



Medical Bits

- **Your Health: Oxygen and Preventive Health**
- **Debunking Myths**
- **Office Updates**

OXYGEN: The Language of Breathing: More Than Physiology

Breathing is not just a physical act—it is woven into our language, identity, emotions, and hope. Consider how many verbs trace their roots to breath:

- **Inspire** — breath in
- **Aspire** — breath toward
- **Conspire** — breathe with
- **Perspire** — breath through
- **Transpire** — breath across
- **Respire** — breathe again
- **Expire** — breath out

Even *spirit* shares the same root: the invisible breath of life. An ancient Latin phrase captures this beautifully: *Dum spiro, spero* — “While I breathe, I hope.”

Our relationship with breathing is both biological and spiritual. When we inhale, we receive; when we exhale, we release. This balanced cycle reflects stress, health, and emotion.

The next time you find yourself reading the news and anguished about the seemingly organized destruction of science, I invite you to demure and take the “long view”.

“All cruelty springs from moral weakness”
Lucius Anneus Seneca

“It is impossible for a man to learn what he thinks he already knows.”
Epictetus



BRIEF COSMOLOGICAL DETOUR

The cosmological timeline from the creation of our Universe to the rise of Oxygen in our atmosphere spans almost 12 billion years, with numerous biological and geochemical milestones promoting the evolution of oxygen-utilizing metabolic pathways along the way. You are fully aware that our Universe is mostly energy with small amounts of matter and all the chemical elements of that matter, without exception, formed in the furnace of the stars from humble atoms of hydrogen (H) and helium (He).

The Universe formed about 13.8 billion years ago and our small and delicate planet Earth, roughly 4.5 billion years ago. For its first two billion years, Earth's atmosphere was anoxic, and simple, unicellular life was dominated by anaerobic metabolism such as fermentation and methanogenesis.

The evolution of photosynthetic cyanobacteria in our primitive oceans —between 3.8 and 2.7 billion years ago—enabled the biological production of O₂ (initially remained at low concentrations, due to rapid consumption and buffering by reduced minerals and gases) but around 2.4 billion years ago the Great Oxygenation Event (GOE), marked the first substantial rise in atmospheric oxygen. Oxygen levels fluctuated for hundreds of millions of years before stabilizing above 10% of present atmospheric levels, with permanent oxygenation arriving around 2.2 billion years ago. A second major oxygenation event occurred in the Neoproterozoic (~800 million years ago), coinciding with the rise of complex multicellular life.

Only life can produce oxygen in significant concentrations!

As oxygen became available, metabolic pathways evolved and aerobic respiration emerged in response, making organisms a lot more efficient and able to deliver a higher energy yield per molecule of substrate.

The evolution of respiratory complexes enabled efficient electron transport and ATP generation in aerobic organisms. The diversification of respiratory enzymes and the development of super-complexes further increased metabolic efficiency, and evolved mechanisms to manage reactive oxygen species (ROS - byproducts of oxygen metabolism that can be toxic), allowing the safe and effective use of oxygen for energy production and signaling.

The rise of oxygen in Earth's atmosphere was a stepwise process driven by biological innovation, and the evolution of metabolic pathways for oxygen utilization enabled the emergence and ecological expansion of complex life.

In summary:

- Bacteria and unicellular life arose 3.8 billion years ago



- Early Earth atmosphere was oxygen-free (hydrogen, ammonia, methane and water vapor with amino acids, purines, pyrimidines, glycosides and vitamins synthesized under “primitive earth” conditions.
- With enough TIME and ENERGY, simple life forms appeared and evolved.
- Photosynthetic organisms (~ 3.8 b. years ago – Stromatolites and cyanobacteria) evolved the ability to split water using sunlight:
 - $\text{H}_2\text{O} \rightarrow \text{H}^+ + \text{e}^- + \text{O}_2$
 - Oxygen was released as a waste product.
 - Oxygen was at first toxic.
 - O_2 easily forms reactive oxygen species (ROS), which damage cell structures.
 - Many ancient organisms went extinct, but some evolved defenses.
 - Cells developed:
 - Antioxidants
 - Protective enzymes (catalase, superoxide dismutase)
 - Membranes resistant to oxidation

This revolutionary adaptation allowed survival in the presence of oxygen as some organisms learned to use oxygen to extract energy efficiently:

- Developed mitochondrial ancestors, likely through endosymbiosis - a smaller bacterium living inside a larger host cell -
- Over time, those became mitochondria, the “powerhouses” of modern cells.

This was one of the most important evolutionary moments in Earth’s history as Oxygen supercharged life, and the reason is rooted in chemistry:

Oxygen has a strong tendency to accept electrons. When molecules such as sugars or fats are broken down, they release electrons. Passing those electrons to oxygen releases a large amount of usable energy, captured in the form of ATP (adenosine triphosphate), the universal energy currency of life.

Without oxygen (anaerobic fermentation):

- 1 molecule of glucose $\rightarrow$ **~2 ATP**

With oxygen:

- 1 molecule of glucose $\rightarrow$ **~32–36 ATP**

Cells gained a **15–18x improvement** in efficiency.

No known biological energy system is more efficient.

This massive energy boost allowed life to grow larger, specialize, organize into tissues and form organs, and the rise of Eukaryotes and Multicellular, Complex Life, ultimately leading to plants, animals, fungi — and us.

A Beautiful Feedback Loop:

 **Oxygen-producing photosynthesis raised atmospheric O_2**



- ➔ Aerobic respiration used that O₂
- ➔ More energy = more complexity
- ➔ Complexity promoted evolution towards higher organisms

LIFE AND ATMOSPHERE CO-EVOLVED

Every breath you take is a direct connection to this evolutionary story:

- Mitochondria inside your cells are descendants of ancient bacteria.
- Your brain uses 20–25% of all the oxygen you inhale.
- The ability to think, move, heal, and hope depends on this chemistry.
- Oxygen enabled life to extract far more energy from food, and through billions of years of evolutionary innovation — especially the rise of mitochondria —allowing large, complex, intelligent, and diverse life.

Oxygen: When and Why

The indication for chronic oxygen supplementation is documented persistently low oxygen (hypoxemia) on pulse oximetry < 88% or on arterial blood gas < 55-60 mmHg. In outpatients O₂ is delivered mostly via nasal cannula.

Table 1. Devices Used in Supplemental Oxygen Therapy.*

Device	Flow (liters/min)	F _{IO₂}	Indications	Advantages	Disadvantages
Nasal cannula	1–6	0.24–0.40 ³	Nonsevere respiratory distress Need for supplemental oxygen at home Low oxygen requirement Need for sedation for procedure	Is comfortable for patient Has low cost Does not interfere with oral intake	Has limited flow Is associated with mucosal drying and epistaxis Unreliable F _{IO₂} Is easily dislodged
Simple face mask	5–10	0.35–0.60 ³	Moderate oxygen requirements Need for sedation for procedure Mouth breathing Need for aerosolized medications	Has low cost Provides higher F _{IO₂} than nasal cannula Is associated with less entrainment of ambient air Is capable of delivering humidified oxygen	Interferes with oral intake May cause patient discomfort May cause patient to feel confined Is associated with carbon dioxide retention Is dependent on tight-fitting mask for oxygen delivery
Face tent	5–15	0.35–0.5	Moderate oxygen requirement Discomfort with tight-fitting mask	Is comfortable for patient Has higher F _{IO₂} delivery Is capable of delivering humidified oxygen	Does not provide reliable control of F _{IO₂}
Venturi mask	2–15	0.24–0.5 ⁴	High oxygen requirement	Provides precision the oxygen concentration delivered Is capable of delivering humidified oxygen Has high gas flow (oxygen plus entrained air)	May cause patient discomfort Prevents patient from eating or drinking May require experienced personnel when setting up high-flow system
Nonrebreather mask	10–15	0.6–0.9	High supplemental oxygen requirement (e.g., in patients with carbon monoxide poisoning, smoke inhalation, acute trauma with severe desaturation, or acute decompensation and in those who need preoxygenation before intubation)	Has high F _{IO₂} (up to 0.9) Can be used in emergency situations	Causes patient discomfort Prevents patient from eating or drinking Requires close monitoring
High-flow nasal cannula	15–60	0.3–1.0 ⁸	Hypoxemic respiratory failure (e.g., pneumonia, interstitial lung disease, pulmonary edema, acute respiratory distress syndrome, care after extubation, etc.); also useful in critically hypoxemic patients who should not be intubated	Allows patient to eat, drink and speak Provides improved control of F _{IO₂} Provides high flows that meet the patient's minute ventilation Provides modest PEEP (prevents atelectasis and improves functional residual capacity) Provides washout of CO ₂ in dead space	May cause patient discomfort (owing to high flows) May cause mucosal dryness and injury Requires experienced personnel Is more costly than other forms of oxygen delivery

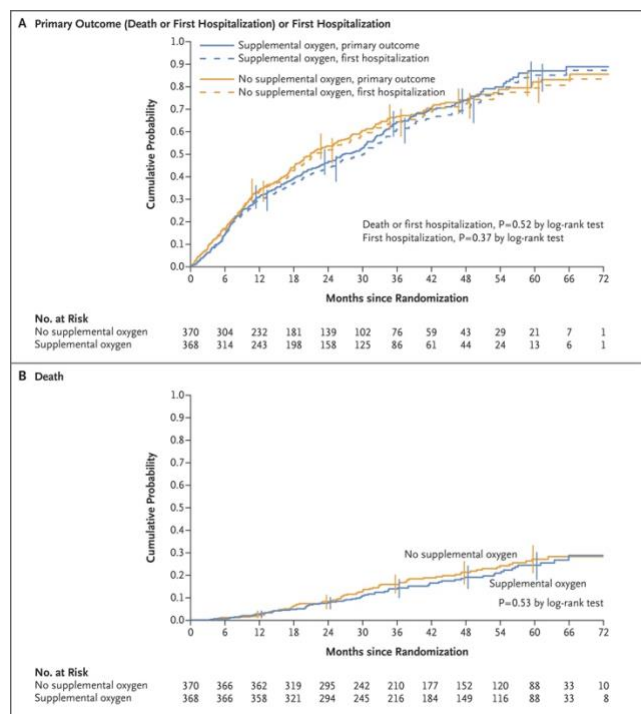
* CO₂ denotes carbon dioxide, F_{IO₂} the fraction of inspired oxygen, FRC functional residual capacity, and PEEP the positive end-expiratory pressure.

Inpatients have several options, determined by hypoxemia severity and specific pathology, as summarized below and on [this video](#).

[Devices Used in Supplemental Oxygen Therapy.](#)

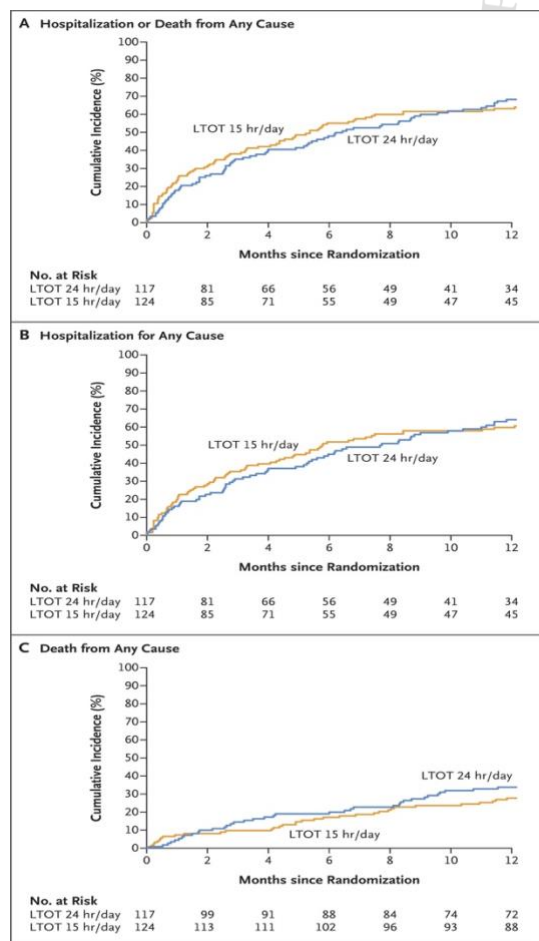


Over the past few years, we have learned that once again, more is not best and transient hypoxemia is well tolerated without long-term consequences.



A multicenter U.S. trial included 738 patients with chronic obstructive pulmonary disease (COPD) and mild-to-moderate resting hypoxemia (SpO₂ 89%–93%) or moderate exertional hypoxemia (SpO₂ <90% for ≥10 seconds, but ≥80% for ≥5 minutes during a 6-minute walk test). Patients were randomized to supplemental oxygen or no supplemental oxygen. There were no differences between groups in mortality, hospitalization rates, quality of life, or lung function (*N Engl J Med* 2016; 375:1617).

Furthermore, among patients with severe hypoxemia, this study from the University of Lund in Sweden, demonstrated that long-term oxygen therapy used for 24 hours per day did not result in a lower risk of hospitalization or death within 1 year than therapy for 15 hours per day. The study randomized 241 patients receive long-term oxygen therapy for 24 hours per day (117 patients) or 15 hours per day (124 patients). At 12 months the groups did not differ substantially in the incidence of hospitalization for any cause, death from any cause, or adverse events.



In conclusion, O₂ supplementation can be helpful, but more is not best, and its use should be supervised by clinicians familiar with indications, dosage, interface and the nuances of any treatment, as high oxygen tension can accelerate the production of reactive oxygen species, leading to cellular injury. It can also displace nitrogen in alveoli, leading to increased physiological “shunting” and hypoxemia. In some patients with COPD, oxygen therapy can cause retention of carbon dioxide and CO₂ “narcosis”.



Preventive Health Care.

As you know, Preventive Health Care has multiple dimensions, from healthy exercise and dietary habits to proper and timely screening tests. We must prioritize the interventions with the highest benefits and the lowest risks. If your doctor orders a CT scan or imaging that is not warranted based on your individualized risk, it may find abnormalities that are not consequential and may lead to additional testing and the ill-defined “cost” of undue anxiety and loss of “happiness” that we all pursue, from sunrise to sunset and beyond. Thus, as we have repeated over the past 7 + years in our “Bits”, MORE is NOT BEST or BETTER!

Recommendations depend on age, sex, familial, occupational and personal histories. Sometimes, the best we can do or should do is to take a deep breath, observe our surroundings and be mindful of the good fortune to be awake, aware, alive and admiring our visible and invisible universes which always provides inner peace and joy!

You should remember that a (very small) portion of your taxes, funds preventive programs. Our CDC (Centers for Diseases Control and **Prevention**) dedicates 10% of its budget to Prevention and by some estimates, less than 2% (and our new “administration” is bent on decimating funding for research and preventive health). The US Preventive Services Task Force is funded through the Department of Health and Human Services (HHS). They publish evidence-based guidelines to help the public and physicians navigate the doubts and uncertainties posed by evolving technology, changing epidemiology and demographics.

Thanks to cumulative preventive efforts, longevity has doubled over the past century.

Life expectancy in 1900 was 47 years. It declined after the 1918 Flu Pandemic and has steadily risen since, to reach 82 years in 2016 (before receding to 79 in the US, due to the Opioid Epidemic and COVID-19 Pandemic). By 2030, 20% of the world’s population will be over 60 years of age. How did Humanity gave itself an extra life? Through numerous, progressive scientific achievements and activism, as summarized by The Times.

How can we achieve adequate PREVENTION?

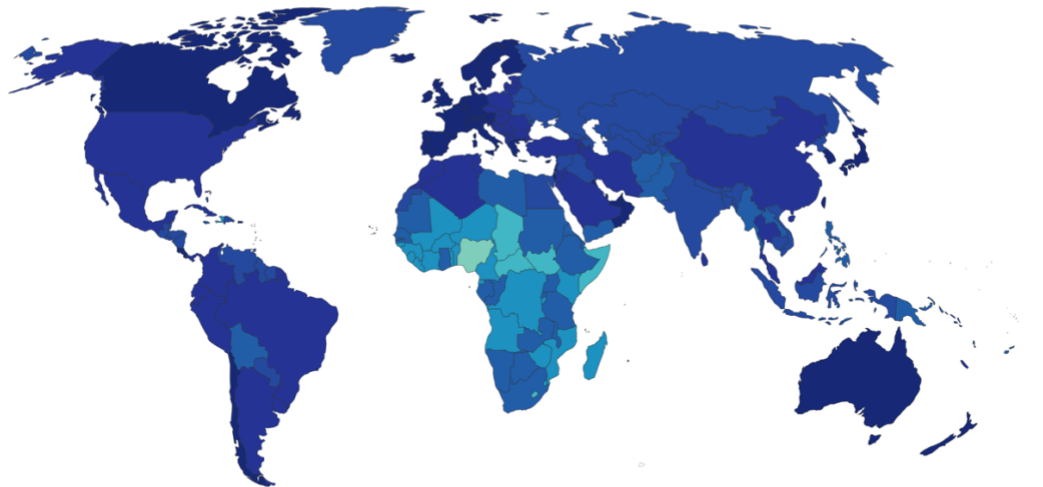
There lays the value of your “Periodic check-up”. Annual examinations and reviews may be beneficial for individuals older than 50 and every 3 years for those younger. Most important, is the dialogue that ensues at those encounters, providing an opportunity to discuss the inherent limitations of screening tests and the concepts of negative and positive predictive value. The probability of benefit from screening for disease may be overshadowed by the possibility of real harm from “overdiagnosis”. It is important to have a candid dialogue with your physician to set priorities and consider risks and benefits.



Life expectancy, 2023

The period life expectancy¹ at birth, in a given year.

Our World
in Data



Data source: Human Mortality Database (2025); UN, World Population Prospects (2024)

OurWorldinData.org/life-expectancy | CC BY

1. **Period life expectancy** Period life expectancy is a metric that summarizes death rates across all age groups in one particular year. For a given year, it represents the average lifespan for a hypothetical group of people, if they experienced the same age-specific death rates throughout their whole lives as the age-specific death rates seen in that particular year.

Learn more in our articles:

- [Life expectancy – what does this actually mean?](#)
- [Period versus cohort measures: what's the difference?](#)

Cardiovascular Disease Prevention:

Limiting or managing the modifiable cardiac risk factors:

- **Diet** ([see Healthy Diet in Adults](#))
- **Tobacco** ([see Tobacco Cessation](#))
- **Hypertension** ([see Screening for HTN](#)). Annually > 40 years and every 3-5 yrs. Earlier in those with risk factors.
- Limit salt intake to less than 2 grams daily. Almost impossible to accomplish if you eat commercially processed foods.
- **Dislipidemia – Cholesterol** ([see Cholesterol management](#)). Screen all adults at 18. Then, after 35 for men and after 45 for women.
- **Coronary Calcium Score evaluation** in select patients.
- **Obesity** ([see Weight management](#)). Strive to maintain a normal weight and BMI < 25.
- **Physical Activity**. The more, the merrier!
- **Diabetes Mellitus**. Keep your hemoglobin A1c below 7%.



- Aspirin for Primary Prevention. Only for those with significant CV risk.
- Use a Cardiovascular risk calculator such as the PCE (Pooled Cohort Equations).
- Non-traditional measures: Coronary artery calcium testing, C-Reactive Protein, Carotid intima thickening, Homocysteine.
- Assess individual risk and consider only in those with high risk.

Cancer Prevention

Keep in mind that healthy habits and behavior do not lead to “immortality”. They may extend cancer-free survival by 8.5 years in women and 6.5 years in men.

The 2025 American Cancer Society guideline on diet and physical activity for cancer prevention recommends a healthy diet, defined as having a variety of vegetables (dark green, red and orange, fiber-rich legumes and others) fruits, and whole grains and limiting or not including processed meats, sugar-sweetened beverages, or highly processed foods and refined grain products. Fiber reduces colorectal cancer, heart disease and diabetes.

In summary: KEEP IT SIMPLE!

- Avoid tobacco, smoke and vapors of ANY kind! They cannot possibly be good for you, despite the claims of the Cannabis Industry and so many other loud “voices”.
- Remain physically active. It will boost your immunity and the “natural killer” cells in charge of cancer cell “surveillance and clean up”.
- Maintain a healthy weight. The incidence of colon, endometrial, pancreatic and postmenopausal breast cancer rises with weight and that risk can be ameliorated by weight loss.
- Eat your nuts, fruits, vegetables, legumes, whole grain bread and olive oil.
- Limit red meats and all smoked meals.
- Eliminate trans-fats.
- Limit alcohol consumption (None is best. If you drink, < 1-2 drinks/day).
- HPV vaccination (up to age 45).
- Hepatitis B vaccination.
- Avoid excess sun-light.
- Do not take supplemental Omega 3 or 6 Free Fatty Acids.
- Enjoy your cup of coffee daily.
- Supplemental Vitamins and micronutrients have not been shown to be beneficial.
- Remember that 17-20% of cancers worldwide are caused by “infections” (Hepatitis B, Hepatitis C, HIV, HPV, Epstein-Barr, HTLV-1, Helicobacter Piloni, Schistosomiasis, Liver Flukes, etc).

Ovarian Cancer

- Screening is only recommended for individuals with a family history.



Breast Cancer

- Average risk, start digital mammography at 50 every 1-2 yrs.
- High risk – Family history, start mammography at age 40 and include genetic evaluation/counseling. Remember that mammography is inaccurate, associated with a significant risk of “overdiagnosis” and false positive results
- Contrast-enhanced digital mammography has higher accuracy.
- Continue testing every 1-2 yrs until life expectancy is < 10 yrs.
- Use a validated risk assessment tool such as the Gail or Tyrer-Cuzick Models to evaluate breast cancer risk.

Cervical Cancer

- Age 21-29: Pap smear every 3 yrs or every 5 yrs with HPV testing.
- Age 30-65: Pap smear and HPV testing every 5 yrs or pap test every 3 yrs.
- Age >65: No further testing required.
- VACCINATE with HPV series (3 shots) all males and females ages 11-26. Vaccines is approved through age 45, but likely beneficial (to reduce ano-genital and head-neck cancers) beyond although not well studied and not likely to be paid by insurance.

Lung Cancer

- Reduce diesel exhaust and particulate matter exposure.
- Reduce chemical exposures.
- Reduce radon, asbestos and arsenic exposure.
- Annual low-dose CT in adults 50-80 yo with > 30 pack-year smoking history and smoke or quit within the past 15 yrs.

Prostate Cancer

- Medications to reduce the incidence of prostate cancer are not indicated. (Finasteride and Dutasteride reduce “low-grade” prostate cancer incidence, but increase more aggressive types.
- For men 55-69 yrs, periodic prostate-specific-antigen (PSA) based screening should be individualized.
- For men > 70 yrs, PSA-based screening is discouraged.

Colorectal Cancer

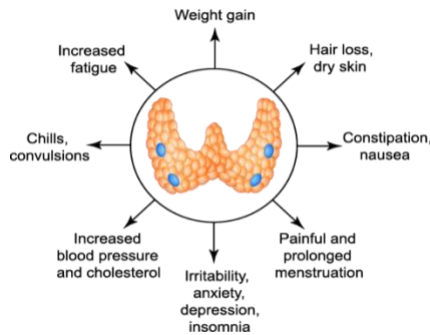
- No risk factors: Start colonoscopy at age 45 and every 7-10 yrs if normal.
- Family history: Frequency depends on individual risk and history
- Cologuard (DNA stool test) may help decrease frequency of colonoscopy.



Melanoma

- Limit sun exposure
- Apply generous sunscreen SPF > 30, 15 minutes before going out and reapply every 2 hrs. Caution near water, snow, sand.

Hypothyroidism



- Screen periodically with TSH – Blood test.
- Treat those with symptoms
- Monitor those without symptoms with TSH and anti-thyroid peroxidase within 2-3 months.

Sexually Transmitted Diseases

- Education on preventive strategies.
- Barrier methods
- Vaccination for those vaccine-preventable STD's
- Diagnosis, treatment, counseling and follow up of those infected.
- Pre-exposure prophylaxis for some conditions (HIV, Herpes).

Osteoporosis

- Promote achievement of high peak bone density in youth.
- Vitamin D3 supplementation in women 1000-2000 IU daily.
- Weight-bearing exercises and adequate diet. Limit carbonated beverages.
- Consider use of preventive strategies with your physician, such as estrogen / hormone replacement, ibandronate, zoledronate, raloxifene, etc.

Vascular Disease

- Men aged 65-75 who ever smoked, should have an aortic ultrasound once.
- No indication for carotid artery disease screening unless additional risk factors present.

Immunizations

- The most important and time-sanctioned strategy since the days of Edward Jenner at the turn of the XVIII century and Louis Pasteur in the late XIX (despite the ongoing assault by Trump and his HHS buffoon, RFK, Jr).



- Special situations may require a discussion with your doctor.
- Most adults should follow the recommendations summarized in this table from the CDC and the Adult Committee in Immunization Practices (ACIP).

Table 1 Recommended Adult Immunization Schedule by Age Group, United States, 2025

Vaccine	19–26 years	27–49 years	50–64 years	≥65 years	
COVID–19	1 or more doses of 2025–2026 vaccine (See Notes)			2 or more doses of 2025–2026 vaccine (See Notes)	
Influenza inactivated (IIV3, ccIIV3) Influenza recombinant (RIV3)	1 dose annually			1 dose annually (HIV–IIV3, RIV3, or aIIV3 preferred)	
Influenza inactivated (aIIV3; HD–IIV3) Influenza recombinant (RIV3)	Solid organ transplant (See Notes)				
Influenza live, attenuated (LAIV3)	1 dose annually				
Respiratory syncytial virus (RSV)	Seasonal administration during pregnancy (See Notes)			60–74 years (See Notes)	≥75 years
Tetanus, diphtheria, pertussis (Tdap or Td)	1 dose Tdap each pregnancy; 1 dose Td/Tdap for wound management (See Notes)				
	1 dose Tdap, then Td or Tdap booster every 10 years				
Measles, mumps, rubella (MMR)	1 or 2 doses depending on indication (if born in 1957 or later)			For health care personnel (See Notes)	
Varicella (VAR)	2 doses (if born in 1980 or later)		2 doses		
Zoster recombinant (RZV)	2 doses for immunocompromising conditions (See Notes)		2 doses		
Human papillomavirus (HPV)	2 or 3 doses depending on age at initial vaccination or condition	27–45 years			
Pneumococcal (PCV15, PCV20, PCV21, PPSV23)			See Notes		
			See Notes		
Hepatitis A (HepA)	2, 3, or 4 doses depending on vaccine				
Hepatitis B (HepB)	2, 3, or 4 doses depending on vaccine or condition				
Meningococcal A, C, W, Y (MenACWY)	1 or 2 doses depending on indication (See Notes for booster recommendations)				
Meningococcal B (MenB)	19–23 years	2 or 3 doses depending on vaccine and indication (See Notes for booster recommendations)			
Haemophilus influenzae type b (Hib)	1 or 3 doses depending on indication				
Mpox	2 doses				
Inactivated poliovirus (IPV)	Complete 3-dose series if incompletely vaccinated. Self-report of previous doses acceptable (See Notes)				
	Recommended vaccination for adults who meet age requirement, lack documentation of vaccination, or lack evidence of immunity	Recommended vaccination for adults with an additional risk factor or another indication	Vaccination is based on shared clinical decision-making	No Guidance/ Not Applicable	

As you well know, embracing healthy choices to improve quality of life, health span, and possibly lifespan is our responsibility.

1. Eat the right way and embrace a Mediterranean diet.
2. Avoid concentrated sweets and all sugary drinks (anything that tastes sweet is probably not good for you, as even artificial edulcorants are known to trigger insulin release and precipitate a negative metabolic response).
3. Accept intermittent fasting as much as you can tolerate, trying to approximate 14 without much caloric intake (breakfasting with a few almonds or nuts and getting most of your nutrition at dinner time gets you close to the goal).
4. Exercise daily. Both aerobic/cardiovascular and resistance exercises help.



5. Get “uncomfortable” by exercising and fasting daily.
6. Meditate.
7. Foster meaningful relationships with family, friends, and strangers.
8. And LASTLY, several molecules have been associated with increased longevity and stress resistance in model organisms such as yeasts, nematodes, flies, mice, and even humans! Some compounds are currently in preclinical and clinical trials by the National Institute on Aging's Interventions Testing Program, as we discussed in our last Medical Bits.

DEBUNKING MEDICAL MYTHS: Q & A

Do I need an annual pneumonia vaccine? Myth! The latest evidence supports the use of Prevnar (PCV20 or PCV21) after age 65, as optimal choices for adult pneumococcal vaccination, with strong immunogenicity and safety. Pneumovax 23 is no longer recommended. There are special circumstances where it may be indicated earlier. Repeat dosing is not necessary.

Fiber and Health: Myth! The mantra that all fiber, whether naturally occurring or artificially added, is beneficial has been debunked. Whole foods containing natural fiber are more beneficial than processed foods with added fiber.

Antibiotics for Upper Respiratory Infections: Myth! It was common practice to prescribe antibiotics for upper respiratory infections, despite most being viral in origin. Overuse of antibiotics has contributed to antibiotic resistance, prompting new guidelines with more restrictive and judicious use.

Repeat: Should we all take medical supplements? Myth! As we discussed in the past, almost 60% of Americans consumes vitamins, minerals, botanicals, live microorganisms, probiotics and dietary supplements (spending about 55 billion in 2020) to prevent or treat (mostly) imaginary ailments and “conditions” (infections of all sorts, memory loss, lack of energy, heart disease, aging, degenerative bone disease, etc.). You may want to read the Dietary Supplement Listing Act of 2022 and will realize why it's always best to “keep it simple” and if not proven, do not use them.

The [FDA reports](#) that there are more than 95,000 supplements on the market today and the vast majority have not been tested for safety or effectiveness.

What are the exceptions where supplements may be beneficial?

1. Laboratory testing has demonstrated a deficiency of specific vitamins or minerals (Only to be tested in particular situations).
2. Vegan individuals are frequently deficient in Vitamin B12, as animal sources are rich in B12. Also, patients who had a gastric or terminal ileal resection.
3. Individuals with Inflammatory Bowel Disease (UC or CD) or GI conditions with associated malabsorption syndromes may need fat-soluble vitamins (A-D-E-K). All Cystic Fibrosis patients. Most patients with prior Bariatric Surgery.
4. Pregnant women need to add Folic Acid and Prenatal Vitamins with iron.
5. [Multivitamins](#) might slow cognitive decline, but more research is necessary.
6. [AREDS](#) supplements (Vitamins C, E, Copper, Lutein and Zeaxanthin) may slow vision loss in those with age-related macular degeneration.



There is no magic pill! Increasing longevity takes hard daily work!

If you have 10 minutes, enjoy this time-lapse of the Entire Universe.

If you have 6 more minutes, the massive expanse of our Universe and the magnificent insignificance of humanity will delight you.

Reviewing the relative sizes of our Universe will remind you of our improbable and yet amazing existence.

Remember that NOTHING LASTS FOREVER, by investing 4 minutes in this wonder narrated by Carl Sagan.

I promise that these two videos will make you smile!

7 Minutes will improve your fitness right now with the Scientific 7- Minute Workout. Get the app

11 more minutes will get you in shape!

For core strength, try this 9-minute routine!

These are 35 SIMPLE HEALTH TIPS.

Can you pass this 10-second BALANCE TEST?

Remember that every woman benefits from Pelvic Floor exercises and should be part of their routine.

START EXPLORING MINDFULNESS!

It lowers your BP, stress, raises pain threshold and well-being.

RESOURCES ON THE WEB.

Embrace fitness! Exercise is candy to our muscles and they need daily intermittent activity to remain metabolically healthy!

You know that the only certainty in life, is death and the only fountains of youth proven by science and experience are love, exercise, laughter, humor and a positive attitude!



OFFICE NEWS AND REMINDERS

- Premier Internal and Pulmonary Medicine of Chevy Chase continues to provide Concierge Internal Medicine and Consultative Pulmonary Medicine at our new office 5454 Wisconsin Ave 1710, Chevy Chase, 20815
- Parking access is at the back of the building and free Valet Parking available. Ask for validation at the office.
- Irene Rieder, our wonderful Nurse Practitioner – joined us on Feb 1st and is an integral part of the practice! She can be reached at [Irene Rieder](mailto:Irene.Rieder@premier-medicine.com) or Irene.Burgos@premier-medicine.com.
- Lexi Manning joined last month, replacing Emily Swearingen, who returned to Boston.
- If you need medication refills or new orders, please, email my assistants:
 - Lexi Manning: Alexandra.manning@premier-medicine.com
 - Olivia Dragovits: ODragovits@premier-medicine.com
- If you need an appointment, email our Front Desk Supervisor, Ashley Alvarez at AAlvarez@premier-medicine.com or by calling our office at 301-637-5555.
- If you have any insurance or billing questions, email my office manager, Brenda Perez at BPerez@premier-medicine.com
- If you need to communicate with me, please, use email at cpicone@premier-medicine.com but if **urgent**, I welcome your call on my cell phone at 301-943-5189.
- If you are hospitalized, please remind the admitting physician to notify me.
- Please, use email and abstain from using SMS or text messaging as I am on my desktop throughout the day and email allows for documentation and delegation of tasks to my staff.
- **I will be away with my family the week of Thanksgivings.** My Nurse Practitioner and my colleagues, Drs. Vassallo, Talesnick, Fishman and Shapiro will cover the office in my absence, but never too far from email or phone, as you well know.



Have a wonderful and healthy Holiday Season!