SelfDecode™

Difficulty Swallowing

DNA Health Report

REPORT CATEGORY

NERVE HEALTH

Sample Client

Report date: 15 January 2026

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Personal information

NAME

Sample Client

SEX AT BIRTH

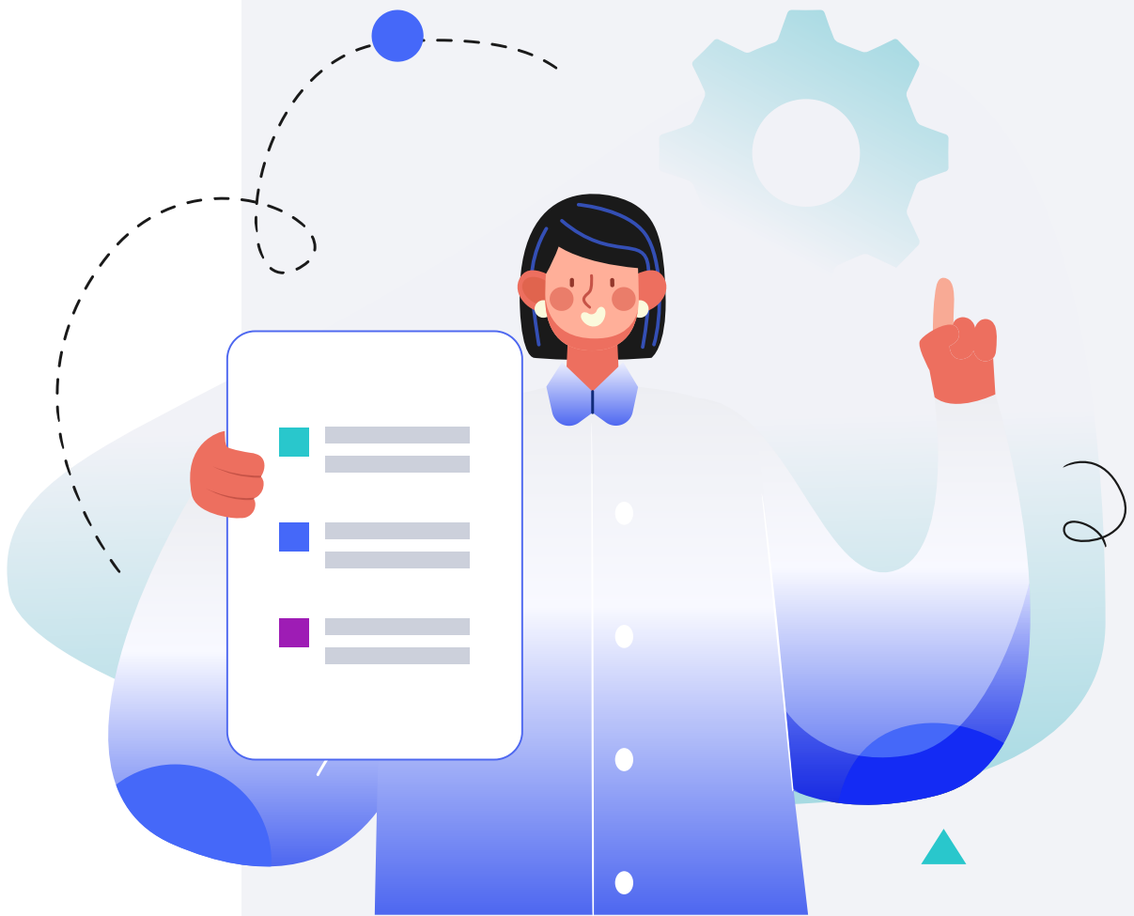
Male

HEIGHT

5ft 5" 165cm

WEIGHT

137lb 62kg

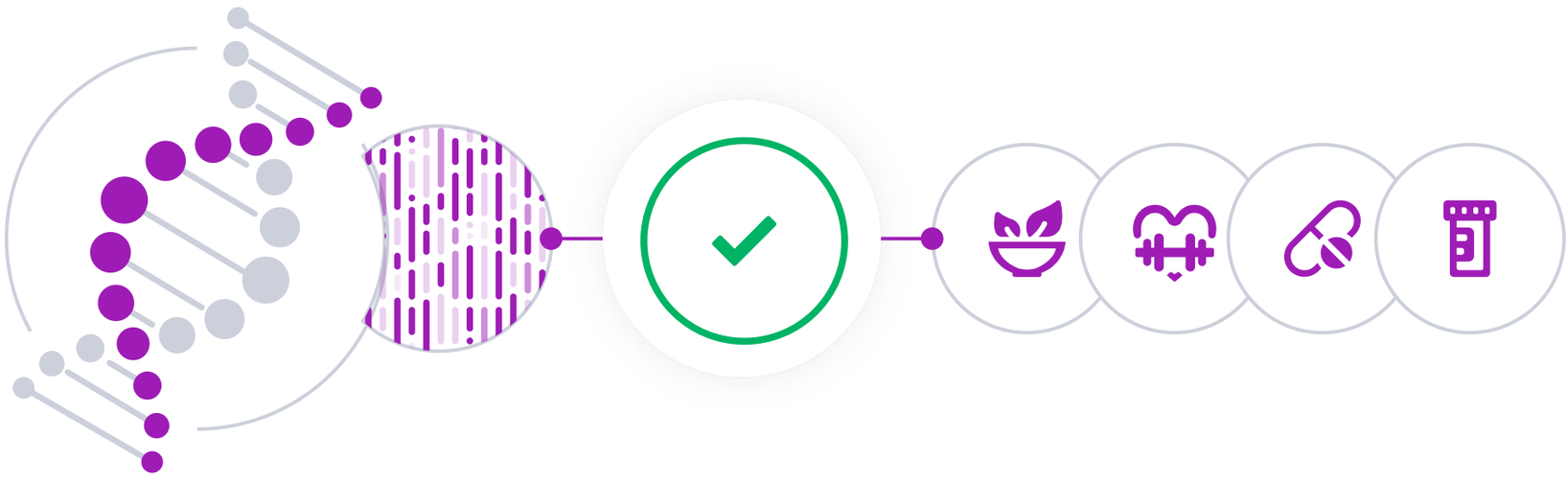


DISCLAIMER

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.

How this works

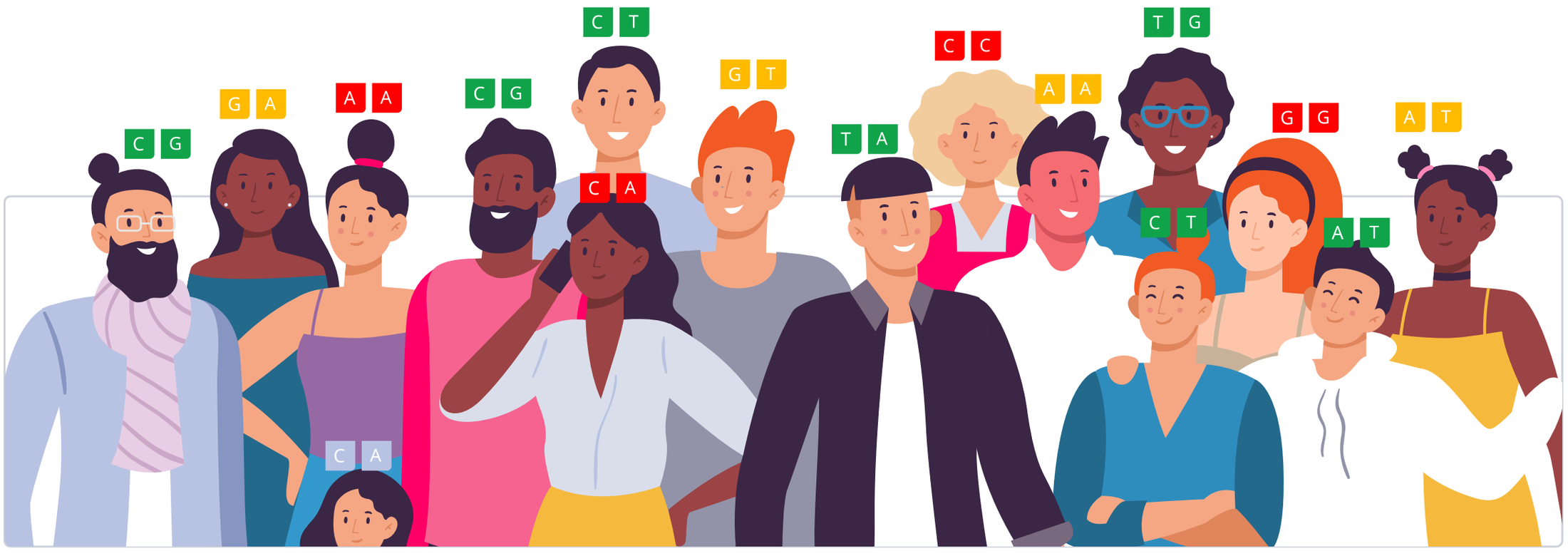
Our Wellness Reports analyze how your DNA influences your health.
We then use this analysis to give you personalized risk estimates and recommendations.



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.

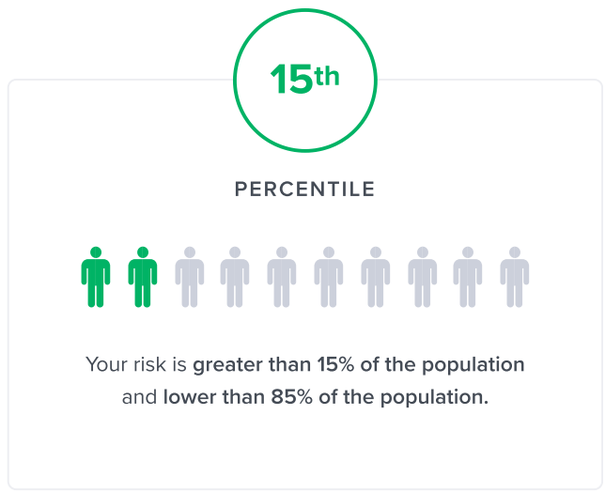
Genetic variants are parts of DNA that differ from person to person. Some can make you more vulnerable to certain health issues, while others may influence traits such as eye color.



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.

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

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



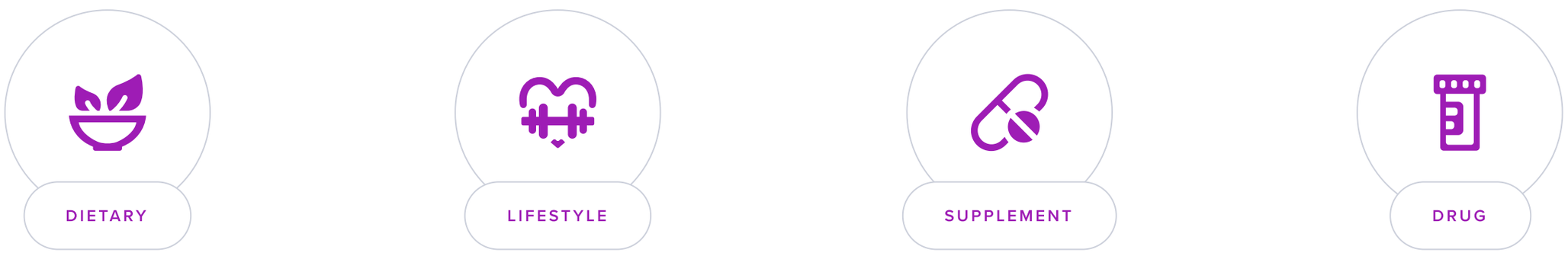
Genotype color info: AA You don't have any risk alleles | AA You have 1 risk allele | AA You have 2 risk alleles

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, afew 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

Dysphagia is a medical term that describes difficulty swallowing. People with dysphagia have trouble swallowing food, liquid, or saliva. This difficulty can lead to malnutrition, dehydration, or aspiration pneumonia if food or beverages enter the lungs. Dysphagia can occur at any age but is more common in older adults.

Common symptoms associated with dysphagia include:

- Pain or discomfort when swallowing
- The sensation of food being stuck in the throat or chest
- Drooling
- Hoarseness
- Regurgitation of food or stomach acids
- Unexplained weight loss
- Coughing or choking when eating or drinking
- Recurring pneumonia due to aspiration

Risk Factors

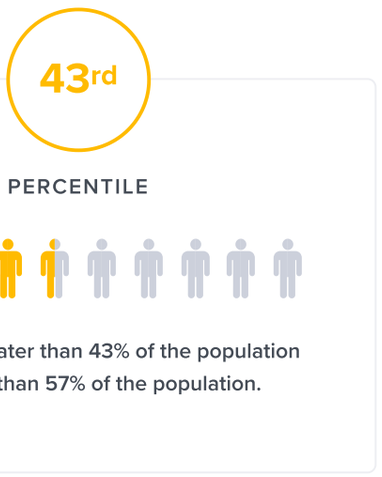
Factors that might increase the risk of developing dysphagia include:

- Neurological disorders such as stroke, Parkinson's disease, or multiple sclerosis
- Diseases of the esophagus, like esophageal cancer or esophageal stricture
- Gastroesophageal reflux disease (GERD)
- Aging, due to wear and tear on the esophagus and a decrease in strength of the muscles used in swallowing
- Certain surgeries or treatments that affect the head, neck, or esophagus
- Genetics

Certain genetic muscular disorders can weaken the muscles involved in swallowing, leading to dysphagia. Additionally, structural abnormalities of the esophagus or throat, which can be inborn, might have a genetic component. However, for the majority of individuals with dysphagia, genetic factors are **not the primary cause**.

TYPICAL LIKELIHOOD

Typical likelihood of having dysphagia based on 1,672 genetic variants we looked at



Your risk is **greater than 43% of the population** and **lower than 57% of the population.**

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
FGFR2	rs17601696	CC
COL9A1	rs701682	CC

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
1	Good Oral Hygiene	2 minutes
2	Capsaicin	
3	Speech Therapy	45 minutes
4	Myofunctional Therapy	
5	Mindful Eating	
6	Drink at Least 8 Glasses of Water a Day	
7	Biofeedback	
8	Avoid Large Meals	
9	Black Pepper	5 mg
10	Chewing	

1

Good Oral Hygiene

IMPACT 2 / 5

EVIDENCE 2 / 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 dysphagia are at a higher risk of developing respiratory disorders due to the aspiration of pathogens from the oral cavity. Good oral hygiene reduces the accumulation of these pathogens, thereby decreasing the risk of life-threatening infections [R].

Implementing intensified oral hygiene measures along with early screening for dysphagia has been shown to reduce the incidence of pneumonia in stroke people. This underscores the critical role of oral health in managing dysphagia and preventing its complications [R].

Regular dental care and oral hygiene are essential components of managing dysphagia, especially in the elderly or those with neurological conditions. Maintaining oral health helps in the overall management of swallowing functions and reduces the risks associated with poor oral conditions [R].

2

Capsaicin

IMPACT 2 / 5

EVIDENCE 2 / 5

How to implement

Apply a capsaicin cream or gel to the affected area up to 4 times daily. Make sure the skin is intact and not broken. Start with a lower concentration (0.025%) and gradually increase to 0.075% if needed for pain relief. Use continuously for at least 4 weeks to evaluate its effectiveness.

Description

Capsaicin, found in chili peppers, is known for its potential to boost metabolism and promote weight loss. It can also provide pain relief when used topically in certain creams and ointments.

How it helps

In 3 studies of 133 older participants with swallowing difficulties, supplementation with capsaicin improved the safety and efficacy of swallowing while shortening the swallow response. Capsaicin also helped restore swallowing function in 3 trials of stroke patients. In one of them, capsaicin was more effective combined with ice stimulation [R, R, R, R, R, R].

3

Speech Therapy

IMPACT 2 / 5

EVIDENCE 2 / 5

How to implement

Attend speech therapy sessions with a certified speech-language pathologist for 45 to 60 minutes per session, 1-2 times per week, for a period that can range from a few months to over a year, depending on the specific needs and progress.

TYPICAL STARTING DOSE

45 minutes

Description

Speech therapy is a specialized form of therapy that focuses on improving communication skills, speech fluency, and language development in individuals with speech and language disorders, offering support for improved communication and quality of life.

Speech therapy is used to assess and treat speech and communication problems. It helps people develop the skills needed for more effective communication. It is used to treat everything from childhood speech disorders to speech impairments caused by stroke or brain injury.

Speech and language therapy (SLT) aims to improve [R, R]:

- Communication
- Eating
- Drinking
- Swallowing

These programs support children and adults who [R]:

- Recover from a stroke or brain injury
- Have speech disorders (e.g., stuttering)
- Have swallowing or joint disorders

How it helps

Speech and language therapy (SLT) is crucial in dysphagia management following a stroke. A study highlighted that despite the lack of high-quality evidence for specific therapies, common practices include supervised swallow trials and the use of standardized measures to track progress [R].

Various interventions used in speech therapy for dysphagia include behavioral modifications, exercises to enhance swallowing safety, and the use of technologies like neuromuscular electrical stimulation. These interventions have been shown to reduce dysphagia symptoms and improve the quality of life for people, particularly after acute neurological incidents [R].

For Parkinson’s disease people, speech therapy, including exercises and techniques that aim to improve swallowing mechanics, is used to reduce the risk of choking and aspiration, even though direct high-quality trials are lacking [R].

4

Myofunctional Therapy

IMPACT 2 / 5

EVIDENCE 2 / 5

How to implement

Myofunctional therapy involves performing specific exercises that target the muscles of the mouth and face to improve their function. These exercises should be performed for a few minutes daily, typically under the guidance of a trained myofunctional therapist. The therapy usually lasts for about 6 to 12 months, depending on individual needs and progress.

Description

Myofunctional therapy is a form of orofacial therapy that aims to improve muscle function and coordination in the mouth and throat. It is often used to address issues like speech problems, swallowing difficulties, and sleep apnea.

How it helps

A pilot study found that combining myofunctional exercises with vocal exercises improved swallowing function more effectively than myofunctional exercises alone in people who suffered a stroke [R].

In people with temporomandibular dysfunction, myofunctional therapy improved jaw functionality, swallowing-related quality of life, and reduced pain and dysphagia more than manual therapy and exercise alone, suggesting its efficacy in this specific type of dysphagia [R].

A phonoaudiology program including myofunctional therapy improved the swallowing function of elderly people, showing that myofunctional therapy may be effective in managing age-related degenerative changes in swallowing mechanisms [R].

5

Mindful Eating

IMPACT 2 / 5

EVIDENCE 2 / 5

How to implement

Allocate at least 20-30 minutes for each meal, taking small bites and chewing each bite around 20-30 times before swallowing. This practice should be maintained consistently at every meal to enhance digestion and control portion sizes.

Description

Chewing slowly and thoroughly can aid in digestion and promote a sense of fullness, potentially assisting with portion control and weight management. It can also enhance nutrient absorption by breaking down food more effectively in the mouth.

How it helps

Chewing thoroughly may help modify the texture of the food in the mouth, making it easier to swallow and potentially reducing the risk of choking or aspiration, which is particularly crucial for people with dysphagia [R].

Eating slowly and chewing thoroughly may also have broader nutritional implications, as faster eating rates are associated with poorer diet quality and increased food intake. For people with dysphagia, slow and intentional eating may aid in better managing food intake and improving nutritional status [R].

6

Drink at Least 8 Glasses of Water a Day

IMPACT 2 / 5

EVIDENCE 2 / 5

How to implement

Consume a total of at least 64 ounces (or approximately 1.9 liters) of water over the course of the day. This can be divided into 8 glasses, each containing 8 ounces of water. Aim to drink evenly throughout the day to avoid dehydration.

Description

Water is an essential nutrient for nearly every process in your body, helping to mainting brain and gut function, maintain a health weight, as well as energy and performance levels, among others.

Water is essential for life. It supports nearly every process in your body [R].

Water helps maintain [R]:

- Energy and performance levels
- Brain function
- Gut function
- Healthy weight

Most experts recommend drinking **around 8 glasses (64 oz. or 2 L) of water daily**. You might need more or less than this, depending on how active you are, where you live, or what your overall health is like [R].

How it helps

A study found that allowing water intake in people with oropharyngeal dysphagia led to increased total fluid intake and improved quality of life. However, there was a higher risk of developing lung complications due to aspiration among those given access to water. This was particularly true for people with severe neurological dysfunction and limited mobility [R].

Another study reinforced that in people with good mobility and cognitive function, free access to water did not result in aspiration pneumonia, and enhanced quality of life compared to those restricted to thickened fluids [R].

7

Biofeedback

IMPACT 1 / 5

EVIDENCE 3 / 5

How to implement

Attend biofeedback sessions once or twice a week for about 8 to 10 weeks. During these sessions, a therapist will guide you through exercises to control different body functions, such as heart rate or muscle tension, using monitors that provide feedback on your physiological state. Practice the techniques learned during sessions at home daily to improve symptoms and manage your condition.

Description

Biofeedback is a type of therapy that teaches people how to control certain body functions, such as heart rate, blood pressure, and muscle tension. It can be used to treat a variety of conditions, including stress, anxiety, and chronic pain.

Biofeedback is a kind of "**brain training**" in which sensors are attached to your body. They detect information like your heart rate, temperature, and breathing rate. By seeing this information, you may be better able to control these functions [R, R].

Biofeedback is used to help with [R, R]:

- Gut problems
- Chronic pain
- Migraines
- Insomnia
- Attention

Neurofeedback is a form of biofeedback that measures brain activity in real time [R].

How it helps

A meta-analysis of 23 studies and 448 participants concluded that adding biofeedback with sEMG and accelerometry to conventional therapy for dysphagia enhances hyoid displacement but has no evident effects on swallowing function [R].

Biofeedback may help by training the body to recognize and control its physiological responses, which can help improve swallowing function.

8

Avoid Large Meals

IMPACT 1 / 5

EVIDENCE 1 / 5

How to implement

Divide your daily food intake into smaller portions spread out over five to six times a day instead of having three large meals. Ensure that each portion is balanced and includes a variety of nutrients. This means having breakfast, a mid-morning snack, lunch, an afternoon snack, dinner, and possibly a light evening snack, depending on your caloric needs.

Description

Eating smaller, more frequent meals may help prevent overeating. This involves eating the same number of meals at about the same times every day. Doing so may help with issues like blood pressure, body weight, cholesterol levels, and migraines.

Eating smaller, more frequent meals may help prevent overeating. One way to do this is to keep a regular meal schedule. This involves eating the same number of meals at about the same times every day. Doing so may help [R, R, R]:

- Manage blood pressure
- Balance the internal clock
- Maintain a healthy body weight
- Support healthy cholesterol levels
- Prevent migraines

How it helps

Another study investigated whether providing smaller, more frequent meals may improve energy intake among elderly residents with dysphagia. The study found no difference in energy intake between those receiving three larger meals versus five smaller meals, although fluid intake was higher with more frequent meals. This indicates that increasing meal frequency without reducing meal size may not improve energy intake but may affect hydration [R].

9

Black Pepper

IMPACT 1 / 5

EVIDENCE 1 / 5

How to implement

Take a black pepper supplement in the form of capsules, commonly available in 5-10 mg doses, once daily with a glass of water, preferably with meals to enhance absorption. Continue as long as needed or recommended by a healthcare professional.

TYPICAL STARTING DOSE

5 mg

Description

Black pepper is a common spice that contains piperine, a compound that may enhance nutrient absorption and provide potential health benefits. It is often used to add flavor to dishes and may support digestive health and overall well-being.

How it helps

Videofluoroscopic study: Piperine supplementation in dysphagic patients reduced unsafe swallows by up to 57.19% and improved swallow safety and efficiency. The maximal benefit was observed at 1 mM dosage. TRPV1/A1 activation shows promise for dysphagia treatment [R].

Study on poststroke residents: Nasal inhalation of BPO reduced swallowing reflex latency, increased swallowing movements, and serum substance P levels. BPO intervention also enhanced regional cerebral blood flow in relevant brain regions, suggesting potential for dysphagia treatment [R].

10

Chewing

IMPACT 1 / 5

EVIDENCE 1 / 5

How to implement

Incorporate chewing thoroughly into your daily eating habits by ensuring each bite is chewed 20-30 times before swallowing. Practice this technique at every meal and with snacks to improve digestion and satiety.

Description

Chewing can help to reduce the tendency to overeat by keeping your mouth busy and providing a sense of fullness. It can also help to improve your metabolic rate and increase your energy levels. Additionally, chewing can help to improve your attention span and reduce stress levels.

How it helps

Dysphagia may be associated with diminished chewing ability in elderly people. This suggests that impaired chewing may worsen swallowing difficulties, likely due to less effective preparation of the food bolus before swallowing, which is critical for safe and efficient swallowing [R, R].

Next Steps

Remember, your genes only tell one important part of your health story!

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

Your lab results

Your lab results are impacted by the combined effect of your genes, environment and lifestyle.

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.