

ST. JAMES'S HOSPITAL LABMED DIRECTORATE			
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## Ten Ways To Help Your Immune System

The principles behind a healthy immune system are much the same as those relating to a healthy lifestyle. If you are not taking care of yourself, your immune system will not function well. There is no 'instant fix' to boost the immune system for most people. Indeed, it is important to remember that having a 'boosted' immune system is actually quite unpleasant – think of the last time you had a flu or a heavy cold; this is an example of when your immune system is 'boosted' active and working hard. What you actually want to achieve is an immune system in balance!

### 1. Smoking:

Do not smoke

### 2. Diet:

Aim to maintain a healthy balanced diet, full of fruit and vegetables. Most otherwise healthy people do not need any dietary supplements with the exception of vitamin D (see no.9)

### 3. Weight:

Being excessively underweight or overweight can have a negative impact on your immune system. You may need advice from a dietician if you are having major problems with your weight. Lots of research tells us that being obese impairs immune function and can contribute to recurrent infection. It is not easy to lose weight but it should be considered an essential part of optimizing immune function.

### 4. Get adequate sleep:

It has been shown that sleep deprivation results in increased susceptibility to infection. In general, it is recommended that adults get between 7 – 9 hours of sleep a day. Missing out on 1- 2 hours of sleep over a few nights can have the same effect as the occasional late night. This is a concept known as 'sleep debt'. This sleep debt can be repaid or balanced out by getting extra hours of sleep a night and engaging with good sleep hygiene (no screen time before 30 – 60 minutes before bed/avoid stimulants such a coffee, tea and chocolate before bed).

### 5. Minimise stress:

We know that a wide number of medical conditions have links to emotional stress. The stress response suppresses the immune system, increasing susceptibility to infection. Completely avoiding stress is impossible, but there are healthy ways to respond to stress such as mindfulness, exercise and exploring new hobbies. If you feel stress and anxiety are a problem for you ask your GP or another healthcare professional for additional advice.

### 6. Exercise:

Exercise is vital for well-being and gives immune system benefits as well. Healthy amounts of exercise will help with weight, stress and sleep. It is important to note that intensive training (elite level training or significant endurance training) can reduce immune function and increase infection susceptibility. However, the benefits of exercise far outweigh the risks. In fact there is good data to show that some aspects of the immune system ('recent thymic emigrant T cells') of elderly distance cyclists are the same as young adults. Get out and get fit!

### 7. Vaccinations:

Vaccination has revolutionized public health in the 20th and 21st centuries. Vaccination is the best, evidence based way to boost your immune response to specific infections. Everyone should make sure they are up to date with their vaccines. If vaccines have been missed then advice on catch-up vaccination is available from your GP. Vaccination is particularly important

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for 'at risk' groups – this can include people with chronic lung problems such as asthma, those on long term medication and even smokers.

**For more information see: <https://www.hse.ie/eng/health/immunisation/pubinfo/>**

### 8. Managing your medical conditions:

If you have a chronic or long-term illness (such as diabetes or lung conditions like asthma and COPD) you are more likely to have a compromised immune system and be at greater risk of infections. There are several reasons for this, including, inflammation at the barriers (such as in asthma / COPD), reduced function of immune system cells (in poorly controlled diabetes) or related to medications (such as with immunosuppressant drugs for inflammatory conditions). By properly managing these conditions you can greatly reduce your risk of infection and other complications. Ways to do this include regular GP/specialist check-ups and taking your medications as prescribed.

### 9. Vitamin D supplementation:

Vitamin D insufficiency and deficiency is common in Ireland. There is evidence from systematic reviews (where lots of research is combined to see if a treatment really works) that taking vitamin D can reduce the risk of chest infections. The effect does seem to be strongest in people with the lowest levels of vitamin D. The best dose is unclear but 800 units per day is a reasonable dose. You should discuss this with your GP.

### 10. Probiotics:

Probiotics are live microorganisms (bacteria) intended to provide health benefits on consumption. The use of probiotics is an area of very active research and it remains difficult to draw firm conclusions regarding the effectiveness of such treatments in the real world. Approaches using probiotics are heavily marketed, often without any accompanying evidence of effectiveness. In this setting, with a dizzying variety of strains, it is very difficult to give strong recommendations about their use. There is some evidence that products such as Aflorex may help with irritable bowel syndrome. In addition, supplementation with *Lactobacillus rhamnosus* and *Bifidobacterium lactis* has been shown to reduce respiratory tract infections in some people. It is important to be aware that the quality of suppliers can vary and to question the evidence for any treatment. That said, such approaches are very unlikely to cause harm and may well help.