



IMPROVE YOUR IMMUNE SYSTEM

Physically Speaking

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The tennis season is here.

This year, you want to compete for a full season at your peak health and fitness. You have been training hard, playing well and you are on-target to meet your goals.

But your **Immune System** has other plans...you have caught a cold (another one!) and feel tired and miserable.

How could this happen? You should not get sick! You are a fit, healthy elite athlete.

Your body should be able to fight off these annoying little colds and viruses.

What is going on?

- Getting sick interrupts your season and negatively affects your performance.
- Unfortunately this is a common problem that affects many professional tennis players.
- To understand and help prevent these frustrating minor illnesses, read on and learn how to enhance your immunity.



Tennis and Sport Photos: Getty Images

WHAT IS THE IMMUNE SYSTEM?

Your immune system is a bit like the court services team at a tennis tournament. They ensure that the courts are ready for play, all rubbish removed, fridges stocked, players' and umpires' seats scrubbed clean, fences and gates secure and courts cleaned, dry and safe. Each member of the team has a different job and when they all work together, the courts are quickly made ready for play.

The immune system is designed to keep the human body free from unwanted visitors that cause illness, such as viruses, bacteria, microbes and germs. It works to clean up and remove these unwelcome vermin, to destroy them quickly before they can make you sick, and then to clean up any left-over mess. It keeps your body healthy and ready to play.

There are a variety of different cells in the immune system. Each cell has a different job to keep the system functioning well:

- Some identify any unwelcome germs and start the process to remove them.
- Some weaken the unwanted infections with clever chemicals designed to reduce their power.
- Some destroy the germs.
- And some will clean up and remove any left-over rubbish.
- These immune system cells work together as a team to keep you healthy.

FIGHTING FIT



- The immune system keeps a record of every unwanted microbe or germ bacteria it has ever contacted. This means it can destroy the microbe very quickly if it enters the body again, before it can multiply and make you feel sick.
- But, if one group of cells is not performing its job properly, then the whole system will be less effective. Reduce the numbers or the strength of one part of the immune system, and it won't work as efficiently and the foreign germs may just take up residence and make you sick.
- To keep your immune system fighting fit requires that you pay attention to all aspects of your health and physical fitness, including:

- ✓ Good nutrition
- ✓ Updated immunizations
- ✓ Type and method of training

- ✓ Proper hydration
- ✓ Recovery techniques
- ✓ Hobbies and non-tennis activities

- ✓ Training amount
- ✓ Stress management
- ✓ Medical and dental check-ups

- ✓ Rest and sleep
- ✓ Healthy social interactions
- ✓ Mental health

THE EXERCISE AND IMMUNE PARADOX

WHY MORE IS NOT BETTER...

Although more research is needed in this complex area, it appears that:

1. **Moderate exercise improves** the immune system so it works better.
 - It increases the numbers and strength of some important immune system cells.
 - It makes the whole system work better as a coordinated, efficient team.
2. **Intense bursts of exercise and prolonged training can actually depress the immune system.**
 - Intense exercise decreases the size and strength of the immune system.
 - Tennis players should schedule a rest day once a week to "recharge" the immune system.
 - Aim for **balance** in all aspects of tennis training and life.





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LIFESTYLE FACTORS

Other factors in a professional tennis player's lifestyle decrease the immune system's ability to fight off sickness:

FACTOR	EFFECT ON IMMUNE SYSTEM
Air Travel	<ul style="list-style-type: none"> • Potentially exposes players to infected people and new organisms.
Nutrition	<ul style="list-style-type: none"> • Dietary deficiencies (e.g. vitamins B6, C & E, essential fatty acids, iron, zinc and others). Reduces capacity of system to fight illnesses. • Alcohol.
Environment	<ul style="list-style-type: none"> • Changes in air quality (pollution), temperature, altitude and time zone differences, sleep deprivation, foreign food, all affect the immune system.
Muscle Damage	<ul style="list-style-type: none"> • Micro-trauma to muscle fibers occurs with all exercise, even without injury. • Some immune cells are used for muscle repair, and create oxidant free radicals.
Psychological Stress	<ul style="list-style-type: none"> • Stress decreases immunity. In elite tennis stress can include: <ul style="list-style-type: none"> • Reduced social contact and too much time in specific goal-orientated activities. • Too much or incorrect training and not enough recovery. • Competition. • The traveling lifestyle (different cultures, languages, foods, constant change).



Don't worry, be happy: Studies indicate happy people have better immune systems.

IMMUNE SYSTEM IMPROVERS



REGULATE AND PERIODIZE TRAINING

- Be careful about increasing training before tournaments and matches.
- Schedule rest days and weeks.

USE RECOVERY METHODS to balance workload.

- Hydrotherapies, massage, lower-intensity training days.
- Learn more. Check out the ScheduleZone and RecoveryZone (available on the PlayerZone).

SLEEP restful sleep helps your immune system to be fighting fit.

REDUCE TRAINING if signs of overtraining occur.

- Excess fatigue, performance slump, muscle soreness, low motivation, injuries which don't heal, elevated morning pulse rate.
- Use a training diary to monitor your immune system function and training load.
- Speak to a Primary Health Care Provider (PHCP) if you experience any of these symptoms and for more information.

EAT A WELL BALANCED DIET

- Include plenty of fruit and vegetables (vitamin C) and meat or meat substitutes (for zinc).
- Treat any deficiencies under medical supervision.

ALWAYS WASH AND DRY HANDS

- To reduce your exposure to harmful organisms and to help prevent the spread of viruses and bacteria.
- Every time: after the toilet, when you cough and sneeze and when you handle food!
- Avoid food which is potentially touched by many people. For example: open breadbaskets, bowls of nuts or chips where no utensils are provided.

AIRPLANE TRAVEL

- Use hand sanitizer and avoid contact with sick people.
- Take and use a mask if someone seated near you is sick.

UPDATE VACCINATIONS and keep them updated. (Chicken pox, measles, mumps and rubella)

- Consider an influenza vaccination each October.
- Carry your vaccination card with you at all times.

REDUCE STRESS

- Learn relaxation, Yoga, meditation, prayer, listen to music, read, walk/pat the dog, enjoy social activities with friends, laugh...
- Happy people have better immune systems and stay healthier!

IF YOU DO GET SICK...

- Upper respiratory infections are common. If you get sick, seek and follow medical guidance.
- REST is the most important aspect of recovery. Take a few days off to allow your immune system to fight off the illness.
- Continuing to play when sick, will prolong your recovery, cause more fatigue and will not help your tennis.



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