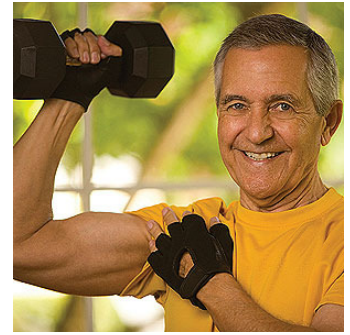
Worksheets Due:

1. Create Workout Template
2. Crossword
3. Final Worksheet
4. Exercise / Machine Worksheet

******Make sure your NAME is on last four pages.******

Benefits of strength & conditioning training

- More energy, Improve athletic performance & decrease chance of injury
- Improved self-image/self efficacy (toned muscles, muscle mass)
- Weight-bearing exercise helps to prevent osteoporosis (bone density)
- Improve mood, management of stress & counter feelings of *depression*
- Improve performance of heart & lungs (Cardiovascular Health)
- Improved metabolism (BMR), weight & appetite control
- Better ability to fall asleep and stay asleep
- Strength contributes to the overall efficiency of the human body (posture etc)
- Quicker healing process and improves immune system



Benefits of Upper Body Strength:

- An important benefit of upper-body strength is that it helps you avoid some particularly troublesome injuries. Repetitive stress injuries result from any kind of activity, from word processing to tennis that subjects muscles, tendons, and ligaments to constant stress. Joints especially shoulders, are particularly vulnerable.
- Surprisingly, arms, shoulders, necks, and backs are more resilient and resistant to injury when they're strong and in good condition.
- Keeping your upper body strong can go a long way towards saving your lower back.



Benefits of Lower Body Strength

- Your leg muscles are by far the largest and most important muscles in your body with respect to movement, stability and overall power. If you've ever played any type of sport, it becomes fairly obvious that most of your power comes from your legs - whether it's walking, running, cycling, baseball, golf, bowling, swimming or anything similar.
- As further incentive, the better you keep your legs now, the greater mobility you'll have at an older age.
- Maintaining strong legs throughout your life will give the knees, hips and ankles the support they need to carry you as far as you want to go, injury free! Furthermore, injuries such as ankle sprains, muscle pulls, and ligament tears are far less likely when they're surrounded by strong supporting leg muscles.

Benefits of Corrective Training / Flexibility Training

- Corrective Training is designed to correct muscle imbalances, joint dysfunctions, neuromuscular deficits and postural distortion patterns. Teaching proper static and dynamic postural alignment during functional activities can prevent most postural dysfunctions. Keep in mind that to prevent tissue overload, individuals should not perform dynamic integrated movements (Olympic lifting) prior to improving the structural integrity.
- Decreased chance of injury and enhance strength, flexibility, speed and power
- Prevent the development of muscle imbalances
- Correct existing muscle imbalances, joint dysfunction and improving posture



Sports Specific Training:

Is auxiliary or in addition to the training that an athlete practices for their particular sport. It usually consists of a conditioning program built around sports skills that help you as an athlete realize your goals much more quickly than if you trained without such a program. A ski jumper would need their legs to be like shock absorbers when landing and a football player when blocking would need explosive power in both their arms and legs. Sports specific training can achieve a stronger and speedier athletic performance because the main characteristic of most specificity exercises is that they closely resemble the individuated body mechanics in your particular sport.



Warm ups and Cool Downs....

Why warming up is important:

To be safe, an aerobic program should begin with a warm up period. The main purpose of warming up is to increase your heart rate slightly. This has two benefits: 1) it raises your core body temperature; and 2) it increases the blood (oxygen) flow to your muscles to prepare your body for more vigorous physical activity. Your muscles and tendons (which attach your muscles to your bones) will be more flexible for stretching after mild movement has raised your internal body temperature. This flexibility helps you increase the range of motion of your joints and may help you avoid injuries such as muscle tears and pulls.

What muscles should I warm up?

Focus on warming up large muscle groups (i.e. quadriceps, calves, chest, etc...) In an aerobic class, participants march in place, grapevine, do knee lifts etc... for the legs. To warm up the chest and shoulder area, participants do shoulder rolls, arm circles etc... Runners/joggers could begin their run with a fast walk for 3 to 5 minutes followed by a stretch prior to the actual run itself.

How long should I warm up?

It takes your body approximately 3 minutes to realize it needs to pump more blood to your muscles. Warm ups should last approximately 5 - 10 minutes and they should incorporate stretching of large muscle groups (such as the quadriceps, calves, hamstrings, hip flexors, shoulders etc...)

Why Cool Down & Duration of Cool Down?

After you've reached and maintained your training heart rate level in the aerobic portion of your class, it is important to recover gently. The cool down serves two purposes: 1) it reduces your pulse; and 2) it returns the blood to your heart in sufficient quantities to rid the muscles of lactic acid (a chemical result of muscular fatigue). If you stop suddenly, the blood will pool in your legs instead of returning to your heart. Dizziness, nausea and a "worn out" feeling are common symptoms of an improper cool down. It takes your body approximately 3 minutes to realize it does not need to pump all the additional blood to your muscles. A safe cool down period is at least 3 minutes, preferably 4-5 minutes. All cool downs should be followed by stretching of the muscles to avoid soreness and tightness.

Review of Training Variables:

Set- A group of consecutive reps

Reps- One complete movement of a particular exercise

Tempo- The speed with which each rep is performed

Rest- Is the time taken to recuperate between sets or exercise

Muscle Endurance Training (Toning)- form of training that includes high amounts of volume and it is used to improve lean body mass and decrease body fat. (12 – 25 reps, 1 – 3 sets, 0 – 90 seconds rest)

Muscle Strength Training- is specific for the adaptation of maximal muscle growth, focusing on high levels of volume with minimal rest periods to force cellular changes that result in an overall increase in muscle. Moderate to heavy weights are used in this phase.

(8 – 12 reps, 3 – 4 sets, 45 – 90 seconds rest)

Muscle Power Training- focuses on increasing the load placed upon the tissues of the body and on both high force and velocity to increase power. Heavy weights are used in this phase. (1 – 5 reps, 4 – 6 sets, 2 – 5 minutes rest)



Strength & Conditioning Final



1. List 2 benefits to regularly participating in strength & conditioning?
2. What are 2 differences between using free-weights and using machines?
3. Improper dress or horseplay can lead to a weight room/training injury.
 - A. True
 - B. False
4. All these are examples stretching except _____.
 - A. Foam Roll
 - B. Leg Swings
 - C. Push ups
 - D. Walking Knee Hugs
5. List 2 examples of weight room etiquette.

Directions: Create full workout for yourself. Make sure to fill in (Training Variables) **set, reps, rest time**. Incorporate all that you have learned as far as core (stability, strength/power) types of flexibility/stretchers, warm-up & Cool down etc.

TRAINING TEMPLATE

WARM-UP / FLEXIBILITY:

Exercise	Time / Distance	Sets / Reps	Coaching Tips

CORE / BALANCE TRAINING

Exercise	Set	Reps	Rest	Coaching Tips

RESISTANCE TRAINING

Exercise	Set/Reps	Weight	Rest	Coaching Tip

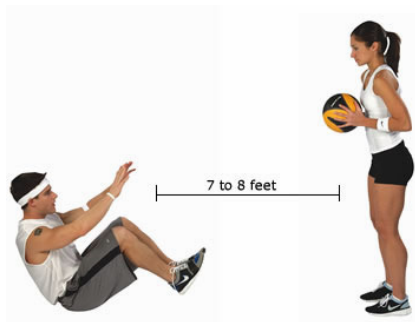
COOL DOWN

Exercise	Time / Distance	Sets / Reps	Coaching Tips

Answer:

What is your goal of this workout? (Weight loss, Toning, Power, Strength, Upper body, Lower body etc)

Directions: For each picture write (A) name of machine or exercise, (B) what muscle(s) are being used, and (C) name a sport or activity that this exercise may help improve performance in.



A:

B:

C:



A:

B:

C:



A:

B:

C:



A:

B:

C:



A:

B:

C:



A:

B:

C:

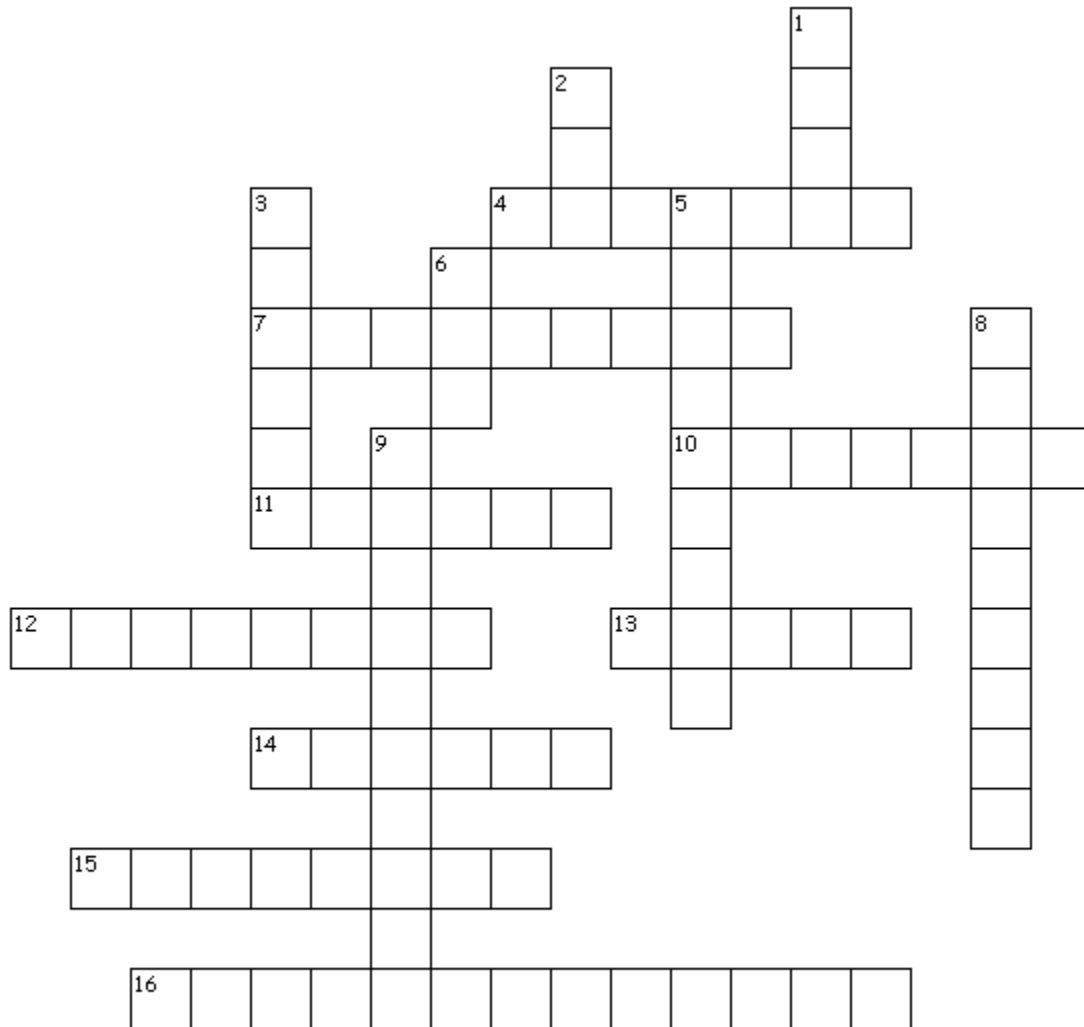


A:

B:

C:

Strength & Conditioning - Final



Across

4. while using free weights in the gym it is good to have a _____.
7. builds explosive power, improves sport specific movements and improves core coordination.
10. Leg swings are an example of this type of flexibility stretch/training.
11. holding a stretch for 15-20 sec is an example of _____ stretching.
12. this machine will help strengthen your legs.
13. is an example of a core - stability exercise.
14. Strength and Conditioning training can help manage _____.
15. Exercise strength _____ are safer to use than free weights.
16. improves stability, balance, and postural control.

Down

1. is where the human body's center of gravity is located and where all movement begins.
2. one complete movement of a particular exercise.
3. the muscle located in front of the arm.
5. is an example of a cardio machine than can be found in weight room.
6. is a group of consecutive reps.
8. cleaning off the equipment after you use it is an example of weight room_____.
9. muscle located in the back of the upper leg.

