

**lupus**  **FACT SHEET**

Lupus Canada

## Infections, Immunizations and lupus

**P**eople with systemic lupus erythematosus (SLE or lupus), especially those who are on immunosuppressive medications, may be at increased risk for a variety of infections. In fact, despite the significantly improved prognosis for this disease over the past two decades, infections continue to be a leading concern in people with lupus. As a result, infection prevention and immunization programs are of critical importance for people with lupus.

### Why the increased risk of infection?

Our environment is filled with micro-organisms – viruses and bacteria – that can cause infections. While most people can fight off these invaders with the body’s natural defense mechanisms, people with lupus may have impaired immune systems, most often due to the immunosuppressive drugs (including corticosteroids) used to treat the disease. Genetic risk factors may also play a role. Thus, the risk of infection varies from person to person and over the course of each individual’s disease.

The risk for specific infections is also associated with certain complications of lupus. For example, nephrotic syndrome, which causes excessive loss of protein in the urine due to lupus kidney disease, is known to increase the risk of serious infections. Other conditions that increase a person’s susceptibility to infections include: neutropenia (low white blood cell count), lymphopenia (low number of immune

cells in the blood), chronic kidney failure, diabetes and poor spleen function or surgical removal of the spleen. For people with these conditions, vaccination may be particularly important.

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*See your doctor if you have a fever that lasts for more than a few days*

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### Types of infection

The two most common types of infections of primary concern to people with lupus are viral and bacterial. Tuberculosis and fungal infections are less common, but also important. Some individuals with lupus, particularly those on immunosuppressive drugs, are at higher risk for bacterial infections of the respiratory tract, joints and urinary tract.

Common viral infections include cold viruses, herpes zoster (shingles) and Epstein-Barr; less common is viral hepatitis. The most common fungal infection in people with lupus is yeast (Candida), which can infect the vagina, throat and esophagus.

### Is it a lupus flare or an infection?

Fatigue and fever may indicate a lupus flare or an infection. Unfortunately, active lupus mimics infection, and infection not only mimics lupus, but can also cause a flare. It is very important to take your symptoms seriously; don’t dismiss them as “just” a flare.

In order to prevent serious, possibly life-threatening complications, infections must be diagnosed and treated as early as possible. See your doctor if you have a fever that lasts for more than a few days; if you also have any of the following symptoms plus fever, you should seek medical

advice urgently:

- A headache plus confusion and/or neck stiffness
- A cough productive of sputum or shortness of breath
- Swollen, tender, red and painful joints with limited range of motion
- Chest pain
- Severe abdominal pain
- Nausea or vomiting
- Burning sensation on urination, increased urinary frequency or flank pain

### **Preventing infections**

If you have lupus, you should live by the motto “An ounce of prevention is worth a pound of cure.” Protect yourself from infections with some common-sense precautions: handle food safely, avoid people who are ill and contagious, eat a balanced diet and exercise regularly.

The most important precaution you can take to prevent infection is to wash your hands regularly and well. That means using an adequate amount of soap, rubbing your hands together to create friction for at least 10 seconds, and rinsing under running water. If soap and running water aren't available, clean your hands with waterless hand scrubs, such as those made with ethyl alcohol.

### **Immunizations**

Immunization is another important step in protecting yourself from infections. Health Canada's Canadian Immunization Guide (2002) sets a schedule of when children and adults should receive various vaccinations.

If you've received any vaccinations since your lupus diagnosis, you likely haven't had any difficulties. Passive immunization (i.e., vaccines that use a killed virus) appears to

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pose no additional risks for people with lupus compared to the general population.

Although there is a chance that immunization with vaccines that use live viruses may produce a lupus flare, vaccines that protect against polio, measles and mumps – which all use live viruses – have been given to hundreds of thousands of people with lupus with no adverse reactions.

### **Flu**

More than just a bad cold, the flu (influenza) is a respiratory infection caused by a virus. Although most people recover from the flu completely, an estimated 4,000 to 8,000 Canadians die every year from pneumonia related to flu, and many others may die from other serious complications of flu. In particular, the elderly are a group at risk.

Health Canada recommends an annual flu shot for people with chronic conditions, including immune suppression. Although flu vaccines are generally considered safe for people with lupus, some individuals may experience side effects. Up to 20 percent of people with lupus may feel sick or achy for a few days following a flu vaccination – that's about twice as many people as in the general population.

While it is important to receive your flu shot, some studies

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indicate that flu vaccines may not work as well in people with lupus as in people without the disease. Thus, avoiding contact with someone who is sick, and washing your hands well and frequently, remain key.

## **Pneumococcal infections**

Pneumococcal infections are caused by bacteria and include infections of the brain (meningitis), bloodstream (bacteremia), lungs (pneumonia) and middle ear (otitis media). They occur more frequently in people with lupus, but may be prevented with the pneumococcal vaccine which Health Canada recommends for anyone with a chronic disease.

This vaccine is very effective for most people with lupus. Although there have been some reports of lupus flares following pneumococcal immunization, large studies have not demonstrated a relationship between the two. In order to maintain optimal protection, you should be revaccinated after five years.

## **Hemophilus influenza type B (Hib) and meningococcal vaccine**

Hemophilus influenza (Hib) and meningococcus pose significant threat to anyone who cannot properly produce specific antibodies against

invading bacteria or other organisms. People whose spleen has been removed or is not fully functional, are at particular risk.

In a study of people with lupus immunized against Hib, there were no serious side effects or lupus flares, and most people developed protective antibodies. However, there are no studies demonstrating the safety or efficacy of the meningococcal vaccine in people with lupus.

If your spleen has been removed or it is not fully functional, vaccination against organisms such as Hemophilus influenza is very important.

## **Hepatitis B vaccine**

Hepatitis B is a serious liver disease that is transmitted by infected blood and other body fluids. Two vaccines against hepatitis B are available in Canada and are strongly recommended for adults in high-risk categories, such as people on dialysis or organ transplant recipients. Thus, individuals with lupus who require dialysis and/or transplant could consider getting this immunization.

No studies have been done to assess the role of the hepatitis B vaccine in triggering or exacerbating disease activity in lupus.

## Immunizations and Travel

If you are travelling outside Canada or the United States, you might want to consult with a travel health clinic to discuss your immunization needs. Schedule your appointment at least six to eight weeks before your trip, as vaccines can take several weeks to become effective.

If you are travelling to Mexico or overseas, you should be aware of any precautions advised by Health Canada (visit <http://www.phac-aspc.gc.ca/tmp-pmv/index.html>) and speak to your physician as far in advance as possible as it may be necessary to attend a travel clinic and get immunizations over a period of time.



### FOR MORE INFORMATION

- Lupus Canada: [www.lupuscanada.org](http://www.lupuscanada.org). This site includes electronic versions of the *Living Well with Lupus* fact sheets.
- *Lupus: The Disease with a Thousand Faces*, edited by Dr. Sasha Bernatsky and Dr. Jean-Luc Senécal, Key Porter Books (2004) ISBN 1-55263-603-8. Contact Lupus Canada to order this book.
- The Arthritis Foundation: [www.arthritis.ca](http://www.arthritis.ca)
- Lupus Foundation of America: [www.lupus.org](http://www.lupus.org)
- Immunizations and Vaccines Public Health Agency of Canada: [www.phac-aspc.gc.ca/im/immvac\\_e.html](http://www.phac-aspc.gc.ca/im/immvac_e.html)
- Canadian Immunization Guide, 2002: <http://www.phac-aspc.gc.ca/publicat/cig-gci/index.html>
- World Health Organization Department of Immunization, Vaccines and Biologicals: [www.who.int/immunization/en/](http://www.who.int/immunization/en/)

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#### Disclaimer

*Systemic lupus erythematosus is an autoimmune disease that affects thousands of Canadians, mostly women in their childbearing years. Symptoms vary greatly from person to person and treatment is highly individualized. Patients are urged to contact their physician or healthcare professional with any questions or concerns they might have.*

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