

Health & Wellness

January
2025
Issue 4

Maintaining a Healthy Immune System

This month's health and wellness education is about your immune system and how to keep it healthy! We'll be going over what the immune system is, what it does for our bodies, how nutrition affects the immune system, and more!



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Welcome to DuPage Senior Citizens Council/Kane Senior Council's January Health & Wellness Newsletter!

We're here to bring you a new topic relating to wellness as well as new brain teasers, seasonal recipes, book recommendations, and more!



Providing Meals and More...



DuPage Senior
Citizens Council



Kane Senior
Council

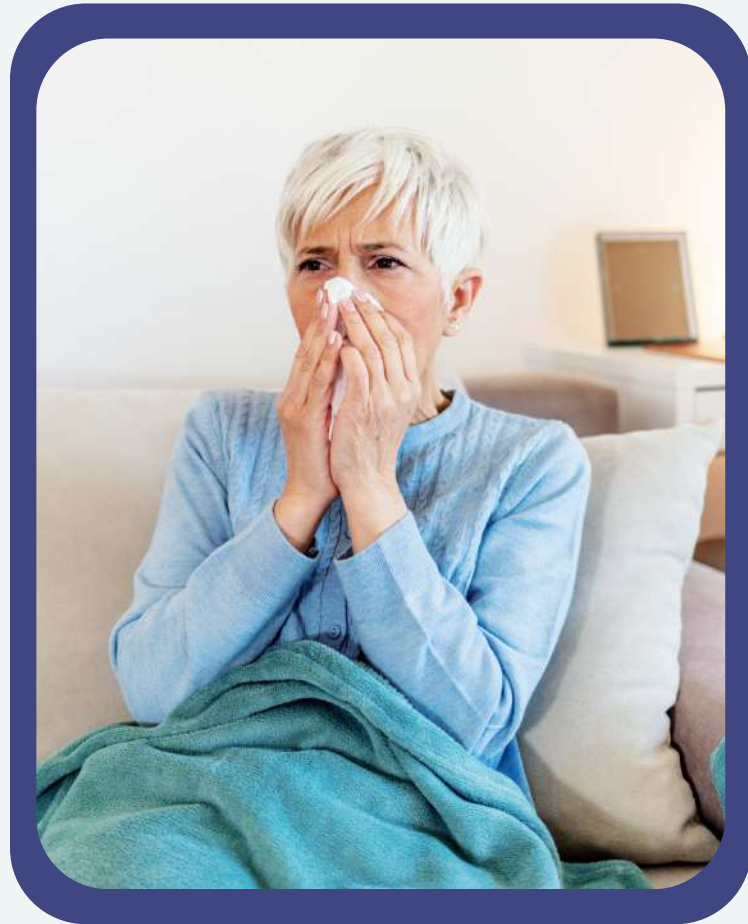
Health & Wellness Education

Maintaining a Health Immune System

Introduction

It is very easy to get sick this time of year - germs are everywhere!

With how easy it is to catch a cold, the flu and other respiratory illnesses it is important to keep our immune system ready to fight.



A lifestyle that includes eating healthy foods, physical activity, reducing stress, and getting enough sleep is known to keep your immune system in the best shape. Let's take a closer look.

Information adapted from:

<https://my.clevelandclinic.org/health/body/21196-immune-system>

<https://nutritionsource.hsph.harvard.edu/nutrition-and-immunity/>

What is the

Immune

System?

Your immune system is a large network of **organs, white blood cells, proteins** and **chemicals** that work together to protect you from **germs** and **other invaders**.

Your immune system helps your body heal from infections and injuries.

The immune system:

- Keeps germs out of your body
- Limits how much harm germs can do if they're inside your body
- Heals damage already done

Your Immune System Protects You Against:

- Bacteria
- Viruses
- Fungi that can cause infections
- Parasites
- Cancer cells

How Does the Immune System Work?

Your immune system tells the difference between cells that are yours and those that don't belong in your body. Then, it activates and mobilizes to kill germs that may harm you.

Your immune system ends an attack once the threat is gone because it learns about germs after you've had contact with them and develops antibodies against them.

Your immune system sends out antibodies to destroy germs that try to enter your body in the future.

Sometimes, your immune system doesn't work properly as occasionally it may be too weak to fight off invaders, or it may launch too strong of a response.

Weak vs Overactive Immune Systems

Weak Immune System

Many different conditions can weaken your immune system and make you more susceptible to infection.

Overactive Immune System

Alternatively, your immune system may react too strongly to invaders (real or perceived). It may mount an attack when there's no need or it may keep attacking after getting rid of an invader.

*An overactive immune
system can lead to
autoimmune diseases
or
allergic reactions.*

What parts of your body make up the immune system?

White Blood Cells

- These immune system cells attack and eliminate harmful germs to keep you healthy. There are many types of white blood cells, and each type has a different job.

Antibodies

- Proteins that protect you from invaders by binding to them and initiating destruction.

Cytokines

- Proteins that serve as chemical messengers to tell your immune cells where to go and what to do. Some regulate inflammation, which happens when your immune cells are warding off invaders or healing damage to your tissues.

Complement System

- Proteins that team up with other cells in your body to defend against invaders and promote healing from an injury or infection.

Lymph Nodes

- Filter waste products from the fluid that drains from your tissues and cells (lymph) while keeping the good components, like nutrients. Lymph nodes are a vital part of your lymphatic system.

Spleen

- Stores white blood cells that defend your body from invaders and also filters your blood, recycling old and damaged cells to make new ones.

Tonsils & Adenoids

- Trap invaders (like bacteria or viruses) as soon as they enter your body.

Thymus

- Helps T-cells (a specific type of white blood cell) mature before they travel elsewhere in your body to protect you.

Bone Marrow

- Makes the blood cells your body needs to survive, including white blood cells that support your immune system.

Skin

- Protective barrier that helps stop germs from entering your body. It produces oils and releases other protective immune system cells.

Mucosa

- Membrane lines cavities and organs throughout your body and secretes mucus that captures invaders, like germs, for your body to then clear out.

Innate Immunity

VS

Acquired Immunity

Innate immunity - protection that you're **born with** and is part of your body's **first-line defense**. It responds to invaders right away by attacking any organism that shouldn't be in your body.

The **white blood cells** involved in innate immunity don't learn to recognize certain invaders. They also have no memory of attacking invaders and don't offer protection against specific germs (or the infections they cause) in the future.

Acquired immunity - protection your body gains **over time** from **exposure to germs**. Certain white blood cells called **lymphocytes** remember specific invaders and can tell when they don't belong in your body. So, if those invaders try to get in again, the lymphocytes can quickly spring into action and work with other cells to eliminate them.

Vaccines support your acquired immunity by training your cells to identify and destroy invaders before you get sick.

What factors, disorders and diseases can affect the immune system?

Conditions that can interfere with the normal workings of your immune system include:

- **Allergies**
 - **Chronic diseases**
 - Autoimmune and immunodeficiency disorders attack and potentially disable immune cells
 - **Cancer**
 - Certain types of cancer, like leukemia and lymphoma, can weaken your immune system
 - **Environmental toxins**
 - Smoke and other air pollutants, as well as excessive alcohol can impair or suppress the normal activity of immune cells
 - **Older age**
 - As we age, our internal organs may become less efficient; immune-related organs like the thymus or bone marrow produce less immune cells needed to fight off infections
 - Aging is sometimes associated with micronutrient deficiencies, which may worsen a declining immune function
 - **Chronic mental stress**
 - Stress releases hormones like cortisol that suppress inflammation* and the action of white blood cells
- *Inflammation is initially needed to activate immune cells

Signs and symptoms of immune system disorders

- Always feeling tired (fatigue)
- Unexplained fever
- Unexplained weight loss
- Drenching night sweats
- Itchy skin
- Sore, aching muscles
- Fingers or toes that tingle or are numb
- Trouble concentrating or paying attention
- Hair loss
- Inflammation, rashes or redness anywhere on your body
- Swollen lymph nodes in your neck, armpits or groin
- Common tests that check the health of your immune system

Doctors often use blood tests to check how well your immune system is working.

These tests may include:

- Antibody test
- Complete blood count
- Complement blood test to check levels of specific types of protein in your blood, such as C3 proteins

What medications can **weaken** my immune system?

- Corticosteroids
- Immunosuppressants
- Chemotherapy and other forms of cancer treatment

How can I **boost** my immune system **naturally**?

- Fill your plate with healthy foods - Fruits, veggies, lean sources of protein and whole grains improve immune function.
- Exercise!
- Maintain a healthy weight - Researchers have linked a body mass index (BMI) greater than 30 (obesity) to poorer immune function.
- Get enough sleep - Not getting enough sleep can prevent your immune system from working as it should.
- Stay up-to-date on vaccines - Vaccines train your body to fight off germs that can make you sick.
- Avoid tobacco use - Tobacco use raises your risk for conditions that can harm your immune system, like rheumatoid arthritis. If you smoke, talk to you doctor about how to quit.

Nutrition and Immunity

Most Effective Ways to Prime the Body to Fight Infection and Disease:

- A balanced diet consisting of a variety of:
 - Vitamins
 - Minerals
- Healthy lifestyle factors such as:
 - Adequate sleep
 - Exercise
 - Low stress

Eating enough nutrients as part of a balanced diet is required for the health and function of all cells, including immune cells. Certain dietary patterns may better prepare the body for microbial attacks and excess inflammation.

Each stage of the body's immune response relies on the presence of **micronutrients**. Examples of nutrients that have been identified as critical for the growth and function of immune cells include vitamin C, vitamin D, zinc, selenium, iron, and protein (including the amino acid glutamine).

They can be found in a variety of plant and animal foods.

Immune System & Your Diet

Diets that are **high** in **processed foods** and therefore **low** in **nutritional content** can negatively affect a healthy immune system.

It is also believed that a diet **high** in **refined sugar** and **red meat** and **low** in **fruits** and **vegetables** can lead to chronic inflammation of the gut, and **associated suppressed immunity**.

Our diets play a large role in determining what kinds of microbes live in our intestines. A **high-fiber plant-rich** diet with plenty of fruits, vegetables, whole grains, and legumes appear to support the growth and maintenance of beneficial microbes.

A diet containing **probiotic** and **prebiotic** foods may be beneficial. Probiotic foods contain live helpful bacteria, and prebiotic foods contain fiber and oligosaccharides that feed and maintain healthy colonies of those bacteria.

Probiotic foods include:

- Kefir
- Yogurt with live active cultures
- Fermented vegetables
- Sauerkraut
- Tempeh
- Kombucha tea
- Kimchi
- Miso

Prebiotic foods include:

- Garlic
- Onions
- Leeks
- Asparagus
- Jerusalem artichokes
- Dandelion greens
- Bananas
- Seaweed

Health & Wellness Education

WRAP UP

Eating a good quality diet can prevent deficiencies in nutrients that our body needs to heal.

Eat well, exercise and reduce stress to keep the colds and flu away this winter!

For more health and wellness tips, information and resources, visit our website.

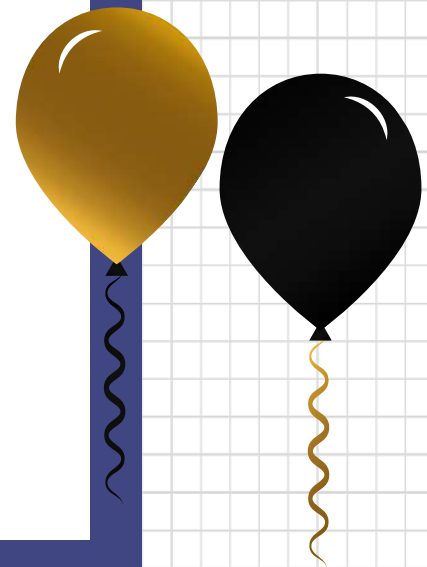


BRAIN BOOSTERS

SUDOKU

5				4		6	9	7
8					2		4	
		9	5		3	1		8
		1	4	3			7	
			7		9			
	7			6	5	4		
1		3	2		4	7		
	2		9					4
6	9	4		1				5

Fill in the blank squares so that each row, each column and each 3-by-3 block contain all of the digits 1 thru 9.

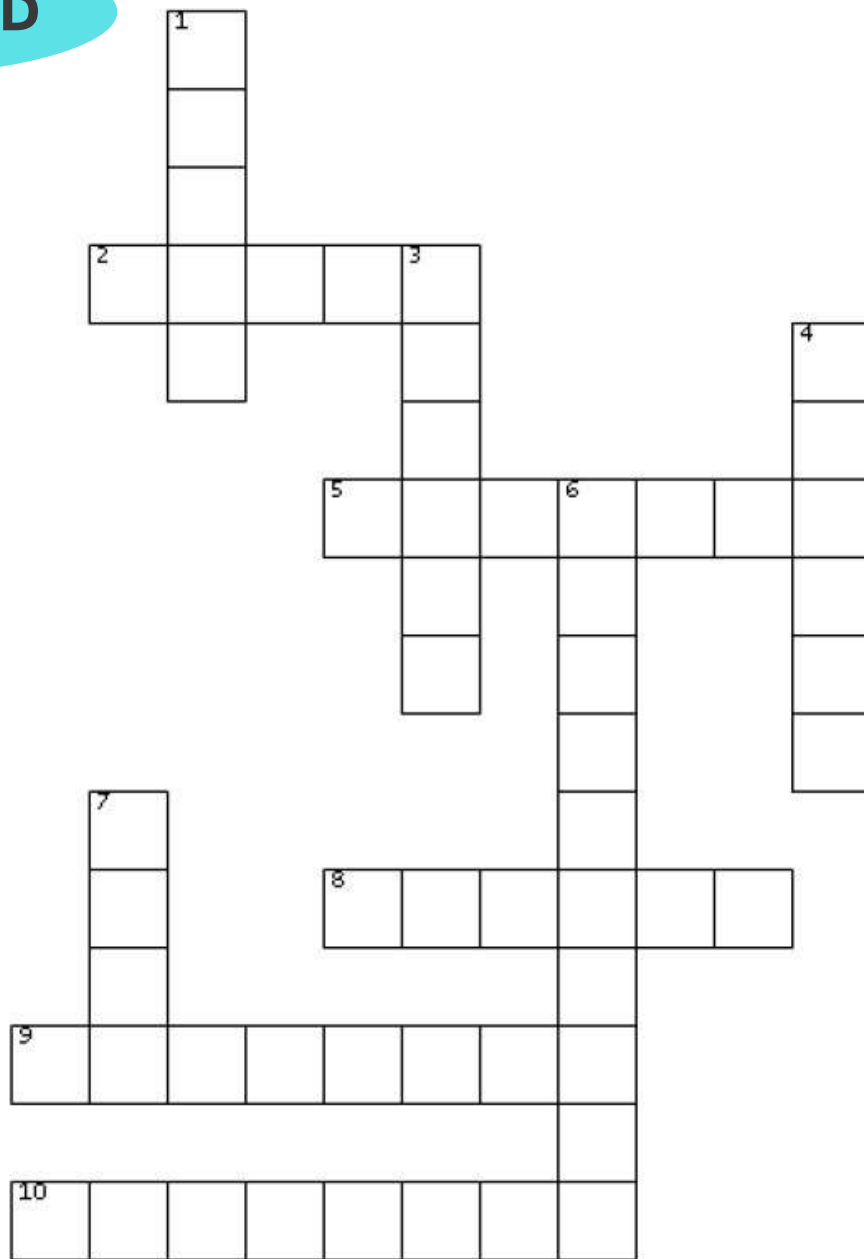


RIDDLE OF THE MONTH

What five-letter word typed in all capital letters can be read the same upside down?



CROSSWORD



ACROSS

2. The immune system protects against this type of invader, such as fungi or parasites
5. Eating _____ foods like fruits and vegetables boosts immune health
8. Membrane that captures germs using mucus
9. Protein that helps destroy germs
10. This activity strengthens the immune system and keeps the body active

DOWN

1. A diet rich in _____ supports beneficial gut microbes
3. Organ that stores white blood cells and filters blood
4. White blood cells mature in this organ before protecting the body
6. A specific type of cell that remembers invaders and reacts quickly
7. Protective barrier that helps keep germs out of the body

Our Picks of the Month

January Recipe: California Italian Wedding Soup

Ingredients:

- ½ pound extra-lean ground beef
- 2 cups finely sliced escarole (spinach may be substituted)
- 1 tablespoon chopped Italian flat leaf parsley (Optional)
- grated Parmesan cheese for topping
- 2 tablespoons Italian-seasoned bread crumbs
- 1 egg, lightly beaten
- 1 tablespoon grated Parmesan cheese
- ½ cup orzo (rice-shaped pasta), uncooked
- 2 green onions, sliced (Optional)
- 5 ¾ cups chicken broth
- 2 tablespoons shredded fresh basil leaves
- 1 lemon, zested



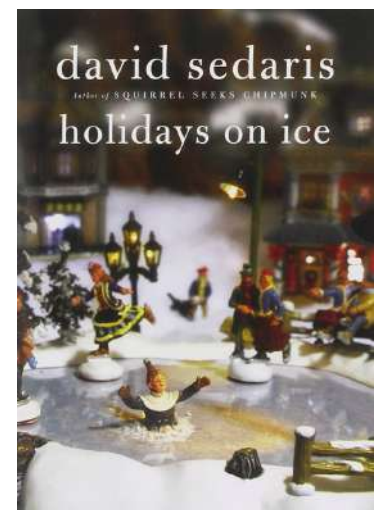
Directions:

1. Mix together beef, egg, bread crumbs, cheese, basil, parsley, and green onions; shape into 3/4-inch meatballs.
2. Pour broth into a large saucepan over high heat. When boiling, drop in meatballs. Stir in escarole, lemon zest, and orzo. Return to a boil; reduce heat to medium. Cook at a slow boil for 10 minutes or until orzo is tender, stirring frequently. Serve sprinkled with cheese.

Our Book Pick of the Month

Holidays on Ice by David Sedaris

“Sedaris's beloved holiday collection is new again with six more pieces, including a never-before-published story. Along with such favorites as the diaries of a Macy's elf and the annals of two very competitive families, are Sedaris's tales of tardy trick-or-treaters and the difficulties of explaining the Easter Bunny to the French.”



ANSWER KEY



5	3	2	8	4	1	6	9	7
8	1	7	6	9	2	5	4	3
4	6	9	5	7	3	1	2	8
2	5	1	4	3	8	9	7	6
3	4	6	7	2	9	8	5	1
9	7	8	1	6	5	4	3	2
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6	9	4	3	1	7	2	8	5

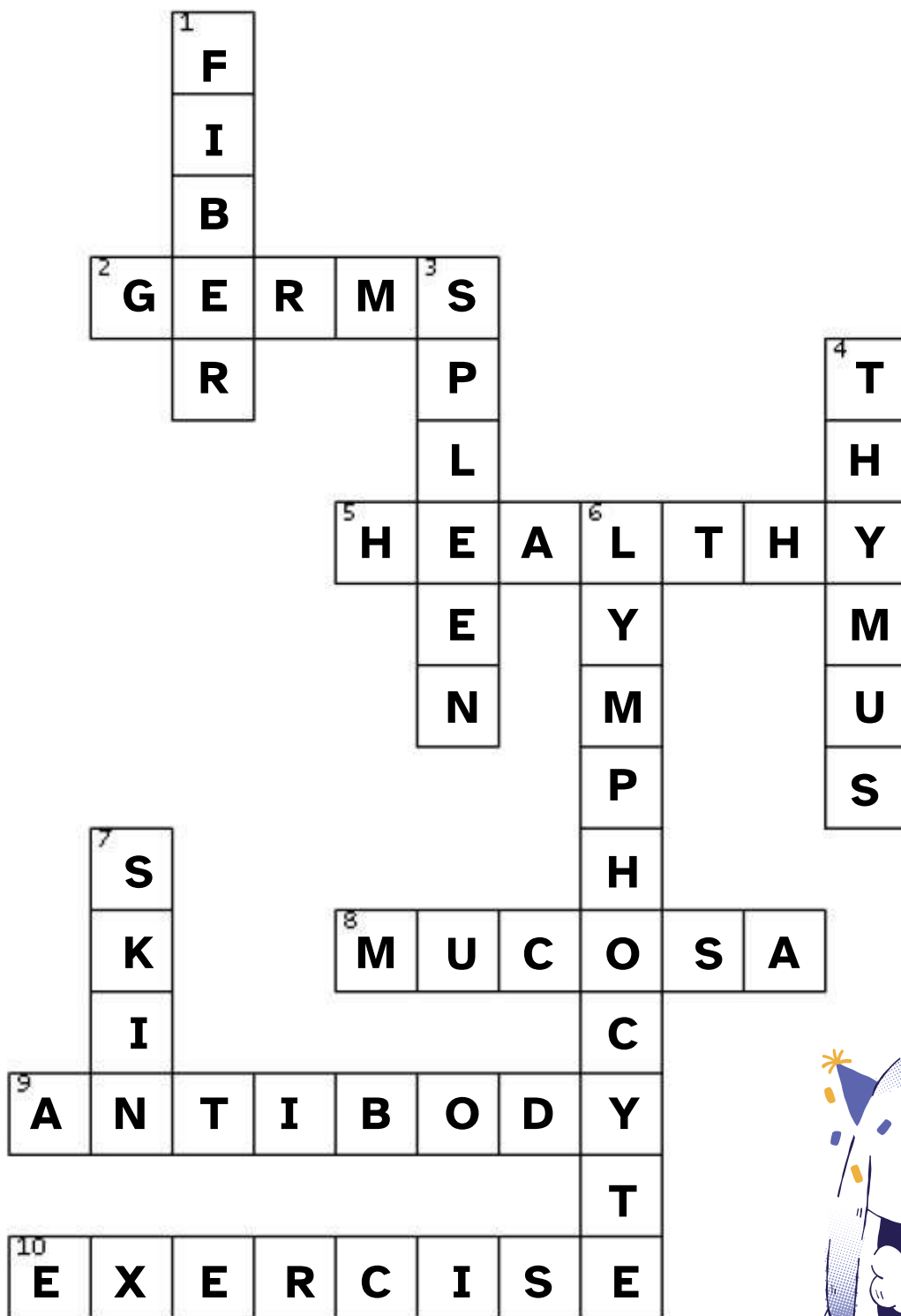
Riddle Answer:

What five-letter word typed in all capital letters can be read the same upside down?

Answer: SWIMS



ANSWER KEY





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From the Council

News & Events

**JANUARY
20**

**DSCC/KSC Offices and Sites
Closed For
Martin Luther King Jr Day**

- Operations Resume January 21st

**JANUARY
22**

**Community Dining
“NEW YEAR VISION BOARD”
Event**

11am-12pm

**Downers Grove Township Senior Center
4341 Saratoga Avenue Downers Grove, IL 60515**

**Call 630-642-8517 by
January 15 to RSVP**

Print Monthly Meal Menus at:

www.DuPageSeniorCouncil.org/Home-Delivered-Meals-Menus

www.KaneSeniorCouncil.org/Meals-On-Wheels



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DuPage Senior Citizens Council

1990 Springer Dr. Lombard, IL 60148

630-620-0804

www.DuPageSeniorCouncil.org

Kane Senior Council

418-B Airport Rd. Elgin, IL 60123

630-338-0999

www.KaneSeniorCouncil.org