

## Recovery working party

### Immune system

It is well proven that participating in regular moderate exercise reduces upper resp.infections but performing acute bouts of prolonged, intense exercise [threshold being greater than 2 hours a day at above 70%max heart rate] or heavy volume of training is associated with above average increase risk of infection.

Infection risk is also affected by nutritional status, psychological well being and environmental influences.

Immune function not a direct reliable marker for overtraining

Extremes of cold with or without exercise do not suppress immune function nor does increase URTI.However high altitude suppress cell mediated immunity. Diet has a significant effect on immunity with deficiencies in Fe, Zn, Vits A, E, B6; B12.

Psychological stress can produce clinically significant changes in immune function. There is evidence that psychological interventions [unspecified] can improve immune function and reduce illness and injury in athletes.

Gleeson writing in "Immune Function in Sport and Exercise" recommends:

- Allow rest between sessions
- Rest days
- Maximum activity 2hours/session
- Periodised training
- Varied training
- If increasing load do not eliminate recovery days
- Diary including recording moods, fatigue and muscle soreness
- Manage rest of life
- Adequate sleep-Gleeson says at least 6 hours – Walker suggest 7+[see sleep sheet]

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## **Diet and CHO**

He recommends monitoring –sleep heart rate, sleep disturbance and salivary IGA

He also says low blood lactate in sub maximal exercise [ask physiologists]

Blood cortisol/test ratio not helpful but cortisol response to high intensity exercise is useful as a blunted response immediately post exercise is significant of athlete at risk.

Gleeson advocates avoidance of children, crowds, sharing showers especially immediately post exercise.

## **Conclusion**

The effect of exercising on the immune system in high performance sport is significant and can lead to infection and/or poor recovery. There are some simple and some complex methods of monitoring and similarly with preventative measures.

## **Recommendation**

The institute should encourage basic diary keeping with simple measures being recorded. The institute should continue and expand Salivary IGA measuring.

