


# A Longitudinal Examination of the Throwing Career of Reese Hoffa

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## ABSTRACT


*It is uncommon to find a publication that covers the evolution of an athlete's training over the duration of his/her entire career. It is even more rare to find an article that incorporates the perspectives of both a coach and the athlete involved. This case study documents the senior career of shot putter Reese Hoffa (USA), a two-time world champion and Olympic bronze medallist with a best of 22.43m who was ranked number one in the world four times and in the top three for ten consecutive years. Jointly written by his coach Don Babbitt and Hoffa himself, it provides a clear explanation of the development of Hoffa's programme and how it led him to becoming one of the most accomplished athletes of all time in his event. In addition to quantitative details, description is given of important adjustments made in response to injuries, variations in fitness and the demands of an ever-changing international competition schedule. The aim, according to the authors, is to help future coaches and athletes see how a top-level performer navigated his career and to explain the rationale behind the training choices made along the way.*

## AUTHORS

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*Reese Hoffa is currently the Director at the Hoffa Throws Academy in Watkinsville, Georgia. As an athlete competing for the USA he won gold medals at the 2006 IAAF World Indoor Championships and the 2007 IAAF World Championships in Athletics and took a bronze medal at the 2012 Olympic Games.*

## Introduction

 ver the years there has been abundant documentation and discussion of athlete training programmes and preparation methods for either a single season or the lead up to a major championship. However, it is uncommon to find a publication that covers the evolution of training over the duration of an athlete's entire career. It is even more rare to find an article that incorporates the perspectives of both a coach and the athlete involved. The intention of this case study is to briefly document the career of an athlete who was one of the world's leading shot putters for more than a decade, Reese Hoffa of the USA. This is done

in an effort to help coaches and athletes see how a top-level performer navigated his career and to explain the rationale behind the important training choices and adjustments made over the years in response to injuries, variations in fitness and the demands of an ever changing international competition schedule.

The course of Reese's career with the senior (7.26 kg) implement spanned 18 years, from 1998 through 2016. During this period, he was able to achieve great success and amazingly stable results. His highlights included gold medals at the 2006 IAAF World Indoor Championships and the 2007 IAAF World Championships in Athletics and a bronze medal at the 2012 Olympic Games. In addition, he was the Diamond League shot put champion on three occasions. In terms of throwing performance, his personal best was 22.43m, he recorded seven competitions over 22m and an incredible 141 competitions over 21m during his career, the latter accomplishment being the most of any shot putter in history by a large margin. As shown in Table 1, he was ranked in the top three of Track & Field News' world rankings for 10 consecutive years (2005-2014), achieving the world's number one ranking in four of those seasons (2006, 2007, 2012, and 2014).

### **The Developmental Years (1997-2001)**

Reese's first exposure to the 7.26kg shot came in his freshman year of university at the age of 20. In high school he had thrown the 5.4kg shot for one and a half years using the rotational technique, achieving a personal best of 19.58m in competition. During this period he had a number of warm-up and training throws in excess of 21.30m, so it was apparent that he had the potential to throw much further than his competition results.

Reese's inability to reproduce his large training and warm-up throws in competition, and an instability in his competition results, stemmed from technical difficulties with his initial turn, or entry, out the back of the ring. The technical model he employed in high school, was

based of the technique of Olympic Champion and world record holder Randy Barnes (USA) and top America high school thrower Brent Noon. This model used a "controlled fall", as described by Noon, as part of the entry out the back of the ring while the thrower is moving through the first single support phase. Reese had a tough time keeping balanced during this portion of the throw, which caused him to over rotate and land to the left of the toe-board when he reached the "power position".

In the autumn of 1997, as Reese began his preparation for his first season with the senior implement, a technical change was made to keep the left foot continuously loaded while he performed his wind-up. This idea was borrowed from the technique of four-time world champion John Godina (USA) in an effort to keep him more stable over the left leg during the first double and single support phases. This adjustment paid off well and he was able to throw 19.07m in his very first season with the heavier implement.

In the subsequent three years Reese improved steadily to reach 20.22m at the end of his university career. Apart from technical refinement, the key strategies for improvement were to 1) steadily increase power through strength & power training in harmony with technical execution, and 2) increase body weight while simultaneously improving vertical jump performance (see Table 1a+b).

Throughout his time at university Reese's training schedule was heavily influenced by the demands of his academic study. As a result, throwing sessions were limited to only two times a week and were placed on Mondays and Wednesdays before lifting workouts in order to allow for maximum recovery between heavy lifting sessions.

Table 2 offers a sample training cycle during the spring competition period to give an idea of the template that Reese would eventually use for the rest of his career. The following points were used to guide the setup of the weekly training cycles:



1. If no competition was scheduled for the weekend, heavy squatting or leg exercises would be put on Friday to allow for a 72-hour recovery before the next training session on Monday.
2. Throwing workouts were scheduled directly before lifting workouts on Mondays and Wednesdays to allow for a 48-hour recovery period after a lifting workout before the next throwing workout.
3. If there was a competition on the weekend, then the squatting or heavy leg workout would be scheduled at the beginning of the week to allow for the longest possible recovery period before the competition (96 to 120 hours).
4. Both competition weight shots and light shots (between 6kg-7kg) were used in training. Heavy shots were not used because they caused Hoffa to alter his technique and timing in a negative way. Heavy shots were only used for stand throws in the General Preparation Phase.

### **The Beginning of the Post-University Years (2002-2004)**

The 2002 season was the first time Reese's athletics career would not be subsidised by a school/university and he now had to rely on a \$5000 post-collegiate grant from the national

athletics federation (USA Track & Field) and a part-time job to finance his throwing. The post-collegiate grant would be good for two years (through the end of the 2003 season), and Reese had told himself that he would devote two years to establishing himself as a professional shot putter. If at that point he could not support himself by shot putting, he would retire and transition into another line of work. We set a goal of being able to throw 20.50m in competition on a consistent basis as we felt this type of result would place him high in all the events of the IAAF Grand Prix and maybe would be good enough to get him on the USA World Championship team for 2003.

Since it had allowed him to progress steadily and there seemed no reason to change, Reese's training schedule was kept the same as what he had done while in university. He continued throwing two times a week, about 20-25 throws per session. This gave him a weekly volume of 40-50 throws, and a monthly volume of around 220 throws. Compared with most world-class throwers, this throwing volume was very low. What was important for Reese, however, was that the quality was very high. There was a sharp focus on execution of movement and the sessions were completed before any significant fatigue could affect the technical execution. We felt that this type of

Table 1a: Career training and performance overview for Reese Hoffa (USA) 1998-2007

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Age	20	21	22	23	24	25	26	27	28	29
Weight	122kg	126kg	128kg	129kg	130kg	133kg	133kg	136kg	137kg	140kg
7.26kg	19.07m	19.36m	19.79m	20.22m	20.47m	20.95m	21.67m	21.74m	22.11m	22.43m
7kg	----	----	----	----	----	----	----	----	----	22.41m
6.8kg	----	----	----	----	----	----	----	----	22.26m	----
6.6kg	----	----	----	----	----	22.62m	22.81m	23.08m	22.76m	22.81m
6.36kg	19.64m	----	20.56m	20.60m	21.29m	22.32m	----	----	----	----
Stand	16.45m	16.80m	17.00m	17.35m	17.15m	16.70m	16.80m	16.40m	16.40m	17.00m
Bench	189kg	200kg	210kg	213kg	215kg	3x195kg	2x200kg	220kg	3x205kg	3x212kg
Squat	227kg	227kg	----	253kg	3x227kg	3x227kg	3x237kg	3x237kg	3x237kg	3x237kg
Clean	143kg	150kg	160kg	168kg	160kg	3x150kg	2x160kg	4x160kg	3x160kg	----
Snatch	110kg	115kg	130kg	130kg	3x125kg	3x120kg	5x100kg	----	----	----
Push Press	150kg	2x150kg	2x150kg	180kg	180kg	2x180kg	2x180kg	----	4x160kg	----
40y sprint	4.92	4.78	4.89	4.89	----	4.81	----	----	----	----
OH Shot	15.55m	17.10m	16.58m	17.76m	18.19m	17.55m	----	----	18.31m	----
S.L.J.	2.60m	2.62m	2.75m	2.72m	2.80m	----	----	----	----	----
Vertical	60cm	63cm	65cm	69cm	71cm	71cm	----	----	75cm	71cm
World Rank	----	----	41	28	32	9	5	2	1	1
US Rank	----	----	5	6	7	5	3	2	1	1

training approach would reduce the long-term wear and tear on his body and would pay him back by allowing him to produce world-class results well into his 30's.

In 2003, his second year out of university, Reese was able to put together a solid season with 11 competitions over 20m and six over 20.50m. He reached his goal of making the USA team for the IAAF World Championships in Athletics in Paris and won the gold medal at the Pan-American Games in Santo Domingo with a Games record of 20.95m. These results were critical, and enabled him to secure a shoe sponsorship and earn enough money to continue his throwing career.

After the 2003 season we analysed Reese's competition results and determined that even though he had reached his goal of throwing well enough to justify being a full-time shot

putter, his average competition results were still too unstable with large fluctuations in performance. On two occasions he had important throws land just outside the left sector line due to over-rotation caused by turning out the back on his left heel. The first was a 21.34m sector foul at the Mt. SAC Relays, and the second was a 20.30m sector foul in the qualifying round of IAAF World Championships in Athletics. Both of these results would have drastically altered his ranking and status for 2003 if they had landed just 30cm to the right, and therefore, in the sector.

To address this issue we determined that Reese should "stay in touch" with his timing and technique so he would not have to spend a lot of time trying to find or retool it during the course of the competition season. This was to be accomplished by throwing all year round. It was decided that during the off-season (from

Table 1b: Career training and performance overview for Reese Hoffa (USA) 2008-2016

	2008	2009	2010	2011	2012	2013	2014	2015	2016
Age	30	31	32	33	34	35	36	37	38
Weight	143kg	146kg	145kg	145kg	145kg	145kg	145kg	150kg	141kg
7.26kg	22.10m	21.89m	22.19m	22.09m	22.00m	21.71m	21.88m	21.30m	21.02m
7kg	22.25m	21.95m	22.35m	22.46m	22.56m	21.98m	21.86m	21.76m	21.26m
6.8kg	----	----	22.25m	----	----	----	22.04m	21.97m	21.76m
6.6kg	22.55m	22.12m	----	23.56m	23.64m	22.23m	22.15m	----	21.88m
6.36kg	----	----	----	----	----	----	----	----	----
Stand	16.75m	17.05m	17.15m	18.70m	18.18m	18.05m	----	17.70m	16.32m
Bench	227kg	2x227kg	3x205kg	2x220kg	2x220kg	230kg	221kg	2x230kg	1x230kg
Squat	3x237kg	4x250kg	4x250kg	4x220kg	3x227kg	3x227kg	3x227kg	4x250kg	2x250kg
Clean	----	----	3x140kg	----	----	3x140kg	----	----	----
Snatch	----	----	----	----	----	137.5kg	----	----	----
Push Press	----	----	----	----	----	----	----	----	----
40y sprint	----	----	----	----	----	----	----	----	----
OH Shot	18.18m	----	----	----	----	----	----	----	----
S.L.J.	----	----	----	----	----	----	----	----	----
Vertical	71cm	71cm	----	71cm	71cm	71cm	----	----	----
World Rank	3	3	2	3	1	3	1	5	15
US Rank	2	2	2	2	1	2	1	2	5

September to November) he would take 10 full throws one time a week to maintain a good throwing pattern, so he would not have to find his timing as he began his general preparation period for the next season at the beginning of November.

Throughout the autumn of 2003 Reese was able to throw consistently over 20m and at times could hit 20.50-20.60m. This was done without any formal conditioning programme. The only technical focus during this two-month period was to work on staying on the ball of the left foot as he turned out the back of the ring. This was because he was starting to develop a tendency to roll back on his left heel as he turned out the back of the ring, which caused him to do a "heel turn" instead of the traditional pivot on the ball of the foot. By cleaning up the turn out the back of the ring, we felt he would be more consistent in reaching the middle of

the ring and reduce his tendency to over-rotate when he tried to go fast.

The tactic of not taking a break from throwing during the autumn worked out very well, and Reese was able to throw a large indoor personal best of 20.29m in early December of 2003. He transitioned well into the season breaking 21m for the first time and finished the 2004 indoor campaign by winning a silver medal at the IAAF World Indoor Championships in Budapest, Hungary, with a personal best of 21.07m.

Figure 1 documents Reese's competition results from 2001 to 2007 and it shows clearly that his approach allowed him to achieve both of the main aims we set for his first years out of university 1) steadily improve performance and 2) reduce the number of poor competitions. By the 2004 season, it was very rare to see him

Table 2: Sample training cycle during the spring competition period for Reese Hoffa

12 March – 6 April 2001		
Week	Power Lifts	Olympic Lifts
1	6x6x5x5x5	5x5
2	5x5	5x5x5x4x4
3	5x5x5x4x4	5x4
4	4x4x4x3x3	4x4x3x3x2
Monday:	Clean or Snatch (see Olympic Lift reps) Combo Lift 3x3 Push Press (see Olympic lift reps) Running Drills	
Tuesday:	One legged Squats 4x6 each leg Bench Press (see Power Lift reps) Rhythmic Step-ups 3x8 each leg Gymnastics Room (1 hour) 5x100m build-ups	
Wednesday:	Clean or Snatch 5x5, fast and comfortable Narrow Grip Snatch 3x5 fast! 2x150m, 2x100m, 2x50m	
Thursday:	Incline Bench Press (see Power Lift reps) Neider Press 3x4 Gymnastics Room (1 hour) Stair Sprints x5	
Friday:	REST	
Saturday:	Competition	
Sunday:	REST	

throw below 20m in a competition. This type of consistency enabled him to achieve his first top-five world ranking in 2004, as well as making the first of his three USA Olympic Teams.

Disappointingly, one competition where his consistency was not in evidence was the 2004 Olympic Games in Athens where Reese did not advance beyond the qualification round, posting a mark of just 19.40m after mistakenly being given only one warm-up throw in the stadium. This experience led to a new, more focused approach to qualifying round competitions. From that point onwards, in all the throwing sessions leading up to major competitions we made it a condition that he reach

20m after a maximum of three full throws. We followed this approach for the rest of Reese's career and the result was that in all subsequent major championships he was able to successfully qualify for the final. In all but three of these competitions (where in each case he utilised all three attempts) he qualified with his first throw.

### The Prime Years (2005-2012)

The years from 2005 to 2012 were the most successful of Reese's career. During this period he was ranked no worse than number three in the world, and finished ranked number one for the 2006, 2007, and 2012 seasons.

Going into the 2005 season we felt that a throw of 22m would be good enough to win any major championship and therefore chose it as Reese's performance target. He had developed his power levels in the weight room and in field tests to the point where we thought he was capable of 22m, provided he could execute his throw with good technique. However, at this time a decision was made to take the snatch out of Reese's strength training programme in an effort to protect a tender back that he had developed in the previous season. By the end of the 2006 season, both the push press and clean were also taken out of the programme for the same reason. There was an initial fear that 22m could not be reached without having such powerful exercises in the programme, but these fears were quickly allayed as the training results continued to improve, even after their omission.

From this point onwards we paid careful attention to the relationship between Reese's bodyweight and vertical jump. Each successive year of training saw him gradually gain weight while with either maintaining or improving his vertical jump test results. For example, in 2002, he had a bodyweight of 130kg and a 71cm vertical jump, which then improved to a 75cm vertical jump at 137kg bodyweight in 2006.

By the end of the 2006 season it had become a very rare occurrence for Reese to throw below 21m in a competition. This was a testament to his ability to maintain a good throwing rhythm for the whole year. A key strategy we developed for maintaining the throwing rhythm was to match up the weight of the implement thrown in training to the fatigue level seen at the time. The choice of shots for training during the outdoor competition cycle was centred on the ability to maintain a good rhythm and throw between 21.00-21.50m in training. In order to do this, he would throw a 6.6kg shot when he was feeling very fatigued, such as when he returned home from a series of competitions overseas. The 6.6kg shot allowed him the possibility to achieve his target distance and intensity. After a few sessions, once his nervous system recovered from the trip, he would switch up to a 7kg shot. Finally, in the last few workouts before the next trip, he would use the 7.26kg shot. This progressive approach allowed him to always stay in his throwing rhythm for his target performance of 21+ metres.

During the months of May until September of each year, the overwhelming majority of Reese's competitions would be outside the United States. This necessitated a training approach that allowed him to 1) maintain his

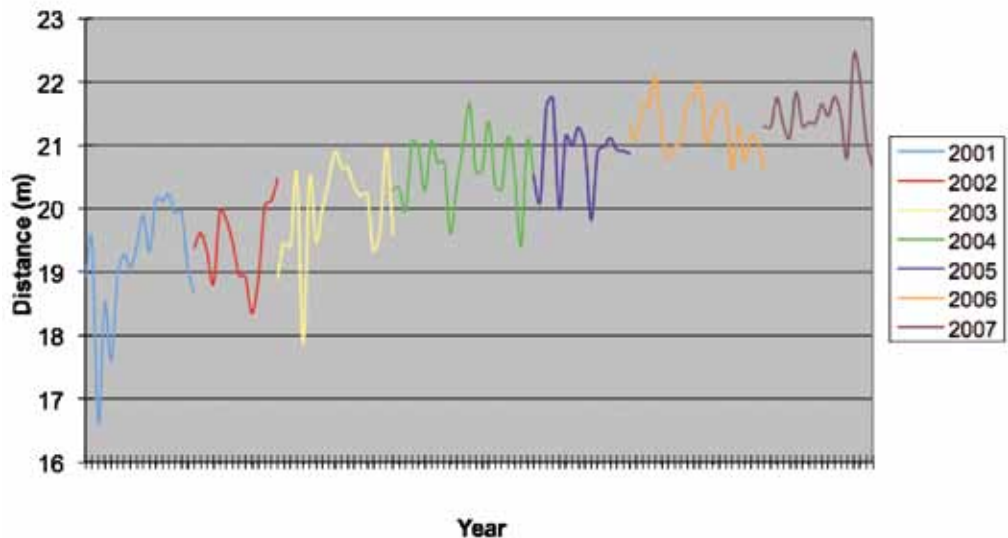


Figure 1: Shot put performance progression for Reese Hoffa 2001 to 2007



throwing rhythm and 2) maintain his power levels while still being able to recover from the international travel that most of his competitions required. Table 3 provides a description of a three-week training cycle that he would use in between a series of international competitions that allowed him to maintain his form. This type of cycle would be repeated over and over between international trips.

With these principles fully developed by the 2006 season, the performance plan for the following years remained largely unchanged from year to year. The quality results were reproducible each of the following seasons with only minor changes needed to work around the injuries that would pop up from time to time, as was the case in the 2009-2010 season.

## The Final Years (2013-2016)

Following the 2012 Olympic Games, Reese developed a nagging knee injury to his left knee. This injury stayed around for most of the 2013 season and caused him to make some inadvertent changes to his technique as he entered out the back of the ring. The instability in the start out the back of the ring caused him to have his shortest seasonal best performance since 2004, however, he was still able to compete well and earn a number three world ranking at the end of the season.

The 2014 season saw Reese return to full health and he was able to find consistent form, win the Diamond League, and finish the year ranked number one in the world. That year he also established the Hoffa Throws Academy in Watkinsville, Georgia, USA, and made plans to finish his competitive career at the end of the 2016 season.



*Don Babbitt (left) and Reese Hoffa*



Table 3: Sample competition training cycle during the competition period for Reese Hoffa

Week	Power Lifts
1	5x5 up to 75-80%
2	5x4 up to 85%
3	5x3 up to 75%
Monday:	Shoulder Circuit followed by short sprints
Tuesday:	Bench Press (see Power Lift reps) Manhandlers 2x10 Standing Bar twists 2x10 each way
Wednesday:	Agility Circuit
Thursday:	Step-ups 2x8 Back Hypers 2x10 Walking twists 4x25m
Friday:	Back Squats (see Power Lift reps) Hip Raises on box 2x10 each leg 4x100m build-ups after lifting
Saturday:	REST
Sunday:	REST

Reese's efforts in his last two years of competition were focused on limiting the number of competitions and avoiding excessive travel (e.g. to East Asia) in order to maximise recovery and conserve energy. These adjustments were relatively successful in 2015 but it was becoming an ever-greater challenge to determine how much recovery he needed between competitions and travel. In 2015 and 2016 it took about twice as many days for him to recover from a trip as it did before 2014. After the experience of many years of training it was relatively simple to figure out how much work to put in to reach a given level of throwing fitness, but it was a constant battle to figure out the amount of recovery that was needed between training and competition.

Upon reflection after the conclusion of the 2016 season, Reese felt that his move to start the Hoffa Throws Academy actually affected his training, and thus, his performances from 2014 to 2016. During those seasons it seemed a little harder for him to feel completely prepared for the top competitions, but he was not quite sure why. This epiphany, made it clear that splitting off just a little of his time to begin the building of his academy took away from some of the little details involved in recovery, which had allowed him to be at such a high level for so long. Such realisation happened too late to have any effect on his results, but it does serve as a valuable lesson for future use by aspiring coaches and athletes.

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