



The AIS and Judo Federation Australia are working together to enhance the performance of our athletes by reducing the incidence of injury and illness at high-performance camps.

## **86% of Australian Judo players reported injuries at last year's international Judo camp.**

Last year, we found that many of the athletes didn't optimally manage their training loads in the lead up to attending the international camp, so this year we're giving you the performance edge by providing information on how to prepare effectively.

It is a myth that athletes need to be fully rested before camp.

From data collected on over than 1,000 athletes, we know that if an athlete dramatically reduces their training load before an AIS camp they more likely to get sick or injured during, or shortly after the camp. We also know that having a high training base is protective against injury and illness.

**Put simply, to tolerate high training loads in camp you need to appropriately incorporate high loads into your training prior to arrival.**

It's likely that you'll be doing three training sessions per day at this international camp, therefore to be within striking distance of safely completing this high training load, you should aim to gradually build your training up over the next 4 weeks.

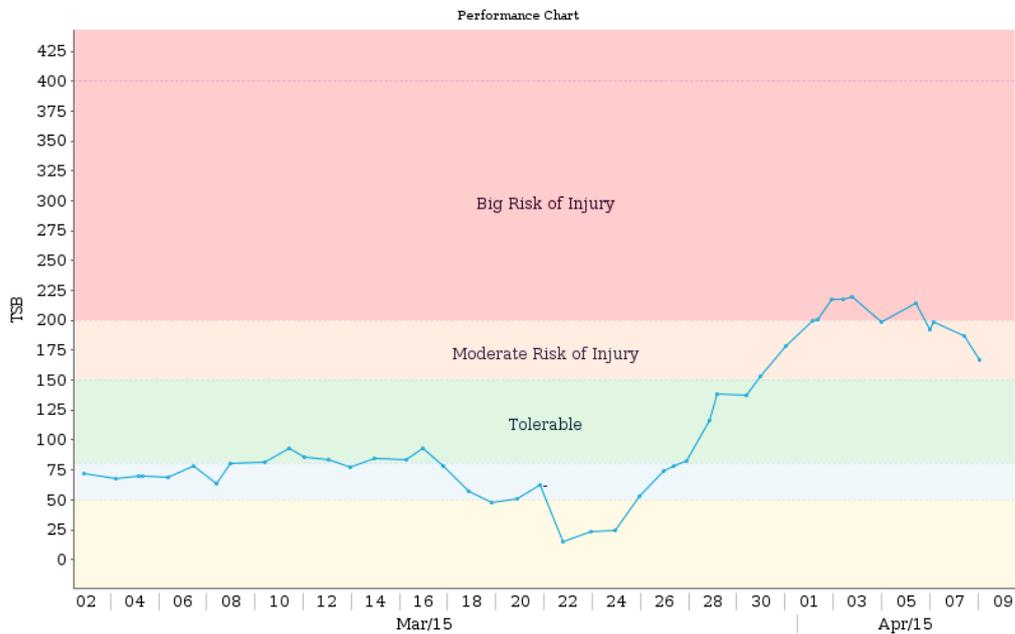
Although Judo training is preferred, you can utilise a cross-training approach by incorporating swimming, running, cycling, gym classes, core workouts, bodyweight training .

**Build your training up gradually** by adding more training load each week.

If you build your training load up too fast you'll end up spiking it (that is doing too much, too soon) and be at higher injury and illness risk before you even get to camp. (Note: That's what happened to the Combat athletes below who came in for a camp earlier this year).

*However, if you are injured, have an illness, or another condition that makes increasing your training load inappropriate then you should not do so. It is important to seek the advice of your coach (and parents if under 18) and medical practitioner where appropriate.*

At the AIS we use a term called Training Stress Balance (TSB) as a way to monitor the injury risk associated with your training load. Training stress balance (TSB – on the left axis) is calculated in the AMS using your training duration and intensity you have achieved in the last four weeks, compared to the training duration and intensity (load) they did in the last month. As you can see, the TSB drops quite low around 22nd March then training spikes at 2<sup>nd</sup> April (camp).



This athlete reduced their training before they came in for a camp and spent the entire camp in the red zone at a big injury risk. This athlete battled with injuries throughout their entire camp.

**Don't risk failure** at the international camp by being put out of action by injury or illness.

Gradually build your training load to over the next four weeks and increase your training base and you'll reduce your risk of both injury and illness AND enhance your performance.

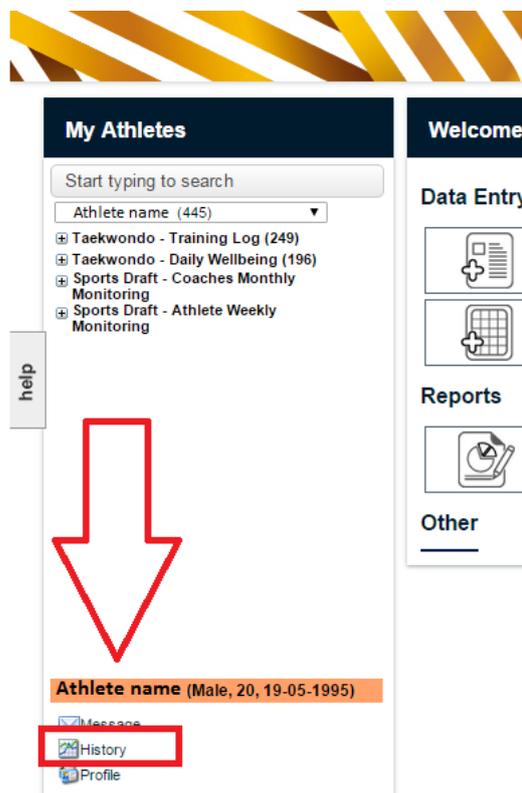
The camp will be around 7,000 units, which is the average training volume of a **dual Olympian**.

You must get your training loads as close to this target as possible by using gradual increases each week to give yourself the best chance of success. Below is information that will assist you in working this out.

## Part 1: How do I work out if I need to build my training load?

To know how far or close you are to the international camp loads you'll first need to know what you're actually doing each week. Follow the steps below to find your Acute Training Load.

1. Log into the AMS (if you don't have an account, email [sally.bromley@ausport.gov.au](mailto:sally.bromley@ausport.gov.au) to gain access)
2. Click on "History" on the bottom of the left toolbar (as shown in picture)



3. Look at the number next to "Acute Training Load". This number is where you are at now with your training load.

The screenshot shows the 'Athlete name's Performance History' page. It includes a navigation bar with page numbers and a 'Showing 10 per page' indicator. The main content is for a 'Taekwondo - Training Log' entry from 30-07-2015. Under 'Training Status Details', the status is 'Full Training'. Under 'Training Session Details', the session type is 'Conditioning, Cross Country, Track, Medicine Ball & Dumbbell', and the conditioning type is 'Hill sprints and upper body circuit'. The duration is 90.0 minutes. The RPE is '8 Very Hard'. The 'Acute Training Load' is 4330, which is highlighted with a red box. A large red arrow points to this value from the right. Other values include 3 Days Rolling Load Total (2930), 7 Days Rolling Load Total (4330), 28 Days Rolling Load Total (11706), Chronic Training Load (2949), and Load Difference (-1381). The TSB Flag is 'No'. There are also sections for 'Recovery Session' details.

4. **Work out the difference** between this training load and the camp load.

If we take the example from above we can calculate the change in load required to be within striking distance of the international Judo camp load.

$$\begin{array}{rcccl} \text{CAMP LOAD} & & \text{ACUTE TRAINING LOAD} & & \text{INCREASE NEEDED OVER 4 WEEKS} \\ 7000 & - & 4330 & = & \mathbf{2760 \text{ units}} \end{array}$$

5. **Divide the difference by 4** to get a weekly increase in load

$$\begin{array}{rcccl} \text{INCREASE NEEDED} & & \text{WEEKS UNTIL CAMP} & & \text{INCREASE IN LOAD PER WEEK} \\ 2760 & / & 4 & = & \mathbf{690 \text{ units per week}} \end{array}$$

## Part 2: How do I actually build my training load?

Load is measured as Rate of Perceived Exertion (RPE) multiplied by the session length (time)

$$\text{RPE} \times \text{TIME} = \text{LOAD}$$

There are many different ways we can add load each week. Some examples are below:

EXERCISE TYPE	RPE	TIME	LOAD	TOTAL INCREASE
Swimming	6	54 mins	270	690
Weights	7	60 mins	420	
Core training	9	10 mins	90	690
Judo	8	60 mins	480	
Cross training	3	40 mins	120	

Attached at the end of this fact sheet is the RPE scale for your reference.

**As a more specific guide, you can use these following guidelines:**

**Judo** – the camp involves at least 2 x on mat sessions per day (am & pm).

- Participate in 4-6 standard Judo training sessions per week (technique & Randori approximately 60-90min). If you are currently on the mat only 3 x per week then add 1 x session per week over the next 4 weeks. Remember that you could do components of a session rather than adding a full session each week.
- Complete 2-3 technical Judo sessions per week (approximately 60min). These should be of a low intensity. If you do not have access to a Dojo and training partners, then use stretch bands to complete your own Uchikomi. Perform these

sessions separated from other Judo training (e.g. in the morning if you normally train at night).

**Off mat training** – the camp involves a number of running based conditioning sessions.

- Complete 2 -3 running based conditioning sessions per week. Ideally these sessions should be separate to your other training and last approximately 30minutes. They can be a combination of continuous and interval training. Ensure you have appropriate footwear and choose a forgiving surface (e.g. grass).
- Although the camp does not involve a large amount of strength training, this should form a standard part of your program.

### Example Weekly Schedule

The following is an example of what a 10-12 session per-week program may look like. Keep in mind that there are almost limitless variations of this example and the most appropriate organization for you will depend on many factors.

	<b>MON</b>	<b>TUE</b>	<b>WED</b>	<b>THU</b>	<b>FRI</b>	<b>SAT</b>	<b>SUN</b>
<b>AM</b>	Strength Training	Conditioning	Strength Training	Technical	Strength Training	Judo/Technical	Off
<b>MID</b>						Conditioning	Off
<b>PM</b>	Judo	Judo	Judo (light session or rest)	Judo	Judo	Off	Off

- Progressively increase your amount of regular training.
- Introduce days where you are training twice per day. Keep in mind that one session can be high volume/intensity and the other can be much lower.
- Vary the type of sessions from day to day wherever possible.
- Have at least one complete day off.

### Week Prior to Camp

- Although increasing your training load prior to the camp is critical, it is also important to ensure you do not start the camp in an overly fatigued state. Whether you have substantially increased your load in preparation for the camp, or normally train at this level, it is important to taper slightly prior to the camp. There are numerous ways to do this, however the simplest approach is to either remove 2-3 sessions from your program in the 3-4 days prior to the camp and decrease the volume of a further 2-3 sessions during the same period (generally a taper is much longer and involves much more of a reduction in training when it is to peak for a major event).

## Part 3: Keeping on track

Use the AMS to record your daily training. It is important to record every training session, not just randori and not just Judo. Regularly check your “Acute Training Load” to make sure you’re progressing towards the camp loads and remember:

***If you fail to prepare, then prepare to fail.***

Here at the AIS we are very happy to assist in any way we can. Please contact Sally Bromley at [sally.bromley@ausport.gov.au](mailto:sally.bromley@ausport.gov.au) if you have any questions.

**Table 1.** Modified Borg scale used for rating perceived exertion (Foster et al. 1996).

Rating	Verbal descriptions
0	Rest
1	Really easy
2	Easy
3	Moderate
4	Somewhat hard
5	Hard
6	
7	Really hard
8	
9	Really, really hard
10	Maximal

**Note:** Thirty minutes following the completion of a training session the athlete must describe the overall perception of effort during the session.