

The impact of strength exercises in the opposite double hierarchical style on some abilities in the effectiveness of the hard disk for the class (F40) for men

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Abstract

The importance of the research is reflected in the use of the opposite double hierarchical training method and the design of structural charts as a time indicator for organizational work that depends on the use of weights, rubber ropes and medical balls in different shapes and weights, and through a serious practical attempt to investigate modern training alternatives using strength exercises in this opposite double hierarchical method to achieve Good technical performance and a high level of achievement, and this is one of the necessities of working on how to overcome the stability of the achievement level for the effectiveness of discus throwing for (F40) players with disabilities, because the great progress witnessed in athletics activities is due to the benefit of workers in the field of sports training from following the correct scientific method. And good training in order to achieve the goals to be reached, and the research problem was the researchers noticed that the effectiveness of the discus throw for the disabled for the F40 category still suffers from stability in developing results and reaching the best records compared to other countries and other activities, and this is what called the researcher to address the situation to investigate the use of an alternative means. Through the preparation and implementation of strength exercises in the opposite double hierarchical method to develop some of the capabilities of Physical in the effectiveness of discus throw for class (F40) for men and in forms that were not used previously in their training. Some physical abilities in the effectiveness of discus throwing for class (F40) for men and to identify the percentage of development between the pre and post test on some physical abilities in the effectiveness of discus throwing for class (F40) for men. As for the research hypotheses, there were statistically significant differences for the post tests in some physical abilities in The effectiveness of discus throwing for class (F40) for men, and there are statistically significant differences in the percentage of development in some physical abilities in the effectiveness of discus throwing for class (F40) for men, the researchers used the one-group experimental approach. As for the research community and sample, the research sample was chosen by the intentional method, and it consisted of players from the DhiQar Committee for the effectiveness of throwing the disc of short stature (F40 category) for men and their number was (5) players, and this sample is a triangle of the research community by 100%. The opposite double hierarchy contributed to raising the level

of the results of all dimensional tests and their values and their achievement with acceptable moral values, as well as the emergence of values for the percentage of development between these tests for the members of the research sample. Muscular strength, including the opposite double hierarchical method.

1- Introduction to Research

1-1 Introduction and Importance of Research

Despite the great development that took place in the sports field, which came as a result of serious scientific research that helped raise the level of all sports and games and events, scientific research and specialists in the field of sports training are still working tirelessly to find the best ways and optimum means in the process of keeping pace with scientific modernity, including training The hierarchical system, which is a multi-modal work system, which is done by raising the resistance in an upward manner, increasing the training load continuously, and decreasing the number of repetitions in one group as the weights (resistance) increase with the harmony of rest with the training condition.

Disabled sport is one of the most important special sports at the present time because of its great role in rehabilitating the disabled and integrating them with society on the one hand, creating a competitive atmosphere for them to achieve high sporting achievements, and raising the name of their countries in international forums on the other hand.

The important and interesting thing that attracts a lot of attention, especially in local and international sports festivals, Through the foregoing, the importance of the research is evident in the use of the opposite double hierarchical training method and the design of structural charts as a time indicator for organizational work that depends on the use of weights, rubber ropes and medical balls in different shapes and weights, and through a serious practical attempt to investigate modern training alternatives using strength exercises in this way The opposite double hierarchy to achieve good technical performance and a high level of achievement, and this is one of the necessities of working on how to overcome the stability of the achievement level for the effectiveness of discus throwing for (F40) players with disabilities, because the great progress witnessed in athletics activities is due to the benefit of workers in the field of sports training from Follow the correct scientific method and good training in order to achieve the desired goals.

1-2 Research Problem

The great progress witnessed in athletics activities is due to the benefit of workers in the field of sports training from following the correct scientific method and good training in order to achieve the goals required to be reached, and through the researcher's experience as a former athletics player and officially accredited coach in the Athletics Federation for the challenged with disabilities currently. The effectiveness of the discus throw for the disabled for the F40 category is still suffering from stability in developing results and reaching the best records compared to other countries and other activities. The effectiveness of discus throwing for class (F40) for men and in forms that were not used previously in their training.

1-3 Research Objectives

- 1- Preparing strength exercises in the opposite double hierarchical method on some physical abilities in the effectiveness of discus throw for class (F40) for men.
- 2- Identifying the statistical differences between the pre-test and the post-test on some physical abilities in the effectiveness of discus throwing for class (F40) for men.
- 3- Identifying the percentage of development between the pre- and post-test on some physical abilities in the effectiveness of discus throwing for class (F40) for men.

1-4 Research Assignments

- 1- There are statistically significant differences for the post-tests in some physical abilities in the effectiveness of discus throwing for class (F40) for men.
- 2- There are statistically significant differences in the percentage of development in some physical abilities in the effectiveness of discus throwing for class (F40) for men.

1-5 Research Areas.

1. The human field: Athletics category (F40) for men in discus throw in DhiQar Committee
2. The time range: February 11, 2021 - July 23, 2021
3. The spatial domain: Local Administration Stadium / Martyr KamelBurhan Hall.

1-6 Define the terms.

Category (F40): They are short in stature whose height is 130 cm or less.

2- Research methodology and field procedures.

2-1 Research Methodology

Since the nature of the problem that the researcher should study necessitated the use of the experimental method with a single group.

2-1-2 The research community and its sample:

The research sample was chosen by the intentional method, and it consisted of the players of the DhiQar Committee for the effectiveness of throwing the discus of short stature (F40 category) for men and their number was (5) players, and this sample is a triangle of the research community by 100%.

Table (1)Physical and training specifications for the disabled of short stature, class (40) for the year 2021, for he effectiveness of discus throw

physical specifications and training	total length	Bloc	Chronological age	training age	arm length	man length	leg length	Shoulder distance
measurement	1.27cm	70kg	25س	وات7س	0.52cm	0.75cm	0.28cm	0.42cm

For the purpose of verifying the homogeneity of the research sample and the correctness of the normal distribution among its members, the researcher used the skew coefficient of the variables under study in the tribal tests, as it turned out that the value of the skew coefficient was confined between (± 3) and thus the research sample enjoys normal homogeneity as in Table (2).

Table (2) It shows the tests of homogeneity and the value of the skew coefficient of the research sample

s	variable	measuring unit	Arithmetic mean	Mediator	standard deviation	Skewness
1	Maximum leg strength	KG	64.50	62.50	9.26	0.18
2	The speed characteristic of the legs	repetition /10SEC	9.60	9.50	1.26	0.54
3	The speed characteristic of the arms	repetition /10SEC	10.60	10	1.17	0.89
4	Explosive power of the legs	meter	1.62	1.6	0.23	0.48
5	The explosive power of the aiming arm	Meter	5.63	5.75	-0.74	0.07
6	max speed	SEC	5.51	5.26	0.59	1.59
7	Discus throw achievement	Meter	21	21.05	1.10	0.19

It appears from Table No. (2) that the skewness coefficient for all members of the research sample is homogeneous, with evidence that the value of the skew coefficient for all the variables under study falls within (± 3), which indicates their homogeneity.

2-3 Means of collecting information, devices and tools used in the research:

The researcher used many tools, devices, and aids to obtain information and data for the research, which are “the means by which the researcher can collect data and solve the problem to achieve the objectives of the research, whatever those tools are of data, samples and equipment”(1)

2-3-1 Means of collecting information used in the research:

- 1- Arabic and foreign sources 0
- 2- The International Information Network (Internet).
- 3- An electronic computer (Pentium 4).
- 4- A registration form for test data and results.
- 5- Personal interviews.
- 6- Special forms for the names of the main research sample.

2-3-2 Devices the tools used in the research:

Manual calculator, manual stopwatch, number (3) iron bars.

Medicine balls (3 kg - 5 kg).

Iron nettles of different weights.

Four (4) tablets, weighing 1 kg.

Fox type whistle (4).

Chinese-made dumbbells of different weights, the Impulse Company.

Chinese-made laser discs, number (10).

American-made Hummer pressure, Lyyi Fitness Company.

Various measuring tools (metric tape measure 50 meters long)

Rubber ropes of different colors and thickness

Push and pull heavy trolley.

2-4 Field Research Procedures:

2-4-1 Determining the research

Variables and their tests:

The researcher studied the Arab and foreign sources and references and surveyed them and took the opinion of the supervising professor on how to determine the most important special physical abilities under research that are characterized by players with disabilities of short stature, the category ((F40)), the research sample in particular and determining the achievement test of throwing the disc to the farthest distance, and put it The researcher used a special form to take the opinions of the members of the subject approval committee, and after deliberation among them, it was agreed on the most important of these abilities and the appropriate tests for them, after making simple modifications to the form, which are as follows:

4. Maximum leg strength.
5. The speed characteristic of the legs.
6. The speed characteristic of the arms.
7. The explosive power of the legs.
8. The explosive power of the aiming arm.
9. Maximum speed.
10. Accomplish the discus.

As shown in Table No. (3) Below

Table (3)Tests for special physical abilities are under investigation

the agreement%	Experts Committee approved the topic	the exams	Special physical abilities	S
100%	5	Run 30m from a flying position	Maximum leg strength	1
100%	5	Throwing a medicine ball with one hand 2 kg	The speed characteristic of the legs	2
100%	5	Long jump from stability	The speed characteristic of the arms	3
100%	5	half durban	Explosive power of the legs	4
100%	5	10 sec front stand (girls stand)	The explosive power of the aiming arm	5
100%	5	Half dabbani (half squat) 10 seconds	max speed	6
100%	5	Completion of discus throwing according to competition law	Discus throw achievement	7

Adopting a percentage of (70%) of the value of the expert opinion agreement and excluding the tests that did not obtain this percentage, knowing that all abilities and their tests obtained a percentage of (100%) from the opinions of the placement approval committee, which numbered (5) individuals, and their accreditation as experts.

2-4-2 Tests used in the research:

2-4-2-1 The first test - a test of running 30 meters from a high start: (1).

- Purpose of the test: To measure the maximum speed.
- Instruments: stopwatch - poles - gypsum (bork) - tape measure in metres.
- Description of performance: The tester stands directly behind the line, and upon hearing the start signal, the tester runs and tries to reach the final line in the shortest possible time.

Recording: Time is calculated in seconds and to the nearest tenth of a second 1/100.

Number of attempts: only once.

3-4-2-2 The second test - the test of throwing a medical ball weighing 2 kg with one hand over the head from a sitting position: (1).

The objective of the test: To measure the explosive force of the shooting arm.

Tools: a medicine ball weighing (2) kg and a tape measure and tight.

Performance specifications: The laboratory sits on a chair and the medical ball is carried by hand over the head and throws the ball. Each laboratory has two attempts to score its best
 Scoring method: The distance between the leading edge of the throwing line and the nearest point the ball places on the ground is calculated.

2-4-2-3 The third test - the long jump test from a standing position: (3)

Purpose of the test: To measure the explosive power of the legs.

Necessary tools: a suitable place to measure the jump, with a width of 1.5 m and a length of 3.5 m, taking into account that it is level, a tape measure, colored pieces of chalk.

Description of performance: The tester stands behind the starting line with his feet slightly apart and parallel so that the instep of the feet touches the starting line from the outside, and the tester swings the arms back with his knees bent and leaning forward a little, then he jumps forward as far as possible by extending the knees and push the feet with swinging arms forward.

Calculation of degrees: the measurement is from the starting line to the last part of the body that touches the ground.

The number of attempts: only two, and the best is calculated.

2-4-2-4 The fourth test - the test of the maximum strength of the muscles of the legs is half-dubbed (4):

The objective of the test: To measure the strength endurance of the muscles of the legs.

Tools used: Al-Dubni device, different weights.

Method of performance: placing the device's arms on the shoulders, with an assistant next to the player, with the knees bent and extended halfway, twice.

Recording method: two repetitions for the maximum added weight.

2-4-2-5 The fifth test - the frontal leaning test - bending the arms and extending them from the leaning position in ((10 seconds of leaning girls)): (1)

The purpose of the test: To measure the speed characteristic of the two arms.

Necessary tools: an electronic clock, a registration form, and an assistant.

Performance description: The tester lies on the floor, resting on his arms. And his arms are outstretched, when he hears the signal to start. He quickly flexes and extends his arms in 10 seconds.

Calculation of degrees: The number of times the arms are bent and extended in a time of 10 seconds is calculated.

Number of attempts: once.

2-4-2-6 The sixth test - speed-distinctive strength test for the legs - half-dear ((half squat (10 econds.

The purpose of the test: to measure the speed characteristic of the legs.

Necessary tools: an electronic clock, a registration form, an assistant, and a training barrier of 40 cm height.

Description of performance: The tester stands in front of the barrier, when he hears the start. He bends the legs and touches the barrier with the hands and gets up quickly in 10 seconds.

Calculation of degrees: Calculates the number of times the legs are bent and extended in a time of 10 seconds.

Number of attempts: once.

Calculation of degrees: Calculates the number of times the arms are bent and extended in a time of 30 seconds.

Number of attempts: once.

2-4-2-7 Seventh Test - Performance Achievement Test - Discus Throw in accordance with the terms and conditions of the International Athletics Law:

The purpose of the test: measuring the throwing distance (achievement).

Tools and supplies: an integrated throwing court, a throwing circle of 2.50 m in diameter, a measuring tape, throwing discs weighing (1) kg, and registration forms.

Description of performance: The player stands inside the throwing circle and throws as far as possible, and the throw must be within the throwing sector, and the fall must be within the throwing sector.

Recording method: The best throwing distance is calculated from the inner edge of the circle to the first trace left by the disc when falling on the ground, and it is measured in meters and centimeters, and for three attempts only, the best is taken.

2-5 Scientific bases for the tests used in the research:

2-5-1 Validity of the tests:

Honesty is one of the most important conditions for a good test. The honest test is “the one who succeeds in measuring what was set for him ()” Hassanein (Stability indicator: It is “the validity of the experimental scores in relation to the real scores that were rid of the impurities of chance errors, and then the real scores are the scale or criterion to which the test’s sincerity is attributed, and this kind of honesty is felt through the square root of stability”).

2-5-2 Test stability

The stability of the test is based on “the method of conducting the test on a group of individual athletes and then repeating the same test on the same athletes after a period of time. Correlation of the scores of the first time with the scores of the second time, so we obtain the test stability coefficient “(3), and this is what suits the researcher’s work, so the researcher applied the tests to the exploratory experiment sample of (5) players with disabilities and from the same research community, on Monday 15/ 2/2021, then the tests were repeated after one week to be repeated on Monday 22/2/2021, also on the same sample and under the same test conditions.

2-3-2 Objectivity of the tests:

Objectivity is one of the important factors that you must have in a good test, and objectivity means “freedom from prejudice or intolerance and not introducing personal factors into the laboratory, such as his opinions, subjective whims, personal inclinations, and even prejudice and intolerance. Objectivity means describing the athlete’s abilities as they really exist, not as we want them to be (1)".For the purpose of verifying the objectivity of the tests, the researcher found the correlation coefficient (Pearson) between the assessment of the first and second judgments (*), since “the correlation coefficient between the assessment of the first judgment and the assessment of the second judgment is the coefficient of objectivity (3)”, noting that the research tests were carried out according to ease, clarity and remoteness. The distance from self-evaluation through what was shown by the results of the simple correlation coefficient (Pearson), so the tests used in the research were of a high degree of objectivity, as shown in Table No. (4).

Table (4)It shows the practical bases of the tests used in the research

s	the exams	stability coefficient	self-honesty coefficient	Objectivity
1	Run 30m from a flying position	0.927	0.963	0.865
2	Pushing a medicine ball weighing (2) kg to the farthest distance	0.949	0.974	0.903
3	Long jump from stability	0.925	0.961	0.861
4	half durban	0.999	0.999	0.999
5	10 sec front stand (girls stand)	0.990	0.995	0.982
6	Half squat (half squat) 10 seconds	0.891	0.944	0.804
7	Discus throwing performance according to competition law	0.999	0.999	0.999

2-6 The exploratory experience of the research:

The tests were conducted as a preliminary experiment on a representative sample of the population to be tested. And recording the various observations about the tests with regard to the validity of the instructions and the extent of the sample members’ understanding of them, and “taking notes from this experiment in preparation for amending them if necessary” (). On the second day, the exercises had strength to regulate the loads and calculate the tension. The researcher conducted the reconnaissance experiment on the research sample on Monday - Tuesday 15-16/2/2021 at four o'clock in the afternoon in the local administration stadium with the assistant work team.

The purpose of the pilot experiment is to:

- 1- To verify the validity of the tools used in terms of positive assistance, and the availability of safety to work on
- 2- Knowing the appropriateness of the exercises for these ages.
- 3- Adequacy of the auxiliary work team (*).

- 4- Knowing the difficulties that the researcher may face in the course of his work and developing appropriate solutions to them.
- 5- Knowing the time taken to perform the tests.

6- Legalizing training loads for exercises.

2-7 Pre-tests for research:

The researcher conducted the tribal tests on Sunday, February 21, 2021 at exactly four o'clock in the afternoon and at the local administration stadium in DhiQar Governorate, and on the research sample (the selection of the DhiQar Committee), the special procedures were prepared after clarifying the tests for the research sample so that the work team could The assistant records the data related to the tests with forms prepared by the researcher for this purpose, the physical abilities and the achievement test of throwing the disc under the supervision of the researcher himself.

2-8 The main research experience:

The researcher prepared a set of strength exercises in the opposite double hierarchical method that is being implemented during the preparation phase of the sample teams, which falls on Tuesday, February 23, 2021. For people with disabilities, category (F40), these exercises have been prepared for the purpose of applying them in the opposite double hierarchical method.

Some clarifications on the exercises:

- 1- The duration of the training curriculum is three months (12 weeks).
- 2- The number of training units per week is three units.
- 3- The number of training units in the curriculum (36) training units.
- 4- Training days (Sunday - Tuesday - Friday) in the morning.
- 5- The training units used are short and medium.
- 6- Finding the average intensity of the group for each exercise and adopting the principle of gradual intensity.
- 7- Taking into account the scientific foundations in training and the relationship between the components of the training load (intensity, size, comfort).

2- 9 Post-tests for the research:

After the end of the period of application of the exercises for the independent variable that was prepared and supervised by the researcher, the date of the post-test procedures on the research sample was set on Thursday, 20/5/2021 and at exactly four o'clock in the afternoon, taking into account the conditions of the tribal tests themselves. Creating the same conditions for the tests in terms of time, place, the same auxiliary staff (in the pre and post tests), and tools and devices in order to stabilize the variables as much as possible.

2-10 The statistical methods used in the research:

After obtaining the raw data, the researcher used the statistical package for social sciences (SPSS) system, and each of the values of:

SMA

standard deviation

Mediator

distortion coefficient.

percentage.

Self-honesty = $\sqrt{\text{Constancy}}$

Simple correlation coefficient (Pearson).

T's law for correlated and independent samples.

As for the law of the proportion of evolution, it was taken from its own source.

Law of Proportion of Evolution: Proportion of Evolution. (1)

2- Presentation, analysis and discussion of the results:

3-1 Presenting and analyzing the results of the pre and post tests of the sample in the research variables:

After unloading the data for the pre and post tests of the sample, the researcher processed the results statistically, as shown in Table (5)

Table (5) It shows the arithmetic means, standard deviations, progression percentage, t-value and significance between the pre and post tests of the sample.

	variable	measuring unit	pretest		post test		evolution rate	calculated t value	sig	The result
			m	s.d	m	s.d				
1	Maximum leg strength	KG	64	11.40	71	9.61	10.93	5.71	0.00	Moral
2	The speed characteristic of the legs	repetition /10SEC	9.20	1.30	12.60	1.51	36.95	6.66	0.00	Moral
3	The speed characteristic of the arms	repetition /10SEC	11.40	1.14	14.60	1.14	28.07	8.55	0.00	Moral
4	Explosive power of the legs	meter	1.65	0.21	1.96	0.11	18.78	4.29	0.01	moral
5	The explosive power of the aiming arm	Meter	5.97	0.72	6.40	0.68	7.20	15.90	0.00	moral
6	max speed	SEC	5.68	0.73	4.99	0.60	12.14	8.33	0.00	moral
7	Discus throw achievement	Meter	21.27	0.94	22.52	1.33	5.87	4.87	0.00	moral

3-2 Discussing the results of the pre and post tests of the sample for the research variables:

The researcher attributes the reason for the significant differences and percentages of development shown by the results of the dimensional tests for the sample and for all the variables under study, to the effective effect of the strength exercises in the opposite double hierarchical method that the researcher used for the sample. Developing them (as study variables), taking into account the principles of training and correct codification of the components of the training load that fit the research sample and the shape that simulates the motor paths of the disabled, the appropriate repetitions and intensity for each exercise and many things that serve the training circumstance of the sample

This is confirmed by (TalhaHossam El-Din and others) "to the need to diversify the use of exercises or their method of performance, as one of the most prevalent training mistakes among trainers is the omission of the process of change in training excitement, and among these changes, for example, the change in the number of repetitions or the number of groups or through the intensity of The load used or the speed of exercise and rest periods" ().

As well as focusing on being suitable exercises for the movement of the disabled, in addition to the fact that the opposite double hierarchical method achieves a development in the level of muscular strength of the muscles working in performance for all tests, which indicates the development of the efficiency of the sample members trained in this method when the performance is repeated more than once and in a manner

hierarchical, that training tends to build the special physical abilities associated with the player's future specialization and uses exercises of a special preparation nature according to the characteristics and requirements of each game, and coaches must pay attention to the correct technical performance during the implementation of strength exercises and the use of appropriate weights and appropriate doses that can reflect the effects Positive in the development process. (1) It is also noted in the table that the percentage of development for the post-tests with acceptable values according to the period during which the vocabulary of these exercises was applied in the opposite double hierarchical method within the exercises prepared for this sample. The test also indicated the effectiveness of this method in developing the skill performance when throwing the discus.

Among these strength exercises is the opposite double hierarchical method followed by several contractions, including the moving and fixed, the moving muscle contraction ((positive isotonic method)) that is, it is required to overcome resistance or external resistance, and here the exercises focused on that the muscle fibers of the working muscle work in case of shortening, either ((Negative isotonic)), it appeared when the special exercises prepared by the researcher worked on the muscle fibers of the working muscle in the case of lengthening, and this was reflected on the mechanism of implementation of strength exercises by the sample members, which contributed to the dimensional differences in the tabular (T) values with Acceptable progression ratios in all tests of the variables under consideration.

The researcher believes that the development of muscle strength according to the opposite double hierarchical method is a means to achieve the goal of reaching the sports effectiveness under study to the highest level of performance as possible.

4- Conclusions and recommendations:

4-1 Conclusions: They are as follows:

- 1- The muscular strength exercises in the opposite double hierarchical method contributed to raising the level of the results of all the dimensional tests and their values and their achievement with acceptable moral values as well as the emergence of values for the percentage of development among these tests for the members of the research sample.
- 2- The mechanism of implementing and applying the exercises prepared in the opposite double hierarchical method contributed to raising the level of physical abilities; This was reflected in the completion of the post-tests for these abilities, as well as raising the level of achievement of the discus test and for all members of this sample.

4-2 Recommendations:

According to the set of conclusions adopted and formulated by the researcher from the results obtained in this field experiment that were applied to the members of the research sample.

The researcher recommends the following recommendations:

- 1- We recommend working on relying on accurate scientific rules in organizing and preparing strength exercises using training methods in muscular strength training, including the opposite double hierarchical method.
- 2- Realizing the importance of rationing the components of the training load for strength exercises in the opposite double hierarchical method designed to develop some special physical abilities and focus on the mechanism of their implementation and application in a manner commensurate with the type of the existing sample in order to be reflected in its achievement.
- 3- Work on conducting future research using the opposite double hierarchical method in developing the muscular strength capabilities of players with disabilities and for categories and activities other than this category for which the field experiment was applied to them.

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Appendix (1)

shows a model of a training unit of strength exercises in the double hierarchical method

Main section time: 40.31 Objective / To develop the explosive and speed-distinguishing power of the arms and legs

Total exercise time	working time	Total rests between groups	n1 r5	n1 r4	n1 r3	n1 r2	n1 r1	n	intensity g 5	intensity g 4	intensity g3	intensity g2	intensity g 1	exercise name	s
365 s	65 s	300 s	11 s	12 s	13 s	14 s	15 s		75%	70%	65%	60%	55%		1
			90 s	75 s	60 s	45 s	30 s	68	10	12	14	16	18		
380 s	80 s	300 s	14 s	15 s	16 s	17 s	18 s		75%	70%	65%	60%	55%		2
			90 s	75 s	60 s	45 s	30 s	68	10	12	14	16	18		
395 s	95 s	300 s	17 s	18 s	19 s	20 s	21 s		75%	70%	65%	60%	55%		3
			90 s	75 s	60 s	45 s	30 s	68	10	12	14	16	18		
425 s	125 s	300 s	14 s	15 s	16 s	17 s	18 s		75%	70%	65%	60%	55%		4
			90 s	75 s	60 s	45 s	30 s	68	10	12	14	16	18		
405 s	105 s	300 s	19 s	20 s	21 s	22 s	23 s		75%	70%	65%	60%	55%		5
			90 s	75 s	60 s	45 s	30 s	68	10	12	14	16	18		
425 s	125 s	300 s	14 s	15 s	16 s	17 s	18 s		75%	70%	65%	60%	55%		6
			90 s	75 s	60 s	45 s	30 s	68	10	12	14	16	18		