

From Zero to 72.50 in 2.5 years,
Throwing Volumes, Specific Implements and Peaking for the Hammer.
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I am writing this paper in retrospect to the last 8 years of coaching the Hammer at the collegiate level. Through trial and error I have found many good ways to develop hammer throwers and have found many poor ways that showed me the way to good hammer training. This is what this old Shot and Discus coach has learned from hands on experience.

1. I make everyone in my program learn to throw hammer. I have found that it makes the other rotational events better. I have also found it makes Cleaning and Snatching power better. When Dan Taylor was throwing hammer and weight his pulling power was 10-15% better. This alone has an effect on the other events.

2. Some athletes can turn well from the first day and some will never turn well no matter how many turns they do. My best hammer throwers could make a descent looking 3 turn throw in 15 minutes. These athletes are the one's that will end up being hammer throwers. The athletes that don't take to it right away, do get better by doing lots of turns but they usually never catch the athlete that can do it in the first 15 minutes. I have had 3 girls that could do this. So far I have had no men that could pick the hammer up in a few minutes.

3. **Specific Strength Throwing- (Multiple weight implements fall training)**

Monday-Hammer Practice: Short Wire Day (Release work, Speed and Positioning)

Implement	No# of Turns	No# of Throws
W-20lb-30lb ½ wire-28-29 inch M-35lb-45lb ½ wire	1 turn and Release	6 Throws
W-18lb-25lb ½ wire M-30lb-40lb ½ wire	2 turn and Release	6 Throws
W-16lb-20lb ¾ wire-37.5'-38.5' M-20lb-25lb ¾ wire	3 turn and Release	6 Throws
W-12lb-16lb ¾ wire M-16lb-20lb ¾ wire	3 turn and Release	6 Throws
W- 3.5K-10lb Hammer M- 14lb-18lb Hammer	Normal Full Throw	6 Throws

- Notes: 1. **Warm-Up:** 30 turns (right arm), 30 turns (left arm)
30 turns (normal), 30 turns (one wind, one turn)
2. **Note to Workout:** This is for a 3 turn thrower. 4 Turns just add a turn to each implement.
3. **Hammer Lengths -** ½ wire = 19.25 inch wire+ implement = 28.25 inch to 29 inch total implement length. ¾ wire = 28.87 inch wire+ implement= 37.87 inch to 38.50 inch total Implement length.

Tuesday- Lifting

- **Pulls and Top End Benching Day:**
 1. 5-7 sets of Hang Cleans, Box Cleans, Power Cleans, Hang Snatches, Box Snatches, Power Snatches or Clean Grip Snatches.

2. 3-5 sets of a Heavy Pull Aux. such as Clean Hi-Pulls, Snatch Hi Pulls, ½ Rack Dead Lifts, Speed Dead Lifts, Back Hypers or Reverse Hypers.
3. 5-7 sets of Top End Heavy Benching such as 1,2,3,and 4 board benching, Band benching from the bottom, Band Benching from the Top and Benching from various pin heights and various grip widths.
4. 4-6 sets of Heavy Aux. Benching such as 30 degree Incline Dumbbell Bench and 30 degree Incline, 45 degree Incline and Dumbbell Incline Benching.
5. 4-6 sets of heavy Row work such as Seated Low pulley rows, 1 arm dumbbell rows, Barbell Rows or Machine Rows.
6. AB Work, Land mine, Plyo's

Wednesday-Long Hammer Day- (Work phase day)

Implement	No# of Turns	No# of Throws
W-14lb-16lb Hammer M-20lb-10k Hammer	5 turns and Release	6 Throws
W-12lb-14lb Hammer M-18lb-20lb Hammer	4 turns and Release	6 Throws
W-10lb-12lb Hammer M-16lb-18lb Hammer	3 turns and Release	6 Throws
W-3.5k-10lb Hammer M-14lb-16lb Hammer	3 turns and Release	6 Throws
W- 3K-4k Hammer M- 12lb-14lb Hammer	3 turns and Release	6 Throws

Note: Warm-Up: 30 turns (right arm), 30 turns (left arm), 30 turns (normal)
30 turns (one wind, one turn)

Thursday-Hammer Practice- Release Day

Implement	No# of Turns	No# of Throws
W-25lb-35lb Weight M-40lb-50lb Weight	1 turn and Release	6 Throws
W-16lb-25lb-1/2 wire M-25lb-35lb- ½ wire	1 turn and Release	6 Throws
W-12lb-20lb ¾ wire M-18lb-25lb ¾ wire	2 turns and Release	6 Throws

Warm-Up: 30 turns (right arm turns), 30 turns (left arm), 30 turns (normal)
30 turns (one wind, one turn)

Friday- Lifting

- **Squats and Volume Benching Day:**
 1. 5-7 sets of either Box Squats, Box Squats with Bands or Chains, Safety Squats, Back Squats or Front Squats.
 2. 3-5 sets of a Heavy Squat Aux. such as ½ rack squats, Step ups, One legged squats, or Weighted Sled Pulls.
 3. 5-10 sets of Volume Benching from a regular bench, close grip bench, dumbbell bench, or 30 and 45 degree Incline benching, skull crushers, weighted dips ect.
 4. 4-6 sets of Overhead Work such as Push pressing from the back and front, standing overhead pressing, seated behind the neck pressing or Dumbbell overhead pressing.

5. 4-6 sets of Heavy curl work such as Dumbbell Curls, Straight bar curls or curl bar curls.
6. AB Work, Land Mine

Sunday Hammer Practice-Light Hammers (Speed Day)

Implement	No# of Turns	No# of Throws
W-4k Hammer M-16lb Hammer	Competition Technique	9 Throws
W-3.5k Hammer M-14lb Hammer	Competition Technique	9 Throws
W-3k Hammer M-12lb Hammer	Competition Technique	9 Throws

Note: Warm-Up: 30 turns (right arm), 30 turns (left arm), 30 turns (normal), 30 turns (one wind, one turn)

4. Breakdown of Fall Hammer training:

- # of throws per week- 105
- # of heavy throws taken -66 (63%)
- # of normal to light throws taken-39 (37%)
- # of short implement throws taken-42 (40%)
- # of Normal length implement throws taken-63 (60%)
- # of Normal length implement heavy throws taken-34 (32%)
- # of Normal length implements normal to light throws taken-29 (27%)
- # of fast throws (71=67%) vs. slow throws (34=33%)
- # of turns taken while throwing implements-283
- # of turns taken on without throwing-480
- Saturday is a rest day

5. Indoor Season 20lb and 35lb Weight Training;

Sunday Lifting- 1.00pm

- A. Heavy Pulls- Hang cleans, Box Cleans, Hang Hi-pulls, for 5-7 sets.
- B. Heavy Squats- Safety, Box or Front for 5-7 sets
- C. Leg Aux.- Lunges, Step Ups for 3-5 sets.
- D. Hypers- Reverse or Normal for 4-6 sets.
- E. Leg Ext- for 4-6 sets.
- F. Landmine-for 4-6 sets

Monday Lifting- 8-11am

- G. Heavy Bench- Bench, Close Grip Bench, Bench with Bands (bottom and top), Bench with Chains, Bench with boards for 5-7 sets.
- H. Heavy Upper body Aux.- 3-5 sets of either 45 or 30 Incline, Seated behind the neck press , Push Press ect.
- I. Heavy Back Aux- 3-5 sets of low or high row, Lat Pulls, ect.

- J. Heavy Tricep- 3-5 sets of skull crushes, weighted Dips, Dumbbell triceps, cable pushdowns ect.
- K. Heavy Bicep- 3-5 sets of Dumbbell curls, curls bar curls, or straight bar curls.

MONDAY-Weight Throw Workout #1 (2-6 pm)

Weight	1-Turn	2-Turn	Meet Form- 2 or 3 turns.		
M35 ½ Followed by 42wt Throw W25 ½/30wt	35 ½ wire- 4Throws 25 ½ wire- 4Throws	42 wt- 4Throws 30 wt- 4Throws			
M30 ½/ 35wt W20 ½/ 25wt		30 ½ wire- 4Throws 20 ½ wire- 4Throws	35WT 4 throws 25WT 4 throws		
M30 wt W18 wt			8-THROWS		

*** OR ****

Monday- Weight Throw Workout #2

Weight	1-Turn	2-Turn	COMP FORM		
M45lb-40lb wt W35lb-30lb wt	6 throws				
M42lb-35lb wt W30lb-25lb wt		6 throws			
M35lb-30lb wt W25lb-20lb wt			6 throws		
M32lb-30lb wt W20lb-18lbwt			6 throws		

Tuesday- Rest Day

Wednesday-Weight throw Workout #1 or #2

Weight	COMP FORM				
M25 ½/35wt W20 ½/ 25wt	9- THROWS				
M30wt/ W18wt	9 THROWS				
		*** <u>OR</u> ***			
M35lbwt W25lb wt	6 THROWS				
M32lb wt	6				

W20LB wt	THROWS			
M30lb wt	6			
W18lb wt	THROWS			

Thursday- Light and Fast Lifting

1. 5 sets of 2 reps on Snatch
2. 5 sets of 2 on Box Squats at 60-70% of max
3. 5 sets of 3 on Bench at 60-70% of max
4. 100 hammer turns

Friday- TRAVEL AND COMPETE IN THE WEIGHT THROW

Saturday- Compete in the shot and travel back home.

6. Competition Hammer Training (Outdoor Season)

Sunday Lifting- 1.00pm

- a. Heavy Pulls- Hang cleans, Box Cleans, Hang Hi-pulls, for 5-7 sets.
- b. Heavy Squats- Safety, Box or Front for 5-7 sets
- c. Leg Aux.- Lunges, Step Ups for 3-5 sets.
- d. Hypers- Reverse or Normal for 4-6 sets.
- e. Leg Ext- for 4-6 sets.
- f. Landmine-for 4-6 sets

Monday Lifting- 8-11am

- g. Heavy Bench- Bench, Close Grip Bench, Bench with Bands (bottom and top), Bench with Chains, Bench with boards for 5-7 sets.
- h. Heavy Upper body Aux. - 3-5 sets of either 45 or 30 Incline, Seated behind the neck press, Push Press ECT.
- i. Heavy Back Aux- 3-5 sets of low or high row, Lat Pulls, act.
- j. Heavy Tricep- 3-5 sets of skull crushes, weighted Dips, Dumbbell triceps, cable pushdowns act.
- k. Heavy Bicep- 3-5 sets of Dumbbell curls, curls bar curls, or straight bar curls.

Hammer Throwing – Outdoor Season

Monday (Women)

- 1.) 25lb-30lb Weight (5 throws 3 turns)
- 2.) 25lb-20lb ½ wire (5 throws 3 turns)
- 3.) 16lb-12lb ¾ wire (5 throws 3 turns)
- 4.) 12lb-10lb hammer (5 throws 3 turns)
- 5.) 10lb-3.5k hammer (5 throws 3 turns)
- 6.) 3.5k-3k hammer (5 throws 3 turns)

Warm-Up: 30 turns (right arm), 30 turns (left arm), 30 turns (normal)
30 turns (one wind, one turn)

Monday (Men)

- 1.) 45lb-40lb Weight (5 Throws 3 turns)
- 2.) 30lb-25lb ½ wire (5 Throws 3 turns)
- 3.) 10k-20lb ¾ wire (5 throws 3 turns)
- 4.) 18lb-16lb hammer (5 throws 3 turns)
- 5.) 16lb-14lb hammer (5 throws 3 turns)
- 14lb-12lb hammer (5 throws 3 turns)

Tuesday (Women) Optional

- 1.) 12 throws with 3.5 hammer
- 2.) 10 1 Turn throws 25lb-20lb ½ wire

Warm-Up: 10 turns (right arm), 10 turns (left arm), 10 turns (normal)
10 turns (one wind, one turn)

Tuesday (Men) Optional

- 1.) 12 throws with a 14lb hammer
- 2.) 10 1 turn throws 30lb-25lb ½ wire

Wednesday (Women)

- 1.) 25lb-20lb ½ wire (6 throws 3 turns)

Wednesday (Men)

- 1.) 30lb-25lb ½ wire (6 Throws 3 turns)

- 2.) 16lb-12lb $\frac{3}{4}$ wire (6 throws 3 turns) 2.) 10k-20lb $\frac{3}{4}$ wire (6 throws 3 turns)
 3.) 12lb-10lb hammer (6 throws 3 turns) 3.) 18lb-16lb hammer (6 throws 3 turns)
 4.) 10lb-3.5k hammer (6 throws 3 turns) 4.) 16lb-14lb hammer (6 throws 3 turns)
 5.) 3.5k-3k hammer (6 throws 3 turns) 5.) 14lb-12lb hammer (6 throws 3 turns)
 Warm-Up: 30 turns (right arm), 30 turns (left arm), 30 turns (normal)
 30 turns (one wind, one turn)

Thursday (Women)

- 1.) 3.5k hammer- 9 throws

Thursday (Men)

- 1.) 14lb hammer- 9 throws

1. 5 sets of 2 reps on Snatch
2. 5 sets of 2 on Box Squats at 60-70% of max
3. 5 sets of 3 on Bench at 60-70% of max

. Breakdown of Spring Hammer training:

- # of throws per week- 91
- # of heavy throws taken -48 (52%)
- # of normal to light throws taken-43 (47%)
- # of short implement throws taken-32 (35%)
- # of Normal length implement throws taken-59 (64%)
- # of Normal length implement heavy throws taken-21 (23%)
- # of Normal length implement normal to light throws taken-38 (41%)
- # of Fast throws (70-76%) vs Slow throws (21-24%)
- # of turns taken while throwing implements-253
- # of turns taken on without throwing-220

7. Breakdown of Brittany Riley's 72 meter Drake, Reg, USA vs NCAA & Pan Am's

Number and type of throws	Drake Relays 72.51	Regionals 72.33	NCAA'S 69.29	USA nationals 72.41	Pan Am's 65.51	World Champs
Throws per week	Week Before 75 Meet Week-55	91/67	73/36	75/52	40/35	91/77
Heavy throws per week	Week Before 57 Meet Week-45	69/54	57/24	48/22	28/3	61/46
Light throws per week	Week Before 17 Meet Week-10	22/14	16/12	27/32	12/32	30/31
Short	Week Before 31 Meet Week-25	20/25	20/12	28/16	19/3	37/36

throws per week, Weights, ½ wires, ¾ wire						
Normal Length throws per week	Week Before 44 Meet Week-30	71/42	53/24	47/36	21/32	54/41
Normal Length heavy throws per week	Week Before 26 Meet Week-20	49/28	37/12	28/6	13/0	34/10
Normal Length light throws per week	Week Before 18 Meet Week-10	22/14	16/12	19/28	8/32	20/31
Last Heavy Hammer Workout	3 days out- 10k ½ L 18 ¾ L 12lb ham 10lb ham 3.5k ham 5 throws per implement	3 days out- 10k ½ L 18 ¾ L 12lb ham 10lb ham 3.5k ham 5 throws per implement	8 days out- 10k ½ L 18 ¾ L 12lb ham 10lb ham 3.5k ham 5 throws per implement	3 days out- 10k ½ L-3 16 ¾ L-3 10lb ham-3 3.5lb ham-5 3k ham-5	11 days out. 16 ¾ 12 ham 10 ham 3.5k 3k -4 throws each	3 days out 10k ½ 10lb ham-66m+ 3.5k ham-71.86m 3k ham 5 throws per implement
Last Light Hammer Workout	Could not use the field	2 Days Out 12lb Ham-204 10lb Ham-216 3.5k Ham-237 4 throws each	4 days out ¾ 16lb 10lb-219 3.5k-241 6 throws each	2 Days Out 16lb ¾ 3.5k- 238 3k Ham-245 4 throws each	2 Days Out 3.5k- less then 70m 3k Ham 4 throws each	2 days out 16 ¾ 3.5k-72.50+ 5 throws each
Last Heavy Lifting Workout	6 Days out Box CL.5X245, Safety Sq-5x510, Chain Bench-4x265, 30 Incline-2x225, Dips4x3, Landmine 4x6	6 Days out Box CL.2X275, Safety Sq-3x600, Chain Bench-2x295, 30 Incline-2x255,	6 Days out Box CL.3x250, Safety Sq-3x480, Bench-3x250,	6 Days out Box CL.3x250, Safety Sq-3x480, Bench-3x185	7 Days out Box CL.3x275, Safety Sq-3x520, Bench-3x225	6 days out Hang Hi pulls-3x130k Box Squat-
Last Light Lifting Workout	Day before Cl. Grip Snatch-5x2x135, 18' Speed Box Squat 3x185,225,275,315,365 Speed Bench-5x3x155	Day before Cl. Grip Snatch-5x2x135, 18' Speed Box Squat 3x185,225,275,315,365 Speed Bench-5x3x155	Day before Cl. Grip Snatch-5x2x135, 18' Speed Box Squat 3x185,225,275,315,365 Speed Bench-5x3x155	2 Days before Cl. Grip Snatch-5x2x135, 18' Speed Box Squat 3x185,225,275,315,365 Speed Bench-5x3x155	2 Days before Cl. Grip Snatch-5x2x135, 18' Speed Box Squat 3x185,225,275,315,365 Speed Bench-5x3x155	Day before Cl. Grip Snatch hi pull-2x220, 18' Speed Box Squat 3x185,225,275,315,365 Speed Bench-5x3x155

Notes: Drake, Regionals and USA Nationals all have common training that created the 72 meter throws. These are the following important points.

- **Average amount of throws between the 3- 72 meter meets was (80 per week). The week of the meet the average was (58 per week) a 28% decrease in throwing volume.**

- Average amount of Heavy throws for the 3- 72 meter meets per was (58 per week) 72%.The week of the meet the average was (40 per week) 68% a 4% decrease from the training weeks.
- Average amount of light throws per week for the 3-72 meter meets was (22 per week) 27%. The week of the meet the average was (18 per week) 31%- 3 % more then the training wee
- Average amount of short implements for the 3-72 meter weeks was (26 per week) 32%. The week of the meet the average was (22 per week) 37% an increase of 5% from the training weeks.
- Average amount for the Normal length implements for the 3 -72 meter meets (54 per week) 67%. The week of the meet the average was (36 per week) 62% down 5% from the training weeks.
- Average amount for Heavy Normal length implements for the 3-72 meter meets (34 per week) 42%. The week of the meet the average was (14 per week) 24%, down 18% from the training weeks.
- Average Amount for the Light Normal length implements for the 3-72 meter meets (20 per week) 25%. The week of the meet the average was (17 throws per week) 30% up 5% from the training weeks.
- Last Heavy throwing workout (3 days out from meet)
- Last Light throwing workout (2 days out)
- Last Heavy Lifting workout (6 days out)
- Last Light and Fast lifting workout (1-2 days out)
- The training set-up for Worlds will be 67% Heavy, 33% Light, 41% Short, 59% Normal, (Heavy Normal 62%, Light Normal 38%) OF THE 91 THROWS PER WEEK

8. NCAA'S- the preparation for NCAA in the training week was good. (Volume, Heavy, short and light) But the week of training was not. The last heavy workout was 8 days out instead of 3 and the last light throwing workout was 4 days out. In retrospect the last heavy workout should have been done the day before Qualifying and the qualifying day should have been the 2 day out light workout. This is what I will do next year. Brittany looked sluggish and couldn't crush release
9. Pan AM'S- this failure was due to the lack of throwing volume and heavy throwing. Total throws per week was 40 and I must have been out of my mind to let her do this. The concept for this training was to draw off the base from the year and chase speed and let the light implements pull the 4k out further. In the end what happened was a peak that occurred 6 days too early with a sudden throwing drop that followed. At the Pan Am's Brittany said the ball felt heavier than a 10lb. Connie said she couldn't move and had no release. When she came back to Carbondale Brittany had a hard time finishing a 30 throw workout and finishing releases on a 3.5k hammer. She had lost a ball and ½ . The 3.5k was not going as far as she could throw a 10lb 3 weeks previous.

10. World's – this failure was due to the lack of experience at this level of competition. I knew that it would take 67.50-69 meters to make finals. Brittany's training was very good and maybe better than the other 72m+ meter meets. Brittany had a 3.5k training throw of 73+ and a 66m + 10lb throw. The day of the meet Brittany took 1 throw outside the stadium that was thrown at 80% and it went 68m+. Took one inside the stadium and it went the same. In the competition she had a cage foul, a throw bounced off the ground, and the third throw the handle and wire caught the cage. She basically was rushing the throw. I was very pleased with the training setup for this meet and would do it again. It took 68.55 to make the final. Once she becomes better battle tested she will be able to compete and make finals in the near future.