

HIV/AIDS

Disease Report

REPORT CATEGORIES —



IMMUNITY &
INFECTIONS



SEXUAL HEALTH

Sample Client

Report date: 15 January 2026

Table of Contents

03 How this works

- 04 Impact
- 05 Evidence
- 06 Some things to keep in mind

07 Introduction

08 Your genetics

09 Your recommendations

32 Next Steps

- 32 Your Lab Results

DISCLAIMER

This report does not diagnose this or any other health conditions. Please talk to a healthcare professional if this condition runs in your family, you think you might have this condition, or you have any concerns about your results.

Personal information

NAME

Sample Client

SEX AT BIRTH

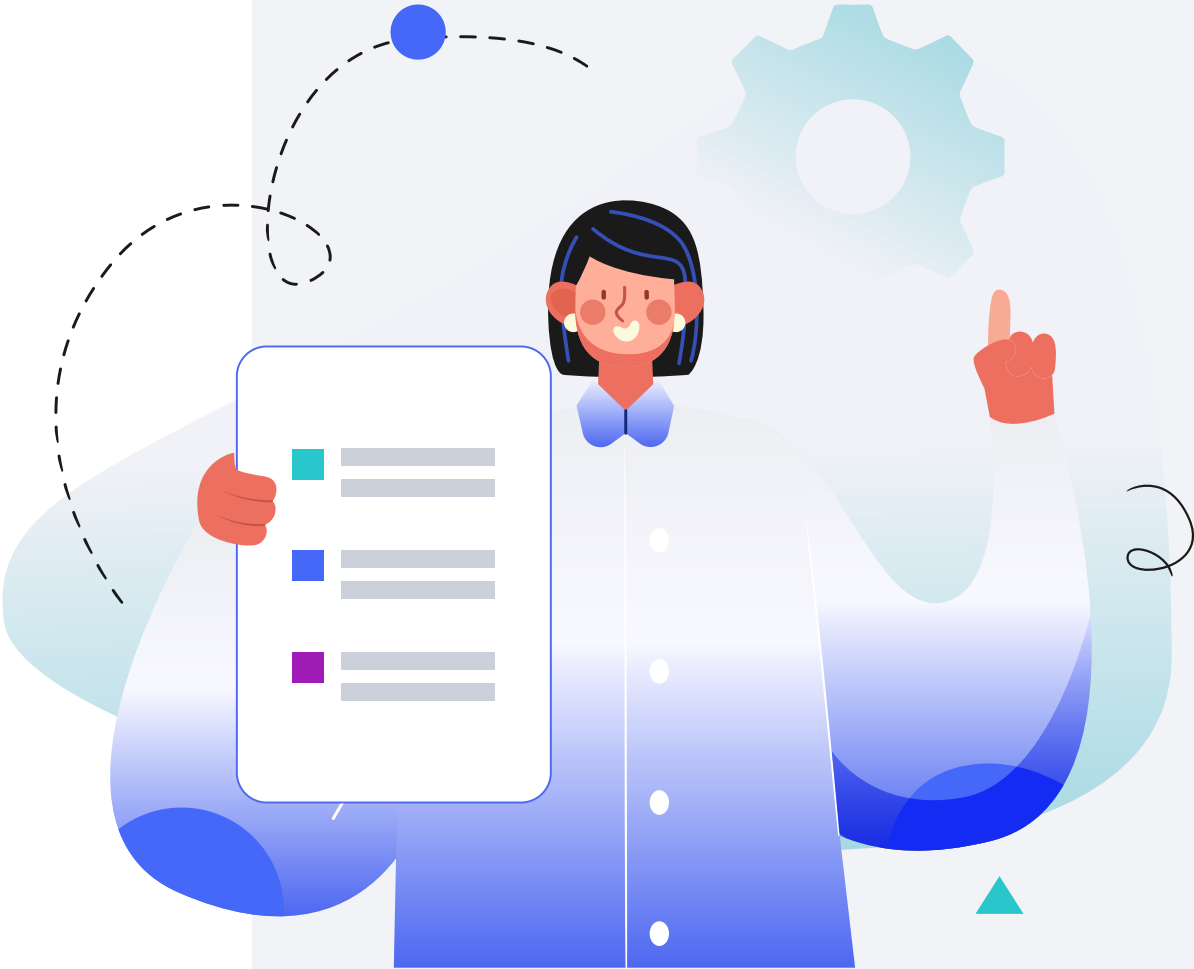
Male

HEIGHT

5ft 5" 165cm

WEIGHT

137lb 62kg



How this works

Our Wellness Reports analyze how your DNA influences your health.
We then use this analysis to give you personalized risk estimates and recommendations.



Similarly, our Trait Reports look at how your DNA influences your traits.



Your DNA is like an instruction manual — it contains a lot of information.
You can think of it as a blueprint for your body.

Genetic variants are parts of DNA that differ from person to person. Some can make you more vulnerable to certain health issues, while others may influence traits such as eye color.



We use artificial intelligence and machine learning to analyze all this information.
We then summarize your results as a risk score or display it on a gauge.

In total, we analyze up to 83 million genetic variants.

When we give a risk score, the risk icon tells you if you are at a higher or lower risk compared to other people:



Genotype color info:

AA

You don't have any risk alleles

AA

You have 1 risk allele

AA

You have 2 risk alleles

Your risk is also displayed as a percentile. This will tell you how your risks compare to our sample population. The lower your percentile number, the lower your risk. The "50th percentile" would be an average risk.

Similarly, the gauge tells you your relative risk score compared to our sample population, or it indicates a specific trait or haplotype you are more likely to have based on your genetic variants.

When applicable, we also list top evidence-based recommendations that may help lower your risk. The focus is on recommendations that may be of benefit to you, based on your genetics.

Our recommendations come in four categories: lifestyle, diet, supplements and drugs.
The following icons tell you which category a recommendation falls into:



Our team of scientists also ranks each recommendation.
We rank based on impact and the strength of evidence in the medical literature.

Impact shows how strongly a recommendation will affect your health in a certain area.
Evidence is how much scientific support there is for the recommendation. Rankings are from 1 to 5 (low to high):



Impact

Impact scores range from 1-5. These scores reflect how much of an effect each recommendation can have. An impact score of 5 predicts the biggest effect.

When a recommendation affects something we can measure, we use those measurements to assign the impact score. For example, a recommendation that decreases cholesterol by 20% will have a higher impact score than one that decreases it by 5%.

Some recommendations affect things that we cannot directly measure, like stress or mood. For these, the impact score is based on how well they work relative to other recommendations and standard treatments. The best ones get the highest scores.

If there is a lot of research that shows a recommendation works especially well for your genotype, the impact score gets increased.

Recommendation Evidence

- 5 / 5
- Recommendations that are considered effective and generally recommended by experts and medical bodies.
-
- 4 / 5
- Recommendations that are considered likely effective and that have multiple independent meta-analyses and a great many studies supporting them.
-
- 3 / 5
- Recommendations that are considered possibly effective and have many studies supporting them
-
- 2 / 5
- Recommendations that have insufficient evidence, with two or several clinical trials supporting them, or many studies but with ambiguous results.
-
- 1 / 5
- Recommendations that have insufficient evidence, with a single clinical trial, or with many studies most of which didn't find support for the recommendation.
-
- 0 / 5
- No evidence in humans.

Genotype-specific Evidence

- High-quality
- Direct evidence that a recommendation helps more in people with your gene variant (many clinical trials, a few large clinical trials, or a meta-analysis).
- Medium-quality
- Direct evidence that a recommendation helps more in people with your gene variant (a few clinical trials or one large clinical trial).
- Low-quality
- Direct evidence that a recommendation helps more in people with your gene variant (a single clinical trial or more trials with inconsistent results).
- Indirect
- A recommendation may help more in people with your gene variant because it targets a specific gene or protein affected by your variant (e.g., MTHFR, dopamine).
- In theory
- A recommendation may help more in people with your gene variant because it targets a specific mechanism affected by your variant (e.g., inflammation, oxidative stress).

Some things to keep in mind:

- Genetics doesn’t play a considerable role in a condition or a trait.
- There is not enough research available to estimate a genetic predisposition.
- There are technical limitations to estimating or presenting a genetic predisposition.
- The topic is sensitive, and a genetic predisposition should only be estimated and presented by a healthcare professional.

Introduction

HIV, or Human Immunodeficiency Virus, is a virus that attacks the body’s immune system, specifically the CD4 cells (T cells), which help the immune system fight off infections. If left untreated, HIV reduces the number of these cells in the body, making the person more likely to get infections or infection-related cancers. Over time, HIV can destroy so many of these cells that the body can't fight off infections and disease, leading to the most severe phase of the HIV infection: Acquired Immunodeficiency Syndrome (AIDS).

HIV symptoms vary depending on the stage of the infection [\[R\]](#):

- Acute HIV infection: The first stage, also known as primary HIV infection, is the period right after contraction of HIV. Symptoms resemble those of the flu or other viral illnesses and may include fever, swollen glands, sore throat, rash, muscle and joint aches, headache, and diarrhea.
- Clinical latency stage: In this stage, HIV is still active but reproduces at very low levels. People may not have any symptoms or only mild ones. Without treatment, this stage can last a decade or longer, but some people may progress through this phase faster.
- AIDS: The most severe phase of HIV infection, where the immune system is badly damaged and becomes vulnerable to opportunistic infections. Symptoms of AIDS can include rapid weight loss, recurring fever or profuse night sweats, extreme and unexplained tiredness, prolonged swelling of the lymph glands, and persistent diarrhea.

Risk Factors and Management

HIV is transmitted through bodily fluids that include [\[R\]](#):

- Blood
- Semen
- Vaginal and rectal fluids
- Breast milk

The virus does not spread through air, water, or casual contact such as shaking hands or sharing dishes. Common modes of transmission are:

- Unprotected sexual contact with someone who has HIV.
- Sharing needles, syringes, or other drug injection equipment.
- From mother to child during pregnancy, childbirth, or breastfeeding.
- Receiving blood transfusions, blood products, or organ/tissue transplants that are contaminated with HIV (very rare in countries where blood is tested for HIV antibodies).

Preventive measures include [\[R\]](#):

- Using condoms during sexual activity.
- Pre-exposure prophylaxis (PrEP): A daily medication for people at very high risk of HIV infection.
- Post-exposure prophylaxis (PEP): A medication taken after potential exposure to HIV, to prevent the virus from taking hold.
- Never sharing needles.
- Testing regularly for HIV, especially if you have more than one sexual partner or other risk factors.

There is no cure for HIV, but it can be controlled with proper medical care, known as antiretroviral therapy (ART). ART involves taking a combination of HIV medicines every day. Although ART cannot cure HIV, it helps people with HIV live longer, healthier lives and reduces the risk of HIV transmission [\[R\]](#).



TYPICAL LIKELIHOOD

Typical likelihood of HIV infections based on 19,381 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
NTNG1	rs4118325	GG
PTPRA	rs6076463	CT
TGFBRAP1	rs1020064	TG
SOX5	rs1522232	CT
MGST3	rs10800098	GG
MPDZ	rs1360517	CC
PABPC1	rs3108919	TT
NFIB	rs1556032	TT

The number of "risk" variants in this table doesn't necessarily reflect your overall result.

Your Recommendations

Your recommendations are prioritized according to the likelihood of it having an impact for you based on your genetics, along with the amount of scientific evidence supporting the recommendation.

You’ll likely find common healthy recommendations at the top of the list because they are often the most impactful and most researched.

		DOSAGE			DOSAGE
1	Aerobic Exercise (Cardio)	1 hour	2	Spirulina	500 mg
3	Zinc	15 mg	4	Propolis	
5	Uridine	150 mg	6	Folinic Acid	
7	N-acetylcysteine (NAC)	1200 mg	8	Moringa	400 mg
9	Transcendental Meditation	20 minutes	10	Whey Protein	25 g
11	Keto Diet		12	Alpha-Lipoic Acid	600 mg
13	Avoid Aflatoxins		14	Neem	300 mg
15	Autogenic Training	10 minutes	16	MCT Oil	
17	Avoid Mycotoxin		18	Alanylglutamine	1 g
19	Selenium Supplements	50 mcg	20	Progressive Muscle Relaxation	10 minutes
21	L-Carnitine	1 g	22	Andrographis	300 mg
23	Avoid Illicit Drugs		24	Safer Sex Practices	
25	Good Oral Hygiene	2 minutes			

1



Aerobic Exercise (Cardio)

IMPACT3 / 5

EVIDENCE3 / 5

How to implement

Engage in at least 150 minutes of moderate-intensity aerobic exercise or 75 minutes of vigorous-intensity activity each week. Distribute this time over at least 3 days per week, avoiding consecutive days of vigorous exercise to allow for recovery.

TYPICAL STARTING DOSE

1 hour

Description

Engaging in regular aerobic exercise, such as running, swimming, or cycling, offers numerous health benefits, including improved cardiovascular fitness, weight management, and mood enhancement. It supports overall physical and mental well-being while reducing the risk of chronic diseases.

Cardio, short for cardiovascular exercise, is any type of physical activity that temporarily increases your heart rate. Examples include **running, cycling, swimming, and brisk walking**.

Regular cardio exercise has many benefits for your overall health. It can help lower your risk of heart disease and diabetes, support weight loss, and improve your mood and energy levels. To get the most out of cardio, try to do it for at **least 30 minutes, 3-5 times a week**.

Interval training is a type of cardio that combines periods of high-intensity training with brief rest periods.

How it helps

Research studies on exercise interventions for individuals living with HIV indicate that combined aerobic and resistance exercise, as well as aerobic exercise, have positive effects on strength, quality of life, and cardiovascular health. These interventions also show potential in improving CD4 cell counts, although more research is needed to establish optimal exercise parameters. Additionally, supervised aerobic exercise appears to benefit lung function and reduce depression symptoms in HIV-positive individuals. While aerobic exercise can enhance psychological well-being and cardiopulmonary fitness, its effects on CD4 counts and viral load remain inconclusive due to small sample sizes and dropouts. Further investigation is required to confirm these findings and determine the most effective exercise strategies for this population [R, R, R, R, R, R, R, R, R, R, R, R].

2



Spirulina

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Take 1-8 g of spirulina supplements daily, preferably with a meal to enhance absorption.

TYPICAL STARTING DOSE

500 mg

Description

Spirulina is a blue-green algae. It is rich in nutrients like protein, vitamins, and minerals, particularly vitamin B12 and iron, and is a source of antioxidants, chlorophyll, and phycocyanin. It can be found in powdered or tablet form as a supplement, and is often used to boost energy, support the immune system, and enhance overall nutrition. Additionally, spirulina.

[Spirulina](#) is a supplement made from blue-green algae that grows in fresh and marine water [\[R, R\]](#).

Dried spirulina is up to 70% protein. It’s also rich in vitamins, antioxidants, and healthy fats. This makes it a great source of nutrition for both people and livestock [\[R, R, R\]](#).

People use spirulina supplements to reduce [\[R, R\]](#):

- Cholesterol
- Blood pressure
- Blood sugar

How it helps

In a [placebo-controlled trial of 39 male soccer players](#), supplementation with spirulina (3 g/day) for 8 weeks **attenuated the reduced monocyte and leukocyte ratio caused by intense, long-duration exercise** [\[R\]](#).

In a [placebo-controlled trial of 19 professional rowers](#), supplementation with spirulina (1500 mg/day) for 6 weeks **prevented the post-exercise increase in Treg count and post-recovery decrease in Tδy cell count, while reducing Treg/CTL prior to and after the exercise** [\[R\]](#).

Supplementation with spirulina (400 mg/day) for 7 days **enhanced NK activity** in a [placebo-controlled trial of 11 healthy volunteers](#) [\[R\]](#).

In a [placebo-controlled trial of 169 HIV patients](#), supplementation with spirulina (10 g/day) for 12 months **increased CD4 count and decreased viral loads** [\[R\]](#).

In a [placebo-controlled trial of 60 patients with chronic hepatitis B](#), supplementation with spirulina (3-6 g/day) for 6 months **decreased HBsAg, TNF-alpha, IL-6, hepatic fibrosis, and steatosis, while increasing IFN-gamma** [\[R\]](#).

3



Zinc

IMPACT

2 / 5

EVIDENCE

1 / 5

How to implement

Take a 15 mg zinc supplement daily, ideally with a meal to enhance absorption.

TYPICAL STARTING DOSE

15 mg

Description

Zinc is an essential mineral found in various foods, including meat, dairy, and nuts. It is crucial for immune function, wound healing, DNA synthesis, and maintaining healthy skin and nails. Zinc supplements are sometimes used to support immune health and manage zinc deficiencies.

[Zinc](#) is an essential mineral. Your body needs it to [\[R\]](#), [\[R\]](#):

- Defend against disease
- Protect DNA from damage
- Heal wounds
- Control blood sugar

Some of the best sources of zinc include **shellfish, pork, beef, and beans**. It is also available as a supplement [\[R\]](#).

Adults should get **8-11 mg of zinc** per day [\[R\]](#).

How it helps

The effect of zinc supplementation in individuals with HIV/AIDS has been explored in various clinical trials. Here are some key findings:

- Freiberg et al. (2020) conducted a randomized clinical trial to determine if zinc supplementation reduces mortality, cardiovascular disease risk, and slows HIV disease progression among people with heavy alcohol use living with HIV/AIDS. The study concluded that zinc supplementation did not decrease mortality risk or impact other outcomes at 18 months [\[R\]](#).
- Diouf et al. (2015) explored the effect of consuming 100 g of ready-to-use therapeutic food daily as a supplement on the body composition, anemia, and zinc status of hospitalized people living with HIV/AIDS in Senegal. The study found that supplementation improved muscle mass and anemia but did not impact zinc status [\[R\]](#).
- Hadadi et al. (2019) assessed the effect of selenium and zinc supplementation on CD4 cell count and the risk of developing opportunistic infections in HIV(+) patients. The study found that zinc supplementation was associated with reduced risk of opportunistic infections, but no significant improvement in CD4 count was observed [\[R\]](#).
- Baum et al. (2010) conducted a randomized controlled trial involving 231 HIV-infected adults with low plasma zinc levels. The study found that long-term (18-month) zinc supplementation at nutritional levels delayed immunological failure and decreased diarrhea, suggesting zinc supplementation as an adjunct therapy for HIV-infected adult cohorts [\[R\]](#).
- A study explored zinc supplementation's effect on immuno-virological discordance (IVD) in 80 HIV patients. Baseline plasma zinc levels were similar, and zinc supplementation didn't significantly impact CD4 levels in IVD patients [\[R\]](#).
- A study investigated zinc supplementation's potential benefits for 254 HIV-positive individuals with alcohol use. It assessed mortality risk, HIV progression, cardiovascular risk, and inflammation. Zinc supplementation offered a low-cost intervention for addressing alcohol-related issues in this population [\[R\]](#).

In conclusion, zinc supplementation in HIV/AIDS patients shows mixed results, with some studies indicating benefits in reducing the risk of opportunistic infections and improving muscle mass and anemia, while others find no significant impact on mortality risk or CD4 counts. The role of zinc supplementation as an adjunct therapy in HIV/AIDS requires further investigation to establish its efficacy conclusively.

4



Propolis

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take a propolis supplement in capsule or tablet form, typically ranging from 500mg to 1000mg per day. It's best to follow the dosage instructions on the product label or a healthcare provider's advice. Propolis can be taken continuously, but consult a healthcare provider for specific durations especially if it exceeds three months.

Description

Propolis is a resinous substance collected by bees from tree buds and used to seal their hives. It has been traditionally used in natural medicine for its potential antimicrobial properties and as a source of antioxidants that may support oral and immune health.

Propolis is a waxy compound, also known as “bee glue.” Honeybees make it from plants and use it to build, repair, and protect their hives [\[R\]](#).

People use propolis to potentially help [\[R\]](#):

- Reduce the appearance of acne
- Maintain oral health
- Support the immune system

How it helps

In a study involving people living with HIV/AIDS under antiretroviral therapy, daily propolis intake for 3 months correlated with improved immune response, reduced inflammation, increased Foxp3 expression, and enhanced lymphocyte proliferation [\[R\]](#).

5



Uridine

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take uridine as a supplement in the form of uridine monophosphate (UMP) capsules. The usual dosage is 150-250 mg, taken orally once or twice daily, preferably with food to enhance absorption. This supplement regimen can be continued indefinitely, but it's recommended to evaluate its effects periodically, every 3-6 months, with your healthcare provider.

TYPICAL STARTING DOSE

150 mg

Description

Uridine is a nucleotide that plays a role in RNA synthesis and is found in various foods. It is used as a dietary supplement to support cognitive function, enhance memory, and promote overall brain health.

How it helps

A study explored uridine supplementation's impact on mitochondrial function in HIV-infected patients with thymidine-analogue treatment. NucleomaxX, a uridine-enriched supplement, improved hepatic mitochondrial function non-invasively. Repeated administration could sustain this enhancement, suggesting a potential strategy for managing mitochondrial toxicity [\[R\]](#).

A study compared plasma and fat uridine concentrations between HIV-1-infected patients and controls. HIV-1 infection correlated with lower plasma uridine levels and elevated fat uridine levels. Patients with lipotrophic HALS exhibited notably lower plasma uridine concentrations. Additionally, decreased expression of uridine metabolizing enzymes was observed in patients [\[R\]](#).

In a study with 20 patients experiencing HAART-associated lipotrophy, those receiving dietary uridine supplementation showed significant increases in limb fat, intra-abdominal fat, and total body fat compared to placebo. Uridine supplementation was well tolerated and did not affect HAART's virological efficacy, while another study showed no lasting effects [\[R\]](#), [\[R\]](#).

Other studies demonstrated no effect [\[R\]](#), [\[R\]](#).

6



Folinic Acid

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Folinic acid is administered in several forms, including oral tablets, injections, or infusions, depending on the medical condition being treated. Always use folinic acid as prescribed by a healthcare provider. The specific dose and frequency depend on the condition being treated and the individual patient’s response. Regular monitoring by a healthcare provider is necessary, especially when used in conjunction with chemotherapy, to adjust doses as needed and to manage any side effects.

Description

Folinic acid, also known as leucovorin, is a form of folic acid used in pharmacology, primarily to diminish the toxic effects of certain chemotherapy medications. Unlike folic acid, folinic acid doesn't require enzymatic conversion to become biologically active and can be directly utilized by the body. It plays a crucial role in DNA synthesis and repair, and in the methylation process, which is vital for cellular health and function.

The health benefits of folinic acid are mostly seen in its ability to counteract the side effects of methotrexate, a drug used to treat certain types of cancer and autoimmune diseases. Methotrexate can inhibit the body's ability to use folate, leading to deficiencies. Administering folinic acid can help prevent or mitigate these deficiencies, aiding in faster recovery of healthy cells.

Folinic acid is also used in the treatment of megaloblastic anemia when it's caused by a deficiency in folate and not effectively treated by folic acid due to metabolic or absorption issues. Additionally, there is research into its potential benefits in improving symptoms of mental health disorders such as depression, suggesting that it might aid in managing conditions related to folate metabolism abnormalities.

How it helps

In 2 placebo-controlled trials of 46 HIV-infected individuals, supplementation with folinic acid (5 mg/day for 4 weeks) improved endothelial function. In one of them, it was as effective as aerobic exercise [\[R\]](#), [\[R\]](#).

7



N-acetylcysteine (NAC)

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take 600 mg of N-Acetylcysteine (NAC) supplement daily with water. It can be taken at any time of the day, but try to take it at the same time each day for best results.

TYPICAL STARTING DOSE

1200 mg

Description

NAC is a supplement that contains a form of the amino acid cysteine, a protein building block that your body uses to make the antioxidant glutathione. It is used for its potential antioxidant properties and its ability to support lung, gut, and mental health.

[N-acetylcysteine](#) (NAC) is converted to cysteine in the body. Cysteine is a protein building block (amino acid) that helps make the antioxidant glutathione [\[R\]](#).

People take NAC to potentially support [\[R\]](#), [\[R\]](#):

- Mental health
- Ovarian health and pregnancy outcomes
- Lung health
- Gut health

How it helps

In a double-blind placebo-controlled trial, HIV-positive patients with CD4 counts above 200×10^6 received 800 mg of N-acetylcysteine (NAC) or a placebo for 4 months. NAC normalized cysteine levels, reduced CD4+ lymphocyte count decline, and lowered TNF-alpha levels, but didn't significantly affect neutrophil radical production or increase CD4+ cell count. [\[R\]](#)

8



Moringa

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take 400-800 mg of moringa leaf powder capsule form once daily, preferably with meals to enhance absorption. For fresh moringa leaves, a dose of 10 grams daily can be consumed directly or added to meals. Continue this regimen for at least 3 to 6 months to observe significant benefits.

TYPICAL STARTING DOSE

400 mg

Description

Moringa is a nutrient-dense plant known for its high levels of vitamins, minerals, and antioxidants. It is used in traditional medicine for a range of issues due to it's potential anti-inflammatory, antioxidant, and antimicrobial properties.

How it helps

A study on 200 HIV patients taking ART showed that Moringa oleifera leaves significantly improved physical, psychological, independence, and social relationship quality of life domains over six months compared to controls [R].

In Kinshasa, a single-blind trial with 60 HIV patients compared daily Moringa leaf powder to nutritional counseling over six months. Changes in BMI and biological parameters were monitored, evaluating Moringa's impact on health outcomes during ART [R].

9



Transcendental Meditation

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Practice transcendental meditation for 20 minutes twice a day, once in the morning before breakfast and once in the afternoon or early evening. Sit comfortably in a quiet place, close your eyes, and silently repeat a mantra given to you by a certified transcendental meditation teacher.

TYPICAL STARTING DOSE

20 minutes

Description

Transcendental Meditation is a technique for mindfulness and stress reduction that involves silently repeating a specific mantra to attain a state of deep relaxation and heightened awareness. It is associated with reduced stress, improved focus, and enhanced overall well-being.

How it helps

A study with 22 HIV-positive individuals compared Transcendental Meditation to a healthy eating education group. Transcendental Meditation showed better retention, improved vitality, and enhanced health-related quality of life in community-dwelling adults with HIV, though the small sample size may limit some findings [R].

10



Whey Protein

IMPACT1 / 5

EVIDENCE1 / 5

How to implement

Mix one scoop (approximately 25-30 grams) of whey protein powder with 8-12 ounces of water, milk, or your preferred beverage. Consume this drink 1-2 times per day, ideally post-workout or as a meal replacement.

TYPICAL STARTING DOSE

25 g

Description

Whey protein is a complete protein derived from milk during cheese production. It is rich in essential amino acids and is used to support muscle recovery, promote muscle growth, and provide a convenient protein source for athletes and fitness enthusiasts.

Whey is the liquid that separates from milk when cheese is made. [Whey protein](#) is full of amino acids (protein building blocks) that the body needs [\[R\]](#), [\[R\]](#).

Whey protein usually comes in the form of a powder that can be added to soft foods and drinks. People often use it to help with [\[R\]](#), [\[R\]](#):

- Athletic performance
- Nutritional deficiencies

How it helps

In a double-blind clinical trial, 30 stable HIV patients received either Protectamin or Immunocal whey protein supplements for two weeks. Plasma GSH levels were initially lower than normal. After supplementation, the Protectamin group saw a 44% increase in GSH levels, while Immunocal did not show a significant difference. Other parameters remained stable [\[R\]](#).

HIV-infected children with rapidly progressive AIDS were studied in a 4-month double-blind trial. Whey protein supplementation led to a significant increase in erythrocyte glutathione levels, a non-significant rise in TCD4/CD8 lymphocyte ratio, and reduced co-infections, suggesting it may boost glutathione synthesis and decrease associated co-infections [\[R\]](#).

11



Keto Diet

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Adopt a diet that consists of about 70-80% fat, 10-20% protein, and 5-10% carbohydrates. Eliminate or significantly reduce the intake of sugar and starches like bread, pasta, rice, and potatoes, focusing instead on high-fat foods like meats, fatty fish, eggs, butter, and healthy oils, as well as low-carb vegetables like leafy greens. This dietary pattern should be maintained consistently for a period of at least 3-4 weeks to achieve ketosis, after which it can be adjusted based on individual goals and responses.

Description

The keto diet is a high-fat, low-carbohydrate eating plan designed to induce a state of ketosis in the body, where it primarily burns fat for energy. It is often used for weight loss and managing certain medical conditions.

The ketogenic diet, or the ‘keto’ diet, is rich in fat and restricts carb intake [\[R\]](#), [\[R\]](#).

On the ketogenic diet, 50 g of carbs or less are consumed per day. Around 55-80% of the calories come from fat [\[R\]](#).

The ketogenic diet depletes the body of sugars like glucose. When people fast or eat very little carbs, the body makes less insulin. In response, the body starts using fat for energy.

When the body only uses fat for energy, molecules called ketones are formed. This state is called *ketosis*.

The ketogenic diet may help with:

- Seizures [\[R\]](#)
- Excess weight [\[R\]](#)
- Diabetes [\[R\]](#), [\[R\]](#)

How it helps

In a non-placebo-controlled trial of 14 people with HIV and older than 50 years old, eating a ketogenic diet for 12 weeks improved executive function and processing speed, suggesting prevention of HIV-associated neurocognitive impairment [\[R\]](#).

12



Alpha-Lipoic Acid

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take 600-1800 mg of alpha-lipoic acid daily, preferably with a meal to enhance absorption.

TYPICAL STARTING DOSE

600 mg

Description

[Alpha-lipoic acid](#) is a natural antioxidant found in almost every cell in your body. People use alpha-lipoic acid to help with issues like skin aging, weight loss, and high blood sugar [\[R, R, R\]](#).

People use alpha-lipoic acid to help with [\[R, R, R, R\]](#):

- Complications of high blood sugar
- Skin aging
- Weight loss
- Carpal tunnel syndrome

How it helps

This study assessed the impact of alpha-lipoic acid supplementation on blood total glutathione status and lymphocyte function in HIV-infected patients. The results indicated that alpha-lipoic acid improved blood glutathione levels and enhanced lymphocyte response, suggesting potential benefits in HIV treatment [\[R\]](#).

13



Avoid Aflatoxins

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Store grains and nuts in a dry, cool place to prevent mold growth. Check for moldy smells or discoloration in foods before eating, especially in peanuts, corn, and grains. Avoid purchasing damaged or discolored grains and nuts.

Description

Aflatoxins are toxic substances produced by molds that can contaminate various food products, particularly nuts and grains. Avoiding foods contaminated with aflatoxins is crucial to prevent potential health risks, including liver damage and cancer.

How it helps

Aflatoxin exposure in HIV-infected people is associated with lower levels of vitamins A and E. Aflatoxin may worsen micronutrient deficiencies in people with HIV, impacting health outcomes [\[R, R\]](#).

14



Neem

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take 300-500 mg of neem extract daily with water, preferably after a meal. Do this for up to 10 weeks to help manage conditions like gastric ulcers and skin health. Always consult with a healthcare provider before starting any new supplement regimen.

TYPICAL STARTING DOSE

300 mg

Description

Neem is a medicinal plant from the mahogany family of trees, known for its antibacterial and anti-inflammatory properties, often used in skincare and herbal remedies to alleviate skin conditions, support oral health, and promote overall well-being.

Neem (*Azadirachta indica*) is a member of the mahogany family of trees. It is native to parts of Asia [\[R\]](#).

Neem may help support gum health and improve ulcers [\[R\]](#).

How it helps

In a non-placebo-controlled trial of 60 HIV/AIDS patients, supplementation with acetone-water neem leaf extract (1 g/day for 12 weeks) increased CD4 cell counts [\[R\]](#).

15



Autogenic Training

IMPACT1 / 5

EVIDENCE1 / 5

How to implement

Practice autogenic training for 10-15 minutes daily, ideally in a quiet, comfortable space where you won't be disturbed. Sit or lie down in a comfortable position, close your eyes, and focus on calming your mind and body through self-suggested affirmations. Repeat this routine daily for at least 2-3 months to observe beneficial effects on stress reduction and relaxation.

TYPICAL STARTING DOSE

10 minutes

Description

Autogenic training is a relaxation technique that involves self-suggestion and progressive muscle relaxation to promote relaxation, reduce stress, and alleviate symptoms of anxiety and tension.

Autogenic training is a relaxation technique that a person may carry out on their own [\[R, R\]](#).

Autogenic training uses 6 exercises that take the mind’s attention to bodily sensations such as warmth and heaviness. The exercises involve guided imagery and verbal cues (e.g. "My arm is very heavy") to [\[R, R\]](#):

- Relax the body
- Quiet and calm the mind
- Increase energy

How it helps

In 2 studies on HIV patients, autogenic training improved social and mental quality of life, sleep quality, emotion management, and depressive symptoms [\[R, R\]](#).

16



MCT Oil

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Incorporate 1 to 2 tablespoons of MCT oil into your daily diet by adding it to coffee, smoothies, or salad dressings. Start with a lower dose to assess tolerance before gradually increasing to the full dosage. Use daily for ongoing benefits.

Description

MCT oil is a type of dietary fat known for its rapid absorption and potential to provide quick energy. It is often used in ketogenic diets and may support weight management and cognitive function.

How it helps

In a 15-day study involving individuals with AIDS and fat malabsorption, two enteral formulas were compared. One contained medium-chain triglycerides (MCTs), the other long-chain triglycerides. The MCT formula reduced stool fat and nitrogen content, increased fat absorption, and improved bowel symptoms compared to the control formula. These findings suggest potential benefits of using MCT-based formulas for AIDS-associated malabsorption [\[R\]](#).

17



Avoid Mycotoxin

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

To avoid mycotoxins, store grains and nuts in a dry, cool place, check for mold on foods before eating, and avoid consuming products with visible mold. Prefer buying whole foods over processed ones, and if possible, opt for foods tested for mycotoxin contamination. Discard any food that smells musty or shows signs of spoilage.

Description

Avoiding mycotoxin exposure, which can occur in contaminated foods, is crucial to prevent potential health risks such as liver damage and cancer. Being cautious about food quality and storage conditions can help minimize the risk of mycotoxin ingestion.

How it helps

Two studies associated high levels of aflatoxin B1 with higher viral load and lower vitamin A levels in people living with HIV [\[R\]](#), [\[R\]](#).

18



Alanylglutamine

IMPACT1 / 5

EVIDENCE1 / 5

How to implement

Take alanylglutamine as a dietary supplement by mixing the prescribed dose, typically around 1 to 3 grams, into a beverage of your choice, such as water or juice. Consume this mixture once daily, preferably post-exercise or as directed by a healthcare professional.

TYPICAL STARTING DOSE

1 g

Description

Alanylglutamine is a dipeptide composed of the amino acids alanine and glutamine. It is used as a dietary supplement and is believed to support gut health and recovery from exercise.

How it helps

In 2 non-placebo-controlled trials of HIV patients, supplementation with alanylglutamine (24 g/day) for 7 days improved gut integrity while reducing diarrhea and gastrointestinal symptoms [R, R].

19



Selenium Supplements

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take 50 mcg of selenium supplements once daily, preferably with a meal to enhance absorption.

TYPICAL STARTING DOSE

50 mcg

Description

Selenium is a trace mineral found in Brazil nuts and many other foods as well as supplements. It is an essential nutrient that plays a crucial role in maintaining the body's antioxidant defenses and supporting thyroid function.

[Selenium](#) supports [\[R\]](#):

- Reproduction
- Thyroid function
- DNA production
- Immune response

Adults should be getting **55 micrograms** of selenium per day. Selenium supplements are available for people who can't meet their needs with a balanced diet [\[R\]](#).

How it helps

Selenium supplementation (200 mcg/day) in an HIV study significantly increased serum selenium levels and lowered viral load. Good adherence to the supplementation led to improved CD4 count [\[R\]](#).

20



Progressive Muscle Relaxation

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Set aside at least 10-15 minutes daily in a quiet, comfortable spot where you won't be disturbed. Start by tensing the muscles in your feet for 5 seconds, then relax for 30 seconds, and progressively work your way up through the major muscle groups of your body, tensing then relaxing each for 5 and 30 seconds respectively.

TYPICAL STARTING DOSE

10 minutes

Description

Progressive Muscle Relaxation is a relaxation technique involving the systematic tensing and releasing of muscle groups to reduce muscle tension, stress, and anxiety. Regular practice can lead to improved physical and mental relaxation.

Progressive muscle relaxation is a relaxation technique focused on releasing muscle tension. In this technique, you focus on tensing and relaxing different parts of your body, one after the other, to relieve stress [R](#), [R](#)].

It is common to start with the toes and slowly work your way up to the neck and head. Try to focus on a single muscle group at a time (for example, the calf muscles). Tense these muscles for 5-10 seconds, then relax for 20-30 seconds before moving on to the next muscle group [R](#), [R](#)].

How it helps

In a non-placebo-controlled trial of 42 patients with HIV and depressive symptoms, progressive muscle relaxation (six 1-hour sessions over 12 weeks) improved depressive symptoms, emotional management, and quality of life. Progressive muscle relaxation also improved perceived health status in a non-placebo-controlled trial of 69 HIV patients [R](#), [R](#)].

21



L-Carnitine

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take 500 mg of L-carnitine supplement daily with a glass of water, preferably with a meal to enhance absorption.

TYPICAL STARTING DOSE

1 g

Description

L-carnitine is an amino acid-like compound that plays a role in energy metabolism and helps prevent toxic substances from building up in cells. It is often used in dietary supplements for its potential to support muscle recovery, reduce fatigue, and enhance athletic performance.

[L-carnitine](#) is a compound that helps you burn fat. It also prevents toxic substances from building up in cells [\[R\]](#).

Your body can usually make enough carnitine to meet its needs. You can also get it from **meat and dairy products** [\[R\]](#).

People use L-carnitine for [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Heart problems
- Overactive thyroid
- Fertility problems
- Blood sugar control
- Weight control

How it helps

A study focused on AIDS patients with normal serum carnitine levels but depleted carnitine levels in peripheral blood mononuclear cells (PBMC). High-dose L-carnitine supplementation for 2 weeks restored intracellular carnitine levels, improved lymphocyte response to mitogens, and reduced serum triglycerides, suggesting potential benefits as a complementary option for HIV-infected individuals [\[R\]](#).

22



Andrographis

IMPACT

0 / 5

EVIDENCE

1 / 5

How to implement

Take an Andrographis supplement following the dosages provided on the product label, usually ranging from 300 to 600 mg daily. This is typically divided into two to three doses throughout the day, with meals, and should be done for up to 8 weeks to support immune function or relieve cold symptoms.

TYPICAL STARTING DOSE

300 mg

Description

Andrographis is a medicinal herb native to South Asian countries like India and Sri Lanka. It is known for its potential health benefits, primarily due to its active compound, andrographolide, which has anti-inflammatory and immune-boosting properties. Andrographis is often used in traditional medicine to treat conditions such as upper respiratory tract infections, fever, and digestive issues.

[Andrographis](#) (*Andrographis paniculata*) is an Ayurvedic plant known as the “king of [bitters](#)” People traditionally use it to fight infections and the common cold [[R](#)].

How it helps

In an uncontrolled trial of 13 HIV patients, administering andrographolide from andrographis (escalating doses of 5-20 mg/kg for 9 weeks) increased the mean CD4(+) lymphocyte level [[R](#)].

23



Avoid Illicit Drugs

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Refrain from using any illegal substances, including but not limited to, narcotics, stimulants, hallucinogens, and cannabis where it's not legalized. This means not purchasing, possessing, or consuming these substances in any form or amount. Commit to this practice indefinitely for long-term health benefits.

Description

Avoiding the use of illicit drugs is essential for preserving physical and mental health, as these substances can lead to addiction, mental health disorders, and other physical health issues. Abstaining from their use supports a safer and healthier lifestyle.

Illicit drugs are highly addictive, illegal drugs. Examples include **marijuana, cocaine, meth, and MDMA (ecstasy)**. The term can also refer to a non-medical use of drugs that are legally available (e.g., medical marijuana in some countries and states) [\[R\]](#).

Illicit drug use can have a **devastating impact on all aspects of your health and wellbeing**. It can lead to [\[R\]](#):

- Dependence and addiction
- Injury and accidents
- Health and sleep problems
- Problems in family and social life

How it helps

Avoiding the use of illicit drugs is crucial for individuals with HIV/AIDS as substance use can further weaken the immune system and potentially interfere with HIV treatment adherence and efficacy.

24



Safer Sex Practices

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Use latex condoms every time you have vaginal, anal, or oral sex. Reduce the number of sexual partners you have, and get tested regularly for sexually transmitted infections (STIs), ideally every 3 to 6 months if you're sexually active with new or multiple partners.

Description

Safer sex practices refer to using barrier methods like condoms or dental dams during sexual activity to reduce the risk of sexually transmitted infections (STIs) and unintended pregnancies. They are essential for promoting sexual health and preventing the transmission of STIs.

Safer sex practices help reduce the risk of chlamydia and other STDs. They include [R](#), [R](#):

- Using a condom for all types of sex
- Limiting the number of sex partners (ideally to one)
- Discussing past partners, STDs, and drug use
- Avoiding alcohol and drug use
- Avoiding douching after intercourse
- Getting regular screenings

Using a condom helps prevent chlamydia in men and women. A **combination of male and female condoms** may be the safest option [R](#), [R](#).

Women using **birth control pills** may have **3 times higher** risk of chlamydia compared to those using condoms [R](#).

In men who have sex with men, using **pre-exposure prophylaxis (PrEP) for HIV** may be linked to **11 times higher** risk of chlamydia. Reduced condom use may be one of the reasons for this rise [R](#), [R](#), [R](#).

Men who go to sex workers may have a **2.5 times higher** risk of chlamydia [R](#).

How it helps

Engaging in safer sex practices, such as using condoms, is essential for people with HIV/AIDS to prevent the transmission of HIV to others and to protect themselves from contracting other sexually transmitted infections (STIs) that could further compromise their health.

25



Good Oral Hygiene

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Brush your teeth at least twice a day for two minutes each time using fluoride toothpaste. Floss daily to remove plaque from places your toothbrush can't reach and consider using mouthwash. Visit your dentist at least twice a year for professional cleanings and checkups.

TYPICAL STARTING DOSE

2 minutes

Description

Good oral hygiene, which includes regular brushing, flossing, and dental check-ups, is crucial for preventing tooth decay, gum disease, and maintaining overall oral health. A healthy mouth contributes to overall well-being and can prevent dental issues that may impact systemic health.

Oral hygiene refers to practices that keep the mouth healthy. Good habits include [R](#), [R](#):

- Gently brushing the teeth and tongue for two minutes, at least twice a day
- Flossing daily
- Using a toothpaste with fluoride and a soft toothbrush
- Replacing a worn toothbrush at least every 3 months

To help maintain good oral hygiene, it is also important to regularly see dental professionals. They can help prevent and address issues with your teeth and gums.

How it helps

People with HIV/AIDS have a higher risk of oral health problems, partly due to a weakened immune system. Good oral hygiene, including brushing and flossing regularly, can help prevent common issues like gum disease and oral thrush.

Now that you've seen your DNA-based results for this health topic, let's take a look at other contributing factors.

Lab tests will give you the best picture of your current health status, while your genes provide insight into your health predispositions and which recommendations are best for you.

