

**Improved  
Hammer Throw  
TRAINING  
with over/under weight  
implements**

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There are many factors that determine how far you can throw the hammer. Results depend heavily upon improving your SPECIFIC Strength, Power, and Speed. The most effective way to improve these qualities is through the use of hammers weighted heavier and lighter than the competition weight, thrown using the competitive technique or from a variation of the competitive technique with fewer turns. This booklet will outline a specific plan so you can use your variable weight hammers from SpringCo to improve your competitive results in the hammer throw.

This plan is based on the following model:

- 1) Test with various hammers
- 2) Evaluate results of test
- 3) Choose an appropriate training plan
- 4) Determine appropriate hammer weights and lengths
- 5) Train for 4 weeks
- 6) Re-test hammers and repeat training process

Hammer Packages: the first wire listed is the regular length wire

### **College and Open Men**

6.75 kg iron hammer + 38" wire + 37" wire + handle

7.26 kg iron hammer + 38" wire + 37" wire + handle

7.75 kg iron hammer + 37.5" wire + 36.5" wire + 35.5" wire + handle

### **High School Men**

5.0 kg iron hammer + 38.5" wire + 37.5" wire + handle

5.5 kg iron hammer + 38.5" wire + 37.5" wire + handle

6.0 kg iron hammer + 38.25" wire + 37.25" wire + 36.25" wire + handle

### **College Women/High School Women**

3.5 kg iron hammer + 38.25" wire + 37.25" wire + handle

4.0 kg iron hammer + 38.25" wire + 37.25" wire + handle

4.5 kg iron hammer + 38.25" wire + 37.25" wire + 36.25" wire + 35.25" wire + handle

### ***Step 1: Test with various hammers:***

In this plan, you will test your maximum throw during the course of several days training with a lighter than normal hammer, a competition weight hammer, and a heavier than normal hammer, measure and record the results. You must follow certain conditions during testing, so you can develop a performance model that will tell you how to select or plan training that is appropriate for your individual needs. The conditions that should be met to make this process as accurate as possible include:

1. all three hammers should be of the same overall length
2. the weight of the hammers should be known
3. the same number of turns should be used for all three hammers

4. the number of maximal attempts should be the same for all three hammers

Here is an example of how you might conduct your testing:

Monday: light hammer only

6-8 throws: medium intensity for warm-up

4 throws: maximal (mark all throws then measure the longest)

Tuesday: competition hammer only

6-8 throws: medium intensity for warm-up

4 throws: maximal (mark all throws then measure the longest)

Wednesday: heavy hammer only

6-8 throws: medium intensity for warm-up

4 throws: maximal (mark all throws then measure the longest)

Thursday: rest from training and evaluate testing results, then choose new training plan and get equipment ready.

Friday: begin new training plan

## Step 2: Evaluate Results of Test

The general rule of thumb you will use to compare the distances thrown with each hammer depends on your age and sex. The rules are as follows:

<u>The group you fall into</u>	<u>Changes in distance thrown per hammer</u>
College and Open men	10% per kilogram
College and Open women	15% per kilogram
High School boys	15% per kilogram
High School girls	17.5% per kilogram

In order to simplify the evaluation of test results, you need not make mathematical comparisons yourself. The back of this booklet contains the tables that will make the comparisons for you. You need only to be able to follow the information contained in the table.

Your evaluation of test results will reveal one of the following three challenges:

1. You need to **improve specific speed by throwing more light hammers**. The results shown with the light hammer is less than expected based on the results with the competition weight and heavy hammers.

2. You need to **improve specific strength by throwing more heavy hammers**. The results shown with the heavy hammer is less than expected based on the results with the competition weight and light hammers.
3. You need to **improve results with all three hammers by following a balanced plan**. The results with the light and heavy hammers are near to what is expected when compared with the results using the competition weight hammer.

### ***Step 3: Choose the appropriate training plan***

#### **I need to improve specific speed:**

##### **Early in training year**

###### **Mondays and Thursdays:**

- 10 throws alternating light and competition hammers, low-medium intensity
- 3-4 throws with the light hammer, maximum intensity, measure and record distance
- 10-25 throws alternating light and competition hammers, high-medium intensity

###### **Tuesdays and Fridays:**

- 10 throws alternating light and competition hammers, low-medium intensity
- 3-4 throws with the competition hammer, maximum intensity, measure and record distance
- 10-25 throws alternating light and competition hammers, high-medium intensity

###### **Saturdays:**

- 10 throws alternating competition and heavy hammers, low-medium intensities
- 3-4 throws with the heavy hammer, maximum intensity, measure and record distance
- 10-25 throws alternating light and competition hammers, high-medium intensity

Wednesdays & Sundays are days off from throwing

##### **Middle of training year**

###### **Mondays and Thursdays:**

Same as Early in the year, but all hammers thrown 1" short

###### **Tuesdays and Fridays:**

Same as Early in the year, but all hammers thrown 1' short

###### **Saturdays:**

Same as Early in the year, but heavy hammer thrown 2" short

Wednesdays & Sundays: are days off from throwing

##### **End of training year**

###### **Mondays and Wednesdays:**

- 10 throws alternating light and competition hammers, low-medium intensity
- 3-4 throws with the light hammer, maximum intensity, measure and record distance
- 10-25 throws alternating light and competition hammers, high-medium intensity

###### **Tuesdays:**

- 10 throws alternating competition and heavy hammers, low-medium intensities

3-4 throws with the heavy hammer, maximum intensity, measure and record distance  
10-25 throws alternating light and competition hammers, high-medium intensity  
make heavy hammer 3" short

Thursdays:

Off from throwing

Fridays:

10-15 throws with competition weight hammer on regular length wire, all done at medium intensity

Saturday:

Compete

Sunday:

Off from throwing

### **I need to improve specific strength:**

#### **Early in training year**

Mondays and Thursdays:

10 throws alternating heavy and competition hammers, low-medium intensity

3-4 throws with the heavy hammer, maximum intensity, measure and record distance

10-25 throws alternating heavy and competition hammers, high-medium intensity

Tuesdays and Fridays:

10 throws alternating heavy and competition hammers, low-medium intensity

3-4 throws with the competition hammer, maximum intensity, measure and record distance

10-25 throws alternating heavy and competition hammers, high-medium intensity

Saturdays:

10 throws alternating competition and light hammers, low-medium intensities

3-4 throws with the light hammer, maximum intensity, measure and record distance

10-25 throws alternating light and competition hammers, high-medium intensity

Wednesdays & Sundays: are days off from throwing

#### **Middle of training year**

Mondays and Thursdays:

Same as Early in the year, but all hammers thrown 1" short

Tuesdays and Fridays:

Same as Early in the year, but all hammers thrown 1' short

Saturdays:

Same as Early in the year, but heavy hammer thrown 2" short

Wednesdays & Sundays: are days off from throwing

#### **End of Training Year**

Mondays and Wednesdays:

10 throws alternating heavy and competition hammers, low-medium intensity

3-4 throws with the competition hammer, maximum intensity, measure and record distance

10-25 throws alternating heavy and competition hammers, high-medium intensity

**Tuesdays:**

10 throws alternating competition and heavy hammers, low-medium intensities

3-4 throws with the heavy hammer, maximum intensity, measure and record distance

10-25 throws alternating heavy and competition hammers, high-medium intensity

make heavy hammer 3" short

**Thursdays:**

Off from throwing

**Fridays:**

10-15 throws with competition weight hammer on regular length wire, all done at medium intensity

**Saturday:**

Compete

**Sunday:**

Off from throwing

**I need to follow a balanced plan to improve results with all three hammers:**

Alternate the specific speed program followed the next day by the specific strength program.

Choosing the right intensities for your throws:

Low-medium intensity: refers to between 60-79% of maximum effort with that hammer and wire length.

High-medium intensity: refers to between 80-95% of maximum effort with that hammer and wire length.

Maximum intensity refers to between 96-100+% of maximum effort with that hammer and wire length.

The back of the booklet also contains a chart to keep with you at practice so you can be sure that the intensities you are using are correct.

**All training sessions** should begin with a good general warm-up. Likewise, you will need to do more than just throw to get good results in the hammer throw. Training should include jumping and sprinting, weightlifting drills, technique drills, throwing medicine balls and power balls, and strengthening exercises for the abdomen and lower back. All sessions should be followed by a cool-down period and flexibility work. There are many different ways to incorporate these components into your training, but they are outside the scope of this booklet. There are many good books and videos that can get your started in the right direction.

#### ***Step 4: Determine the appropriate weights and lengths of hammers.***

Lets define what is meant by some terms used in the above section on selecting the appropriate training plan:

Light hammer: can be a hammer that weighs less than the competitive weight hammer, or can be the competitive hammer, if it is thrown on a shorter than normal wire. When you reduce the weight of the hammer or reduce the length of the hammer, you are able to rotate faster than normal since you do not encounter as much resistance as you would with the competition hammer on a full-length wire. The competition weight hammer with a wire that is 1-2" short will allow you to turn just slightly faster than you would with the competition hammer; this trains your mind and body for the higher turning speeds required to throw farther.

Competition hammer: is the hammer that you are going to throw in the meets. Where it says competition hammer, you can take that to read the competition hammer on a full-length wire.

Heavy hammer: is any hammer that is heavier than the competition weight hammer, even if it is on shorter than normal wire.

If you determine that a small adjustment in the weight of a hammer is needed, a quick and easy way is to add chain. Galvanized chain with links ranging in diameter from  $\frac{1}{4}$ " to  $\frac{1}{2}$ " can be purchased in short lengths from almost any hardware store. Use a postal scale and hacksaw to measure a short length that is approximately the weight you want and cut it free. After taking the handle off the hammer, thread the chain over the wire, letting it drop down the wire so as to rest against the hammer's head. Put the handle back on and you have a way to adjust any of the SpringCo hammers for training purposes.

Determining the correct hammer to use can be a little complicated, so the packages available from SpringCo were designed to help take the guesswork out. There are other ways to put this type of program together, but this particular approach serves as a good basic plan; once you feel confident, use this plan as an outline to make your own plan.

#### ***Step 5: Train for 4 weeks***

How long you need to train on a program before making changes depends on many factors. The easiest and best guideline is to change programs when you stop making progress in your maximum results. If you look again at the training plans, you will see that each day calls for a series of maximal attempts with some particular hammer that you will measure and record the distance. I recommend keeping track of the results on a graph or some type of chart. If you look at the trend over time, you can learn a lot about your body's own response to training. Initially when you start a training plan, you may see a decrease of the first week to week and a half in the maximal distance you are throwing each day. This is normal and is simply your body adjusting to the new program. Then, you will begin to see progress. Be patient as the progress can be slow at times. After completing four weeks of your training, you may see a plateau in the

distances you achieve. If this plateau lasts for more than a week and cannot be explained by issues in your throwing technique, then it is likely time to change the program. Four weeks is a good rough estimate of how long a program should last, but it is not possible to say for certain if this is right for you and your situation. Just remember that it is best to make a change in the program, before you become stale.

### ***Step 6: Retest hammers and repeat process***

After training for a 4 week period, having a few days where you test again is a great idea as it serves several functions. Firstly, it helps you to learn how to compete. If you take time to approach the three testing days like you would a meet, you can learn a lot about your mental preparation. Secondly, it gives your body a rest by reducing the number or throws you take. Thirdly, it allows you to assess the effectiveness of your training and choose a new training plan.

### **Conclusion:**

There are many recipes for making delicious chocolate chip cookies. The recipe you choose as your favorite might not be the same one that I like best. Likewise, there are many different ways to plan your training for good progress and results. Part of the challenge of the hammer throw is to find what works best for you and your body. The plan outlined above is only one way to organize your training. I recommend you try it, then make the changes that will make the plan work best for you. Good luck and far throws.

### **About the Author:**

Glenn McAtee is the Women's throws coach at Clemson University in South Carolina. He is also the personal coach to Jamine Moton, who has thrown the hammer 68,48 and is ranked in the top 50 in the world in that event. The training described in this handbook details the approach McAtee uses to develop hammer throwers.

Prior to coming to Clemson, McAtee served as the Men's and Women's throws coach at Cal State Northridge. During his time at Northridge, McAtee guided several men and women hammer throwers to Big Sky and Big West Conference titles, as well as NCAA qualifying marks.

As an athlete, McAtee threw the hammer, both as a collegian at South Carolina, and also on several National teams for his native Canada. Largely a self-taught hammer thrower, McAtee became a student of the hammer throw event, reading everything available and seeking out expert advice about the event.

McAtee is one of a handful of Level III certified throws coaches in the US.