COMPETITION PEAKING

THE JUDO ATHLETE DEVELOPMENT MODEL

1. strength and conditioning
2. strong grips
3. tactics
4. throws
5. strong basic ground work

If the judoka is not in the best possible physical shape then it's impossible for them to have a good performance at a major competition. If the athlete has developed their strength and conditioning they will have the ability to attain their grip. If the athlete can get their grip they will then need to understand what is happening in the match; this will enable them to use their advantage properly. If the athlete understands the tactical advantage of their grip they will then be able have an opportunity to throw. Being able to throw will depend on the following factors:

a) Are they in shape to execute the throw?
b) Do they have the advantage with the grips?
c) Is it tactically a good time in the match to execute a throw?
d) Do they have the technical ability to use a throw that matches the tactical situation? e) Can they control the throw or missed throw to follow with groundwork?

These are a few of the factors that a successful judo player needs to develop to produce winning judo. These factors are developed through randori, drills and situation drills. Judo practice should be done in a calculated and precise manner so the athlete will be able to develop the skills to have good competition performances. The tactical aspect of judo is strongly linked with gripping; the rest will come with experience and with situations on the mat. It is important that the athletes learn the importance of controlling their opponents' grips so they can execute their technique.

BASIC COMPETITION PEAKING

The basic idea of peaking for judo follows the same procedures that all high performance sports maintain. The major difference is that judo is a combative sport and because of this the body takes a huge physical beating unlike most other sports. For this reason, it is important for the athlete and coach to monitor their training to safeguard against over training. The program that I am presenting is an example of how many of the worlds top athletes prepare for a major competition. This program is very general but will ensure that any athlete will be in the best possible competition condition.

The most important aspect about training for a competition is not to do too much and end up burnt-out over trained. At the start of the season the coach should sit down with their athletes or team and discuss what competitions are important and select which ones they should try to peak for. In a year schedule it is only possible for the body to peak 3 times, so pick important competitions/time period to peak for. (Nationals, R. V Montreal, and/or important selection competition.) During the year you can always mini peak, meaning train through the competition and then just start to rest a couple days before the competition.

Two points that are seen as being important when starting a training program:

1. The best way to gain fitness for your sport is doing that sport and drills that imitate competition situations (strength or fitness training should not take precedence over judo training, but rather serve as a supplement to training).
2. The key aspect to physical development is rest/recovery time, this is the amount of time between hard workouts. (Your body needs sufficient amount of time to recover from workout to workout, your body grows when you are resting. One day a week should be set aside for absolute rest.)
**Preparatory Period**

*High work load/volume and lower intensity,* this is also the time to train strength. This period can last as long as 2 or 3 months and as little as 6 weeks.

**JUDO:** During this part of the season the randori sessions should be long, giving the athletes the opportunity to work on their judo endurance. The coach should let some athletes fight 10-20 mins, this will push the athlete to fight with their body, mind, and heart. You can do line randori, this is when one person stays out and fights 4 people for 5 minutes each. In Japan athletes fight 8 to 10 rounds straight with new partners every round. I recommend to due this type of training only once a week.

At the beginning of the season it is recommended to practice a large amount of Newaza randori, this will build up endurance that might be missing. This will also prevent injuries that can occur in standing randori due to lack of conditioning. (Split 35% Newaza / 25% technique / 40% standing randori) this should only last 3 weeks within the preparatory period before proceeding with normal training (25% Newaza / 25% technique / 50% standing randori).

**STRENGTH TRAINING:** During this period the athlete will have a good opportunity to develop power. This period can last as long as 6 weeks and as little as 3 weeks.

**Transition Period**

.Making the transition from preparatory period to competition period, *medium work load/volume and medium intensity.* This is the time to train power.

.TThis period can last as long as 6 weeks and as little as 3 weeks.

**JUDO:** The transition period is the time when training becomes a little more intense. The randori session should be 6 or 7 min. Long with 5 min. Rest time. Athletes should try to set goals for practice, trying to incorporate new techniques and ideas into training. Practice is done to help an athletes improve do randori with a purpose, leave your ego on the side of the mat. Start to introduce anaerobic judo drills (2 min. Working at 80% to 90% of max.) these drills should try incorporating a total body workout.

Start to concentrate on gripping drills that imitate competition situations -same side and opposite side. (70% randori allowing partner to throw through gripping styles)

Start to incorporate throwing into your program either free throwing, crash mat, or line throwing. This time frame is a good opportunity to further develop your technique and to start to focus on gripping tactics.

**STRENGTH TRAINING:** During this phase of training the athlete should start to develop power (strength + speed) into their weight lifting program. To develop power the athlete should be using 65% to 75% of their maximum weight per exercise. The rep count should range between 4 to 6 reps per set, for a total of 5 sets and a total of 6 exercises per workout. (gym time should be only 1 hour)
The athlete should be concentrating on basic movements: Ex. Bench Press, Squat, Cleans, Snatch, Bent Over "Rows, Chin-ups, Dips, ...

Option: Close to the end of this period the athlete should introduce Super Sets to their program to prepare them for muscle endurance circuits. (super sets -2 movements performed right after each other: Bench Press + Bent Rows, Bicep curls + Tricep dips.

CONDITIONING: Aerobic training- once or twice a week depending on your anaerobic training. The athlete can start to introduce interval training once a week ( 5 min to warm-up, one mitt. Hard running 80% of max -then 2 min. Jogging at light pace then repeat for a total 118 min.) This can be done on a stationary bike with the same formula. (5 min. Warm-up, one min. At 100% dropping resistance followed by 2 min. Of light pedalling, repeat for at total of18 min.)

If athlete has weight control problem they might want to continue to run 3 a week.

Anaerobic training -the athlete should try to introduce 400 meter and 800 meter runs into program with 5 min. Rest times once a week. ( 10 min. Warm-up then 2 x 800M -2 x 400M)

This can be done on a stationary bike following the same formula ( 10 min warm-up then 3 x 1 min sprints, dropping resistance -3 x 45 sec. Sprints dropping resistance, rest time is 2 minutes).

MENTAL TRAINING: The most important aspect during this period is the athlete has fun on the mat because the training starts to become tedious.

The athlete should start relaxation techniques such as massage, deep breathing, breathing+stretching and Progressive Muscle Relaxation (deep breathing + muscle tensing till body is relaxed -one body part at a time)

The athlete should start to visualise their throws and ground techniques, they should try to feel the actual movement and see the finish (start in slow motion then try to increase speed to life speed)

**Competitive Period**

- Low work load/volume and high intensity. This is the time to train muscle endurance.
- This period can last as long as 5 weeks and as little as 3 weeks.
- The last week before the competition should be a rest week only doing judo and/or light running if the person is losing weight.

JUDO: During this period of training the randoris should be done in interval style (5 min Randori, 5 min Rest x 4 or5 rounds). The randori should be at maximum intensity, focusing on competition judo, the athlete should try to develop their gripping tactics. Between every randori the athlete should be focusing on what they want to do in the next randori to be successful.

Ground work should be short and intense. Sometimes, if possible the judo club should try and have some transition randoris to combine standing and ground. The best drill to practice for competition Newaza is one min. Or thirty second randori starting with a throw. (it is important that the partner spins to their stomach after being thrown)

Speed uchikomi should be introduced to your program, it is important that technique and explosiveness is not sacrificed for speed.

The athlete should be practising their favourite techniques and combinations both in standing and in ground work uchikomi and randori.

One minute anaerobic/lactic drills should be done at every practice. Emphasis should be put on moving uchikomi, breaking grips with attacks and attacks from no grip.

STRENGTH TRAINING: During this period the main goal is muscle endurance and power over 5 min. The best way to achieve this is through circuit training of some sort. (Exercises performed one after another for 20 to 25 seconds x 5 min. Straight followed by 15 min. Rest x 2/3 sets. The amount of weight for the exercises should be 30% to 50% of the persons maximum weight)

** Athletes should not do weights in last week of preparation!**
CONDITIONING:

Aerobic training - Once a week for 20 - 30 min. At this time the athlete can start to visualise about judo during the runs. If the athlete is having weight control problems they should continue to run twice a week for 30 min.

Anaerobic training - Short explosive runs at maximum speed. (3 x 200m - 3 x 100m - 4 x 50m, the rest time is the amount of time it takes you to walk back to the start line). Line Sprints - 2 x 45 sec & 3 x 30 seconds (3 to 3.5 minutes rest time) This formula can be done on a stationary bike: (4 x 45 sec. Dropping resistance - 4 x 30 sec. Dropping resistance, 2.5 to 3.5 min rest time between sprints).

One week before the competition the athletes should do short dojo sprints for their anaerobic training

MENTAL TRAINING: The most important aspect to this period is that the athlete is having fun at judo practice.

The athlete should;

1. Focus on performance as the main goal of competition.
2. Doing visualisation for their competition techniques both against a right and left handed player. (they should also visualise against different grips)
3. Visualise their favourite ground techniques and ground work situations.
4. Try to only to worry about things that are within their control and not let things out of their control distract them.
5. Start to say positive statements and breath deeply when the start to get nervous. Positive talk can over ride the negative thoughts that go through everyone's heads when they get close to the competition. When the athletes feel nervous, they should do deep breathing and focus on having a good performance and not worry about the result. A good result will happen if the athlete has a good performance.
6. Think about their judo and not the competition judo. They can only control their own actions and not the actions of another.

The coach should; encourage relaxation techniques and try to bring them into the end of the practice. Ex. Massage, PMR, deep breathing, etc.

Rest period - This period is to let the athlete recuperate from the hard training they have just finished after the competition.

- It is also a good time to start to prepare for the next peaking cycle, the athlete can start to do weights during the end of this period. Since the athlete is only doing weights, and has no other stressors, it is a good opportunity for the athlete to gain strength.
- This period can last as long as 4 weeks and as little as one week, depending on how big of a competition the athlete just finished. (at least one week of active rest)

DEVELOPMENT MODEL

Strength Training Program Protocols

Judo of international calibre display great skill and technique. They also are very well physically conditioned athletes. Most of these athletes have dedicated a large amount of training time to developing their strength. Of course, strength should not be a replacement for skill, but it is one of the key factors in any athlete success. If 2 judoka that posses equal skills and experience are match up in competition, the stronger one is most likely to win. Besides a high level of skill and knowledge of tactical elements, one must posses strength, speed, and endurance.

The type of strength training that has been traditionally implemented in the North America Judo community is a body building type of weight routine. This type of training will be adequate for an athlete who has just started weight training, but only for the first year. Many judoka get caught up into the bodybuilding magazines in which prescribe weight programs that make you look good. These programs are good, but are not necessarily good for judo. No matter what weight training you do, you will get stronger and develop muscle mass. The big question is do you want to have better results in judo or waste your time trying to look like a body builder.
Training exercises should attempt to reflect the physical demands of the sport. Furthermore, strength training must be done in conjunction with the energy systems being trained for each phase of training. For example, high repetition, circuit type training should be trained at the same time that the anaerobic judo drills are used. Supplemental strength training serves as necessary means for judo preparation. The judo player must have a well rounded approach to strength training, incorporating maximal strength, speed strength training, and muscular endurance training. Strength training should be done year round corresponding with the physiological demands of each of the training phases.

Specific muscle groups which are key to a judo players success are development of the legs, abdominals, back, and chest areas. Leg and abdominal development should take precedence, primarily the knee and hip extensors are of the utmost importance in executing a successful throw. In addition to leg development, upper body strength of the muscles involved in pulling and pushing are essential for judo performance. Five recommended exercises seen for judo are: 1. Squats, 2. Dead Lifts, 3. Bench Press, 4. Bent Rows 5. Cleans/High pulls.

These exercise are compound movements meaning that they incorporate more than one muscle group to be able to execute the lift, much like any throwing technique. All of these movements are also highly technical movements, you should consult a weight lifting expert before attempting. Strength training is a crucial part of the development of the elite judo player. Consequently, the adaptations required for elite performance often takes years, often takes years of preparations in order to apply strength gains to the specific movements of the sport. However, strength development should not take precedence over judo training, but rather serve as a supplement to training.

The Three Types of Strengths Needed for Judo

Maximal Strength: There are 3 types of maximal strengths:
1. Absolute Strength: over all strength, doesn't take in account the persons body weight.
2. Relative Strength: how strong a person is compared to their body weight, pound for pound strength (Relevant for weight division sports)
3. Optimal Strength: the strength a person needs for their sport.

Maximal strength is the greatest force or torque developed during a single maximal voluntary contraction / repetition. Maximal strength is needed in the application of many judo techniques, especially so in "kumi-kata" and "Newaza" and defensive moves. Maximal strength methods aims primarily at stimulating adaptations at the nervous system level. Maximal strength is also needed for the following reasons.
1. Stronger muscles provide better protection against injuries.
2. Stronger muscles provide a better base for strength-endurance and power training.

Speed Strength: There are 2 types power: Strength x Speed = Power
1. Explosive Power: Strength more important than speed (Jumping)
2. Starting Power: Speed is more important than strength (Throwing a ball)

Speed strength, is also referred as power, is the capacity of the muscles to overcome resistance with high speed contractions. Power = Speed + Strength. Since the successful execution of most throws require speed, speed strength is of a prime importance to judo. Speed-strength includes lifts done at high speed with moderate to heavy loads. The exercises should be judo specific.

Strength Endurance / Muscle Endurance: They’re 2 types of Muscle Endurance:
1. Sport Specific M.E.: the muscle endurance built through practice of the skill in the sport
2. Strength Endurance: developed by doing +30 reps. Per set using resistance.

Strength endurance refers to the capacity of muscles to resist fatigue while applying force over time. An example of this is a hard 5 minute randori or match from a competition.

There are 2 ways to develop Strength Endurance:
1. by training maximal strength
2. by performing a high number of repetitions with loads above 30% of your one rep maximum
The development of the above mentioned strength qualities requires different programs, each having their own characteristics.

The Basics to Building a Strength Program

1. Sets/Reps: The sets/reps have an inverse relationship, meaning the higher the reps the lower the sets & the lower the reps the higher the sets.
   - Lower reps. The athlete is developing their fast twitch muscles/Neuro-muscular adaptation
   - Higher reps. The athlete is developing their slow twitch muscles/Metabolic adaptation

   Examples: 10-12 reps x 3 sets, 6-8 reps x 4 sets, 1-5 reps x 6 sets

2. Rest Time: Lower Reps. The rest time should be 4-5 minutes
   - Higher Reps: the rest time should be 1-2 minutes
   - Rest time can vary depending on what you are trying to develop.
     - Athletes need to train 2 muscle groups at same time. Ex. Bench press - rest 2 minutes, Bent Over Row - rest 2 minutes, Bench Press etc.

3. Work Out Time: For the best strength gains all workouts should be done under an hour. A persons testosterone is at its peak within 22-45 minutes of a work out. An athlete wants to train within these areas if possible it is .96% accurate for everyone almost perfect. Working-out longer will hurt a persons recovery time and this will make them weaker over time.

4. Change Programs Every 3 Weeks: 2/3 of the population adapts to the presented stimulus every 6 workouts with in a phase/type of strength training (Strength, Power & Muscle End.).
   - A simple change of a program change be working with a different tempo, grip on bar or change from barbell to dumbbell.

5. Speed of Exercise: Change the tempo of execution of the lift every 6 weeks. This will change the way that the athlete is presenting stimulus to the muscle.
   - To Gain Size: 8-12 reps x 3 sets - slow tempo at 70% to 80% of the persons 1 rep maximum (RM)
   - To Gain Relative Strength: 1-4 reps x 5-6 sets - medium/fast tempo at 85% to 100% of the persons (RM).
   - To Gain Power: 3-6 reps x 5-6 sets - explosive tempo at 70% to 85% of the persons (RM)
   - To Gain Muscle Endurance: 2-3 sets of 3-5 minute circuit training - fast tempo at 50% to 60% of a persons (RM)

6. Post Workout Nutrition: There is a 10 to 15 minute window of opportunity to boost the athletes recovery after a work out. It is important that an athlete consumes carbohydrates after a workout to help restore the levels of glycogen/muscle energy. The sooner the carbohydrates can be consumed the better.

   **Recovery Drink:** Males: 1L of cold water 2 Gram of Maltodextrine per kg of a persons weight & .5 grams of protein per kg of a persons weight. Females: 1L of cold water 1 Gram of Maltodextrine per kg of a persons weight & .5 grams of protein per kg of a persons weight

Maltodextrine can be purchased at a wine store for a cheap price.

Program Development:

1. When developing a program an athlete/coach needs to look at the nature of the sport. What needs to be developed to increase an athletes performance. All strength training should be specific to the sport. Judo - strong pull/strong push / strong grips / strong leg drive
2. Choose exercise to develop these areas
3. Coaches/athletes need to look at were injuries occur and build training to strengthen those areas. Choose exercises to develop these areas. Judo - common problem are areas shoulders and knees.
4. A young athlete (14-15yrs) should start by performing 18-20 reps per set during their first 12 weeks of weight training. By the beginning of their second year the athlete should be starting at a 10-12 reps per set.
5. An athlete should not start to try to develop maximal strength until they have at least 2 years of strength training experience.
6. Work outs for judo should be split into lower & upper body days respecting the rule of a 1 hour work out.
7. Large amounts of aerobic training (running, biking, swimming, etc.) will interfere with strength gains and power gains. Be specific when you train, if you want to gain strength, develop a program that takes into account your other activities.

8. Coaches/Athletes should develop a periodization plan. Develop training that leads up towards a major competition. Ex. Nationals - Relative strength to Power to Muscle Endurance.

Warm Up

1. Sweat - whatever it takes to make an athlete sweat.

2. P.N.F. Stretching or ballistic stretching - static stretching before and after work out damages the muscles. An athlete should set aside a separate time to stretch.

3. Specific Warm-up - progression of weight until 95% of workout weight Ex. 40kg/4, 60kg/3, 75kg/2, 80kg/I, 95kg/I - workout weight 100 kg.
   ♦ Systematic warm-up - change as fast as possible/no rest.
   ♦ First 2 exercises in the program only from the start.
   ♦ Warm-up doesn't count for work out time.

Recovery

When asking anyone how to become stronger the first answers are to push more weights, spend more time in the weight room or increase the intensity. All of these ideas are good but they are missing the key element in any strength gain, and that is - Muscle adaptation and strength gains occur during rest periods, not during exercise. Muscles therefore need to be given time to recover from training. Depending on the training intensity and the athlete, 48 to 96 hours of recovery are necessary for tissue repair and protein synthesis. A drop in strength will occur if the athlete doesn't allow enough time in between training. Similarly if an athlete trains at maximal intensity for a long period of time a state of general exhaustion will occur. For this reason one should try to alternate high and low intensity workouts to maximise recovery.

When looking at your weight training you must take into account other stresses such as school or job demands, other types of training and periods of higher stress in daily life. If several stresses are imposed on your body, the total general effect may be too big for your body to resist, and exhaustion may occur. The negative effect of too many stresses is called over training. Over training will reverse training gains, and will increase your chances of being injured.
MENTAL PREPARATION STRATEGIES

1. Checking of preparation plans
   ♦ Has the training been enough to win?
   ♦ Is your body relaxed?
   ♦ Are you mentally prepared?
   ♦ Positive self-talk for upcoming matches.

2. Tactical/strategy focus
   ♦ How to grip opponent?
   ♦ Decided the direction not to allow your opponent to move.
   ♦ Have a planned comprehensive strategy.
   ♦ Be prepared when strategy doesn't work.
   ♦ Analysed the opponents strategy and strengths.
   ♦ Think of your decisive choices to use against your opponent.
   ♦ Think of good position.
   ♦ Be determined to attack the opponent with strength an consistency.
   ♦ Mental practice to give a counter attack against the opponent's attack.
   ♦ Be focused on taking a good position.
   ♦ Be focused on consecutive attacks.
   ♦ Determine your opponent's strong points and determine a defensive strategy.
   ♦ Know the opponents weak points and focused on your strong points.

3. Motivational strategies
   ♦ Give opponent slight respect, then beat for your recognition.
   ♦ Think of the importance of growth in terms of competition ability rather than ranking or results.
   ♦ Assured to have the important moment (i.e., Match) in your life with no regret.

OPTIMAL PRE-MATCH MENTAL STATES

1. Positive expectations
   ♦ Feel you can overwhelm your opponent.
   ♦ Think to win this match. Confidence to win.
   ♦ Think that you have no problem due to your training.
   ♦ Feel in good condition resulting in no fear.
   ♦ Think that you can win the match due to your superior strength and skill.
   ♦ Don't think the opponent is better than you.
   ♦ Think that you can throw the opponent.
   ♦ Feel that the opponent was weaker than you after watching their match.
   ♦ Have the feeling of your best match.
   ♦ Increase your confidence due to you paying attention to your strong points and strengths.
   ♦ Feel nervous but not pressured
   ♦ Have the belief to win

2. Comfortable mind
   ♦ No burdens about win/loss.
   ♦ Cool mind
   ♦ Becoming calm
   ♦ Nervous about getting a medal but no worry of the result
   ♦ No thoughts of first place, only there to do your best possible result
   ♦ Not to relaxed
Relaxed with the appropriate energy.
Can attend your focus.
Feel in control of yourself completely
No/little disturbance

3. Heightened efforts and commitment
- focusing on your judo to your potential
- You are going to endure until your potential power is exhausted
- You are going to give all of your abilities
- There is no shame in any loss as long as you gave it your best
- You should be ready to push yourself to the limits

OPTIMAL MENTAL STATES

1. Total concentration
- Totally focused on opponent's movement
- Skills were connected automatically and unconsciously.
- Absorbed in the match without thinking.
- Not overly focused
- Think of only what you have to do right now.
- Offence and defences come automatically
- Easy to find opponent's intention and movement
- Used your skill the same time as your judgement
- Body moves in accordance with the mind

2. Confidence
- Feel you have an edge on the opponent when you have your grip
- Feel the confidence to win even if you get behind in the match
- Feel confident that you can always score a higher point than your opponent
- Confident that your opponent will be exhausted and fatigued
- Confidence in your grip fighting skills
- Confidence in the pace that you set for the match
- Feel that you will be able to throw your opponent after taking your grip

3. Sense of body
- Lighter than usual
- Your body moves smoothly and fluidly
- Feel full of strength in your upper body
- Feel full of energy and be ready to fight
- Feel in great shape and be breathing easily
- Feel whole body is stable with strength in your lower body
- Legs feel light, though they are powerful and explosive
- Hands and feet are faster than usual
- Body movement is fast
- Feel no fatigue, full of energy
- Body is relaxed appropriately
- Feel that your body is not overly relaxed
- Have the strength for the full time with the appropriate intensity
- Feel that your hips are flexible and move smoothly
COMPETITION FOCUS

1. Strategy focus
   ♦ Be focused on how to grip the opponent, especially by the sleeves or collar
   ♦ Be focused to maintain the centre of body low
   ♦ Be focused to use hit and run tactics (i.e., Get a point, wait for the opponent’s mistake and attack)
   ♦ Be focused to get points and maintain attack posture
   ♦ Be focused not to give a point to your opponent
   ♦ Be focused to use your style of fighting
   ♦ Be focused on using a simple but effective strategy
   ♦ Use task oriented self-talk during the match
   ♦ Be focused to attack continuously
   ♦ Be focused on gripping first and attacking first
   ♦ Use different tactics based upon different styles
   ♦ Be focused to let the opponent fatigue, then finish them off in second part of the match
   ♦ Be focused to counter attack at any moment of the match

2. Focusing -refocusing techniques
   ♦ Refocus to use necessary skills without carelessness
   ♦ Try to refocus on using the appropriate skills with deep breathing
   ♦ Refocus to find the opportunity of using your strong points
   ♦ Refocus to attack whenever you see your opponents weak points
   ♦ During stoppages, briefly analyse the situation and plan the next step

COMPETITION DAY PLAN

WARM UP

It is necessary for the athletes to warm up properly to insure that they will be able obtain the best result possible. The athlete has to be ready to give 100%, starting with their first match. Meaning they have to be both physiologically and mentally prepared to fight 100% from the start. This is the key to all great champions, the warm-up can be a way to relax and a time to focus on the work ahead. Everyone will have a different warm-up, but the basic idea is the same for each athlete. The warm-up should take about 20 to 30 minutes in total, with a variety of exercises to help you focus on yourself and on the task ahead. This is an example of a warm-up plan:

♦ 5 to 8 min Run-
♦ 6 x 15 meter Sprints,
♦ Shadow turn-ins (uchikomi) / help to focus on being explosive also
♦ gripping tactics 5 min, .5 x 10 speed uchikomi,
♦ 5 min moving around and throwing / helps to relax and use combinations,
♦ 5 to 10 min hard grip fighting / Try to beat your warm up partner and they do the same to you
♦ 5 to 10 throws / break the grip and throw.

• During the warm-up keep repeating positive quotes and self-talk.