

Tobacco Addiction

DNA Health Report

REPORT CATEGORY —



ADDICTIONS

Sample Client

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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

Tobacco is a plant that can be [\[R\]](#):

- Smoked (through cigarettes, pipes, and more)
- Vaped (through e-cigarettes)
- Sniffed (“snuff”)
- Chewed (“chew”)

Tobacco contains a compound called **nicotine**. When it reaches the brain, it can trigger the release of **dopamine**. This is a brain chemical linked to feelings of reward and pleasure. The release of dopamine plays a major role in **tobacco addiction** [\[R\]](#), [\[R\]](#).

People who are addicted to tobacco have a hard time stopping smoking. They may even continue to smoke despite having health problems. They may also have withdrawal symptoms when they try to stop smoking, such as irritability and intense cravings. About **8%** of people in the U.S. aged 12 and older have a nicotine dependence [\[R\]](#), [\[R\]](#).

Tobacco contains many dangerous chemicals, such as heavy metals. Many toxic compounds are also made when tobacco is burnt, such as tar. You can be exposed to these chemicals by [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Smoking, sniffing, or chewing tobacco
- Breathing in secondhand tobacco smoke (passive smoking)

Because tobacco products contain dangerous chemicals, tobacco addiction is linked to many health problems. These include [\[R\]](#):

- Blood vessel and heart disease
- Diabetes
- Fertility problems
- Eye problems
- Gum disease
- Cancer (especially lung cancer)

Genetics of Tobacco Addiction

Key Takeaways:

- About **50%** of the differences in people's chances of developing tobacco addiction may be due to genetics.
- Other risk factors include age, parents and peers who use tobacco, other substance use, mental health issues like depression or PTSD.
- About **8%** of people in the U.S. aged 12 and older have a nicotine dependence.
- Ending tobacco addiction is difficult. Possible actions to take include nicotine replacement therapy, support groups, and talk therapy.
- Click the **Recommendations** tab for potential dietary and lifestyle changes.

Some people only smoke in social situations or every once in a while. Others can't stop smoking. These differences may be partly due to genetics. In fact, about **50%** of the differences in people's chances of developing tobacco addiction may be due to genetics [R].

Risk factors for a nicotine addiction beyond genetics include [R]:

- Age
- Parents and peers who use tobacco
- Other substance use
- Mental health issues like depression or PTSD

It's difficult to quit tobacco if you are addicted to it. Some methods to help you quit include [R, R]:

- Nicotine replacement therapy (e.g., nicotine gum, nicotine patch)
- Talk therapy
- Support groups



MORE LIKELY

More likely to be addicted to tobacco based on 1,143,273 genetic variants we looked at



Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
NELL1	rs148586747	GG
ZMYM6	rs77109747	GG
POLR1F	rs6461441	AA
R3HCC1L	rs61873668	CC
ICE1	rs187632	GG
CDH10	rs374098	CT
TANC1	rs890622	GG
CACNA2D3	rs56247223	GG
CHRNA4	rs6062901	AG
CHRNA4	rs2273500	TC
AZIN2	rs199563603	TDEL(G)
GPSM1	rs28714232	CT
ADAMTSL1	rs17198023	AA
GFRA2	rs11779702	CG
CHRNA3	rs55828312	AA
IREB2	rs8034191	CT
HLA-F	rs62392942	TC
NR5A2	rs1060061	CT
HLA-F	rs56020557	CT
GLIS3	rs12348139	CT
CHRNA3	rs4950	AA
GNAI1	rs2714674	TT
DNMT3B	rs910083	CA
BCL11B	rs188595723	AA

GENE	SNP	GENOTYPE
IL9	rs78018149	GG
KLF12	rs75012440	GG
SARDH	rs56116178	AA
ZNF608	rs55644503	TT
MPPE1	rs72868658	GG
FAM200B	rs16892135	AA
SLC22A23	rs9503551	GG
FBXO48	rs144481999	CC
IREB2	rs34684276	GG
PEX2	rs12680810	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	Psychotherapy	1 hour	2	Relaxation Techniques	30 minutes
3	Nicotine Replacement Therapy		4	Support Groups	
5	Yoga	30 minutes	6	Exercise At Least One Hour a Day	1 hour
7	Mindfulness	30 minutes	8	Aerobic Exercise (Cardio)	1 hour
9	Hatha Yoga	1 hour	10	Neuro-Linguistic Programming	20 minutes
11	Vinyasa Yoga	1 hour	12	Aromatherapy	30 minutes
13	Black Pepper	5 mg	14	Omega-3 (Fish Oil)	500 mg
15	CBD	10 mg	16	Progressive Muscle Relaxation	10 minutes
17	Melatonin	500 mcg	18	Art Therapy	1 hour
19	Chewing		20	Breathing Techniques	10 minutes
21	Iyengar Yoga	1 hour	22	Vegetables	
23	Cognitive-Behavioral Therapy (CBT)		24	Self-Help	30 minutes
25	Acceptance and Commitment Therapy (ACT)		26	Auriculotherapy	
27	N-acetylcysteine (NAC)	1200 mg	28	Contingency Management and Community Reinforcement	
29	Behavioral Sleep Extension		30	Motivational Enhancement Therapy	

31

Social Activity

1 hour

32

Mindfulness Meditation

30 minutes

33

Neurofeedback

1 hour

1



Psychotherapy

IMPACT

5 / 5

EVIDENCE

4 / 5

How to implement

Schedule and attend regular sessions with a licensed psychotherapist, typically once a week for 50-60 minutes, over a period of several months to years depending on your individual needs and progress. Consistency is key, and the duration can vary widely based on personal goals and the type of psychotherapy being practiced.

TYPICAL STARTING DOSE

1 hour

Description

Psychotherapy is a broad term for therapeutic approaches that address mental and emotional health issues through talking and counseling. It can be used to treat a wide range of psychological and emotional challenges.

Psychotherapy (talk therapy) involves talking about your health with a licensed therapist. It may improve the way you react to certain experiences and help reduce stress [\[R, R\]](#).

Psychotherapy is a great way to improve many conditions, including [\[R, R, R, R, R, R\]](#):

- Depression
- Anxiety disorders
- PTSD
- OCD
- Weight problems
- Eating disorders

Cognitive-behavioral therapy (CBT) is a type of psychotherapy. CBT aims to change the way you think about your life and yourself. Through CBT, a therapist can help you develop healthy coping mechanisms [\[R\]](#).

How it helps

Experts say that talk therapy can help with tobacco addiction. Individual or group therapy may help [\[R, R\]](#).

Talk therapy, such as CBT, may help with tobacco addiction and other substance use disorders [\[R\]](#)

Other forms of talk therapy may also help with addictions. **Techniques that motivate behavior changes may be especially helpful.** These include [\[R, R\]](#):

- **Motivational enhancement therapy:** focuses on a person’s innate ability to change
- **Contingency management:** provides motivation through incentives

For some people, talk therapy combined with medication may work even better. **Your healthcare provider can help you decide which options may be best for you** [\[R\]](#).

Text- and computer-based therapy may also help. However, face-to-face therapy may be more effective for some people [\[R, R, R, R, R, R\]](#).

2



Relaxation Techniques

IMPACT

4 / 5

EVIDENCE

4 / 5

How to implement

Incorporate relaxation techniques such as deep breathing exercises, meditation, or yoga into your daily routine. Spend at least 15-30 minutes each day practicing one of these techniques, preferably in a quiet, comfortable space without interruptions.

TYPICAL STARTING DOSE

30 minutes

Description

Relaxation techniques encompass various methods like deep breathing, yoga, meditation, and progressive muscle relaxation, aimed at reducing stress and promoting mental and physical relaxation. Practicing these techniques regularly can help manage stress, improve mental clarity, and enhance overall emotional well-being.

We all get stressed from time to time.

[Stress](#) can help you deal with a challenge or avoid danger. However, **it’s not healthy to be stressed for a long time** [\[R\]](#), [\[R\]](#).

Relaxation techniques such as [yoga](#) and [meditation](#) can relieve stress in different ways. Most of them focus on breathing and help you get rid of negative thoughts and emotions [\[R\]](#).

People use relaxation techniques to improve conditions like [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Anxiety
- Depression
- Chronic pain

Progressive muscle relaxation is another relaxation technique. In this technique, you focus on tensing and relaxing different parts of your body. It is common to start with the toes and slowly work your way up to the neck and head [\[R\]](#), [\[R\]](#).

Autogenic training is a relaxation technique that a person may carry out on their own. It uses exercises that take the mind’s attention to bodily sensations such as warmth and heaviness [\[R\]](#), [\[R\]](#).

How it helps

Stress is linked to an increased risk of substance use disorders. It may contribute to addictions to tobacco and other substances. It may also make recovery from addictions more difficult [\[R\]](#), [\[R\]](#), [\[R\]](#).

For people dependent on tobacco, relaxation techniques may help with quitting. They may also ease withdrawal symptoms. Helpful techniques include [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Yoga
- Mindfulness

However, the evidence on mindfulness is mixed [\[R\]](#).

Relaxation techniques may help by reducing stress and taking the mind off smoking. They may also help build positive coping strategies [\[R\]](#), [\[R\]](#), [\[R\]](#).

3



Nicotine Replacement Therapy

IMPACT4 / 5

EVIDENCE4 / 5

How to implement

Use nicotine replacement therapy (NRT) products according to their instructions. For patches, apply a new patch every 24 hours on a clean, dry, and hairless part of the skin. For gum or lozenges, use one piece every 1-2 hours for the first six weeks, then reduce usage over the next several weeks. NRT is typically used for 8-12 weeks.

Description

Nicotine replacement therapy involves the use of products like nicotine gum or patches to help individuals quit smoking by providing controlled doses of nicotine, which can reduce withdrawal symptoms and cravings associated with quitting.

Nicotine replacement therapy (NRT) includes all approved products that deliver nicotine through means other than using tobacco products. As opposed to tobacco products, which quickly release high doses of nicotine to the blood, NRT releases lower doses for more prolonged periods [\[R\]](#).

NRT is available in the following forms [\[R\]](#):

- Sprays and inhalers
- Patches
- Gums
- Oral tablets

How it helps

Experts recommend NRT to people attempting to quit smoking [\[R\]](#), [\[R\]](#).

NRT may increase the likelihood of smoking cessation and long-term abstinence. Nicotine spray may be the most effective form, followed by inhalator, nicotine patches, oral tablets, and nicotine gum [\[R\]](#), [\[R\]](#).

NRT may also help people who are not willing to quit completely reduce their habit size [\[R\]](#).

Because **there is insufficient evidence on the effectiveness and safety of NRT during pregnancy**, experts recommend against it in this group of people [\[R\]](#).

4



Support Groups

IMPACT

4 / 5

EVIDENCE

3 / 5

How to implement

Attend a support group meeting related to your condition at least once a week. These meetings can be found through local hospitals, online platforms, or health organizations specific to your condition. Participation can be in-person or virtual, depending on what is offered and your preference.

Description

Support groups are gatherings of individuals facing similar challenges, where they can share experiences, emotions, and coping strategies. They offer emotional support, camaraderie, and valuable insights for those dealing with various health conditions or life circumstances.

Support groups involve people with similar struggles helping each other. Support groups usually take place in a casual setting. During sessions, people share their [\[R\]](#):

- Knowledge
- Experiences
- Coping strategies
- Understanding of the recovery process

Support groups may help support recovery from addictions [\[R\]](#).

How it helps

Experts say that support groups can help with tobacco addiction and other substance use disorders [\[R\]](#).

Support groups are generally cheap and easy to access. They may help people stay away from tobacco [\[R\]](#).

5



Yoga

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

Practice yoga for at least 20 to 30 minutes a day, most days of the week. Choose a style that matches your fitness level and goals, and consider attending a class or using online resources to guide your practice.

TYPICAL STARTING DOSE
30 minutes

Description

Yoga is a mind-body practice that combines physical postures, breathing exercises, and meditation. It enhances flexibility, strength, and mental well-being and is used for stress reduction, relaxation, and overall health improvement.

Yoga combines breathing, stretching, and relaxation techniques. Practicing yoga may help [R, R, R]:

- Reduce stress
- Improve fitness
- Lower blood pressure and heart rate
- Manage pain

How it helps

Stress is linked to an increased risk of substance use disorders. It may contribute to addictions to tobacco and other substances. It may also make recovery from addictions more difficult [R, R, R].

For people dependent on tobacco, yoga may help with quitting and ease withdrawal symptoms. It may work alone and combined with CBT [R, R].

Yoga and other relaxation techniques may help by reducing stress and taking the mind off smoking. They may also help build positive coping strategies [R, R, R].

6



Exercise At Least One Hour a Day

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

Dedicate a minimum of 60 minutes to moderate-intensity activities such as brisk walking, swimming, or cycling. Do this most days of the week, aiming for at least 5 days to optimize benefits.

TYPICAL STARTING DOSE

1 hour

Description

[Exercise](#) can do wonders for your health. It can help you lose weight, improve your heart health, boost your mood, and more [\[R\]](#).

There are many ways you can be active. You can walk, run, swim, dance, or play team sports. **Everything counts, and it's never too late to start!**

Try to get at least **60 minutes of moderate physical activity on most days**, including walking. **Getting a mix of cardio (min 150 min/day) and strength training (min 2 times a week) may be optimal.**

How it helps

Physical activity may reduce **cigarette** craving and withdrawal symptoms. Higher intensity exercise may be best. It may help most as part of a broader treatment plan. However, two reviews did not find evidence to support these benefits [\[R, R, R, R, R\]](#).

Exercise may help by [\[R, R, R\]](#):

- Boosting mood
- Taking the mind off the addiction
- Supporting a healthy self-image

7



Mindfulness

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

Set aside 5-10 minutes each day to practice mindfulness meditation. Find a quiet place, assume a comfortable seated position, close your eyes, focus on your breathing, and observe your thoughts and sensations without judgment.

TYPICAL STARTING DOSE

30 minutes

Description

Mindfulness involves paying focused and non-judgmental attention to the present moment. It can reduce stress, improve emotional regulation, and enhance overall mental clarity and well-being.

Mindfulness is the practice of being aware of the present moment. When practicing mindfulness, a person acknowledges their thoughts, feelings, and sensations without any judgment [R].

Mindfulness and other types of [meditation](#) may improve [R]:

- Weight and anxiety
- Low mood
- Sleep disturbances
- Pain
- High blood pressure

How it helps

Stress is linked to an increased risk of substance use disorders. It may contribute to addictions to tobacco and other substances. It may also make recovery from addictions more difficult [R, R, R].

For people dependent on tobacco, relaxation techniques may help with quitting. They may also ease withdrawal symptoms. Helpful techniques include [R, R, R, R, R]:

- Yoga
- Mindfulness

However, the evidence on mindfulness is mixed [R].

Relaxation techniques may help by reducing stress and taking the mind off smoking. They may also help build positive coping strategies [R, R, R].

8



Aerobic Exercise (Cardio)

IMPACT

2 / 5

EVIDENCE

3 / 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

Aerobic exercise can lessen your desire to smoke as it reduces cravings and withdrawal symptoms. Additionally, the improvement you'll see in your physical health may motivate you to remain smoke-free.

A meta-analysis of 18 trials and 2815 smokers concluded that aerobic exercise was **better than usual care in promoting smoking cessation in the short but not medium or long term** [\[R\]](#).

9

Hatha Yoga

IMPACT

1 / 5

EVIDENCE

2 / 5

How to implement

Practice Hatha Yoga for 60 minutes at least twice a week. Choose a quiet, comfortable space and consider guided sessions for beginners or those unfamiliar with the poses. Consistency over a period of months to years is beneficial for appreciating its full effects.

TYPICAL STARTING DOSE

1 hour

Description

Hatha yoga is a gentle and accessible form of yoga that combines physical postures, breathing exercises, and meditation. Practicing hatha yoga regularly can promote flexibility, stress reduction, and overall physical and mental well-being.

How it helps

Hatha Yoga can aid in tobacco addiction by regulating stress and promoting relaxation, thus reducing the urge to smoke. Its meditative aspect also helps in building self-control and awareness that is crucial in quitting smoking.

Participants were 55 community-recruited smokers (62% male) motivated to reduce or quit smoking and randomized to one session of hatha yoga or wellness control on their intervention day. After statistically controlling for CO in breath, participant type, age, gender, race, and ethnicity, a significant Time × Condition interaction was found, suggesting craving decreased at a greater rate in the hatha yoga condition relative to the wellness condition [\[R\]](#).

In a study with 76 daily smokers after 1-hour nicotine abstinence, those engaging in either cardiovascular exercise (CE) or Hatha yoga (HY) for 30 minutes reported reduced craving to smoke, increased positive affect, and decreased negative affect compared to a nonactivity control group [\[R\]](#).

10



Neuro-Linguistic Programming

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Integrate neuro-linguistic programming (NLP) into your routine by setting aside at least 20-30 minutes daily to practice NLP techniques. These practices could include visualization exercises, positive language use, and modeling or mirroring successful behaviors. Consistency is key, so aim to incorporate these exercises into your daily life for an extended period, at least several months, to observe significant benefits.

TYPICAL STARTING DOSE

20 minutes

Description

NLP is a psychological approach that aims to improve communication, self-awareness, and personal development by exploring the connections between language, thought patterns, and behavior.

How it helps

In a non-placebo-controlled trial of 325 subjects smoking at least 15 cigarettes/day for more than 3 years, group therapy with neuro-linguistic programming for 1 year was 4.5 and 20 times more effective than nicotine gum and nicotine patches, respectively, at improving quitting rates [R].

Neuro-linguistic programming may help by altering the mental associations with smoking, replacing negative patterns with positive ones.

11



Vinyasa Yoga

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Practice vinyasa yoga for 60 minutes, three times per week. Choose a comfortable space and a time of day when you can be consistent with your practice, ideally in the morning or evening.

TYPICAL STARTING DOSE

1 hour

Description

Vinyasa yoga is a dynamic style of yoga that involves flowing through sequences of postures with synchronized breathing. It promotes flexibility, strength, and relaxation and is often used for stress relief and improving physical fitness.

How it helps

In a non-placebo-controlled trial of 55 women who smoked, practicing vinyasa yoga for 8 weeks as an add-on to CBT for smoking cessation improved abstinence by 54% and reduced perceived anxiety [R].

Practicing Vinyasa yoga may help by reducing stress and cravings. The focus on breath control, movement, and mindfulness can promote relaxation, distract from cravings, and assist in building mental strength to resist the urge to smoke.

12



Aromatherapy

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Select essential oils like lavender, peppermint, or eucalyptus. Use a diffuser to disperse the scent into your room for 30-60 minutes at a time, up to 3 times a day. Alternatively, apply a few drops diluted in a carrier oil directly to your skin, such as on your temples or wrists, twice a day.

TYPICAL STARTING DOSE

30 minutes

Description

Aromatherapy is a holistic practice that uses the scents and aromas of essential oils to promote physical, mental, and emotional well-being. It is often used for relaxation, stress reduction, and to address various health concerns through inhalation or topical application of essential oils.

Aromatherapy uses concentrated plant extracts known as **essential oils**. They can be inhaled using a diffuser (a device that releases small amounts of oil into the air) or applied to the skin using a roller [\[R\]](#).

[Lavender](#) is a decorative flower and a calming herb and its essential oil is commonly used in aromatherapy. People use it to [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Reduce anxiety [\[R\]](#)
- Improve sleep quality [\[R\]](#), [\[R\]](#)
- Relieve pain [\[R\]](#), [\[R\]](#)

Essential oils can be harmful if not used properly. Tips for using them safely include [\[R\]](#), [\[R\]](#):

- Diluting them properly using a plant-based carrier oil (such as olive oil or almond oil)
- Using diffusers in a well-ventilated area for a maximum of 1 hour
- If using on the skin, testing a small area first and waiting a day before using more
- Keeping essential oils away from candles or other heat sources

How it helps

In a non-placebo-controlled trial of 20 regular smokers, inhaling 2 drops of the essential oils of angelica or black pepper on a tissue for 2 minutes reduced the level of nicotine craving and allowed a longer delay before the next use of tobacco. However, black pepper reduced the level of craving more than angelica, and angelica allowed for a longer delay than black pepper [\[R\]](#).

Aromatherapy can help by reducing stress and anxiety often associated with efforts to quit smoking.

13



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

In two separate non-placebo-controlled trials involving smokers, inhaling black pepper extract vapor for 3 hours and black pepper oil for 2 minutes both showed reductions in cigarette craving, negative emotions, anxiety-related somatic symptoms, and sensations in the chest [\[R\]](#), [\[R\]](#).

Black pepper essential oil can create a sensation in the throat and lungs similar to the one smokers experience, which could reduce cravings.

14



Omega-3 (Fish Oil)

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take 1-2 g of omega-3 (fish oil) supplement daily, preferably with a meal to enhance absorption.

TYPICAL STARTING DOSE

500 mg

Description

Omega-3 fatty acids are essential fats found in fatty fish like salmon, flaxseeds, and walnuts. They are known for their potential cardiovascular and brain health benefits, including reducing the risk of heart disease and supporting cognitive function.

[Omega-3 fatty acids](#) are some of the healthiest fats we can eat. They help lower inflammation and protect the heart, brain, and eyes. Our bodies produce less omega-3s than we need for optimal health, so it's important to get enough through food or supplements [\[R\]](#), [\[R\]](#), [\[R\]](#).

There are three major types of omega-3s: ALA, EPA, and DHA [\[R\]](#), [\[R\]](#).

Fatty fish are rich in EPA and DHA. They include [\[R\]](#):

- Salmon
- Tuna
- Herring
- Sardines

For optimal protection, try to get at least **two servings of fatty fish per week**. Fish oil supplements are available for those who don't eat fish regularly [\[R\]](#).

How it helps

According to one study, omega-3 fatty acid supplements may reduce cigarette craving and oxidative stress in heavy-smoker men. After 3 months, those taking omega-3 had lower nicotine dependence and smoked fewer cigarettes per day [\[R\]](#).

15



CBD

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take a CBD supplement in a dosage ranging from 10 to 40 milligrams per day. Start with the lowest dose and gradually increase it based on your body's response. This can be taken orally in the form of capsules, edibles, or oil drops under the tongue. For ongoing issues, such as anxiety or chronic pain, it may be used daily, while for acute issues, it might be used as needed.

TYPICAL STARTING DOSE

10 mg

Description

CBD is a non-psychoactive compound found in cannabis plants and is used in various forms, including oils and creams. It may have potential benefits for pain relief, anxiety reduction, and overall relaxation, although more research is needed to fully understand its effects.

[Cannabidiol](#) (CBD) is a compound found in cannabis. Unlike its cousin THC, CBD is not psychoactive and can’t get you “high” [\[R\]](#).

People use CBD to:

- Reduce anxiety [\[R, R\]](#)
- Relieve pain [\[R, R, R\]](#)
- Prevent seizures [\[R\]](#)
- Improve sleep [\[R\]](#)

How it helps

CBD may help reduce cigarette use by 40% based on a single study [\[R\]](#).

CBD may act on parts of the brain that control reward and motivation. In this way, it may help reduce drug-seeking behavior [\[R, R\]](#).

Please note: *CBD can interact with medications, and it may not be safe for pregnant women. Never use CBD without consulting your doctor. Also, make sure to verify the legality of CBD in your country or state* [\[R, R, R, R\]](#).

16



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

Progressive Muscle Relaxation (PMR) can foster a sense of overall calm and stress-relief, which can help manage cravings associated with tobacco addiction. By learning to notice and control your body's physical tension, you can respond to bouts of addiction-fueled stress and anxiety with relaxation, potentially reducing the urge to use tobacco.

In a non-placebo-controlled trial of 32 smokers undergoing acute abstinence, a 1-hour progressive muscle relaxation session reduced cigarette craving, withdrawal symptoms, and blood pressure [R](#)].

17



Melatonin

IMPACT1 / 5

EVIDENCE1 / 5

How to implement

Take 500 mcg of melatonin orally, about 30 minutes before bedtime, to help with sleep. It can be taken daily as needed.

TYPICAL STARTING DOSE

500 mcg

Description

Melatonin is a natural hormone produced by the pineal gland in the brain that helps regulate the sleep-wake cycle. It plays a crucial role in promoting sleep onset and maintaining a consistent sleep pattern, making it a commonly used supplement for managing sleep disorders and jet lag.

[Melatonin](#) is an important sleep hormone. Bright light at night may prevent your body from making enough melatonin [\[R\]](#), [\[R\]](#), [\[R\]](#).

Your body makes melatonin on its own. However, some people take melatonin supplements to help them sleep. It may help with jet lag in particular [\[R\]](#), [\[R\]](#), [\[R\]](#).

How it helps

A single dose of melatonin (0.3 mg) may help reduce mood symptoms of **cigarette** withdrawal. These include restlessness and irritability. It may also reduce cigarette cravings [\[R\]](#).

Please note: *Melatonin may interact with some medications. Consult your doctor before taking melatonin* [\[R\]](#).

18



Art Therapy

IMPACT1 / 5

EVIDENCE1 / 5

How to implement

Participate in art therapy sessions, which can include activities such as painting, sculpting, or drawing, for 1-2 hours per week. These sessions can be done either in group settings guided by a trained art therapist or individually, depending on your comfort level and goals. It is beneficial to engage in this practice consistently for several months to observe the therapeutic benefits.

TYPICAL STARTING DOSE

1 hour

Description

Art therapy is a type of therapy that encourages free self-expression and reflection through [\[R\]](#):

- Painting
- Drawing
- Clay modeling

It may be combined with mindfulness. Mindfulness is the practice of being aware of the present moment without any judgment [\[R\]](#).

Art therapy is used to improve [\[R\]](#):

- Self-esteem
- Self-awareness
- Emotional resilience
- Social skills

How it helps

A mixed-method study of 66 Taiwanese youth smokers from three senior high schools found that art therapy (for 6 weeks) compared to typical courses on smoking cessation led to significant improvements in the social domain [\[R\]](#).

19



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

In a non-placebo-controlled trial of 45 smokers, chewing gum helped manage withdrawal symptoms in response to a stressor [\[R\]](#).

Chewing gum can distract from cravings and keep the mouth busy when trying to quit smoking.

20



Breathing Techniques

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Practice deep breathing exercises for 10 minutes daily, preferably in a quiet space where you won't be disturbed. Sit or lie down in a comfortable position, slowly inhale through your nose, allowing your chest and lower belly to rise, hold the breath for a moment, and then exhale slowly through your mouth or nose. This can be done at any time of day to reduce stress and improve focus.

TYPICAL STARTING DOSE

10 minutes

Description

Breath awareness and specific breathing techniques, such as deep breathing or mindfulness-based practices, can help reduce stress, improve focus, and enhance overall mental well-being. These techniques are valuable tools for managing anxiety and promoting relaxation.

Most breathing techniques involve taking slow and even breaths. Their main goal is to prevent rapid breathing (**hyperventilation**) [\[R\]](#).

Breathing techniques tend to help with [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Stress
- Anxiety
- Sleep problems
- Asthma

One example is the **Buteyko breathing technique**. It's often used by people with asthma or other conditions that affect the lungs [\[R\]](#).

Another example is **yogic breathing**. [Yoga](#) is a practice that combines breathing techniques with exercise and meditation [\[R\]](#), [\[R\]](#).

How it helps

A randomized controlled trial with 96 abstaining smokers found that yogic breathing exercises/pranayam (for 10 min when experiencing cravings until the next visit) helped with craving and withdrawal symptoms. However, the adherence to the breathing exercise regimen in the following 24 h was low, and there was no evidence of reduced cravings at 24 h follow-up [\[R\]](#).

Breathing techniques may help by providing an alternative stress-coping mechanism instead of smoking.

21



Iyengar Yoga

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Attend a 90-minute Iyengar yoga class at least once a week. Choose a class led by a certified Iyengar yoga instructor to ensure proper guidance and technique adherence.

TYPICAL STARTING DOSE

1 hour

Description

Iyengar yoga is a style of yoga that emphasizes proper alignment and the use of props to support poses. It can help improve flexibility, balance, and mental well-being through precise and controlled movements.

How it helps

In a non-placebo-controlled trial of 227 smokers, practicing Iyengar yoga as an add-on to CBT for 8 weeks increased the odds of successful cessation by 37%, especially among light smokers [R].

Iyengar yoga may help by providing stress relief and promoting mental discipline.

22



Vegetables

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Incorporate at least 2-3 cups of various vegetables into your daily diet, ensuring a mix of colors like greens, reds, and yellows to maximize nutrient intake. Aim to include vegetables in most meals, either as a side, part of the main dish, or snacks.

Description

Vegetables are edible parts of plants that offer various health benefits due to their rich nutrient content, including vitamins, minerals, fiber, and antioxidants. They are essential components of a balanced diet and contribute to overall health, supporting various bodily functions.

How it helps

Certain vegetables like celery or carrots have a crunchy texture that can satisfy the oral cravings associated with smoking cessation. They are low in calories and may help with maintaining weight that could be gained from quitting smoking.

23



Cognitive-Behavioral Therapy (CBT)

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Schedule weekly sessions with a certified cognitive-behavioral therapist for a period of 5 to 20 weeks. Engage actively in exercises assigned by your therapist both during sessions and as homework to apply CBT strategies to daily life.

Description

Cognitive-behavioral therapy (CBT) is a psychotherapeutic approach that has been effective in treating various mental health conditions by helping individuals identify and change negative thought patterns and behaviors. It is widely used for conditions like depression, anxiety, and phobias.

Psychotherapy (talk therapy) involves talking about your health with a licensed therapist. It may improve the way you react to certain experiences [\[R\]](#).

Talk therapy is a great way to improve many conditions, including [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Depression
- Anxiety disorders
- PTSD
- OCD
- Substance use disorder
- Bipolar disorder

Cognitive-behavioral therapy (CBT) is a type of talk therapy. CBT aims to change the way you think about your life and yourself. Through CBT, a therapist can help you develop healthy coping mechanisms [\[R\]](#).

How it helps

CBT can help modify the thought patterns associated with tobacco use, aiding in the development of coping strategies.

24



Self-Help

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Incorporate activities such as journaling, mindfulness meditation, or exercise into your daily routine, dedicating at least 30 minutes each day to any self-help activity of your choice. Consistency is key for this recommendation, so aim to follow this routine daily for an extended period, ideally making it a permanent part of your lifestyle.

TYPICAL STARTING DOSE

30 minutes

Description

Self-help refers to personal development techniques and strategies aimed at improving mental, emotional, or physical well-being. It encompasses a wide range of practices and resources for self-improvement.

How it helps

Access to self-help materials and support can empower individuals with strategies and motivation to quit tobacco.

25



Acceptance and Commitment Therapy (ACT)

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Participate in Acceptance and Commitment Therapy (ACT) sessions with a licensed therapist weekly for a minimum of 8 to 12 weeks. During this period, engage in daily ACT exercises at home as recommended by your therapist, such as mindfulness practices and writing exercises that help you connect with your values and accept your thoughts without judgment.

Description

ACT is a type of psychotherapy that focuses on accepting one's thoughts and feelings while committing to actions that align with personal values. It is used to improve mental well-being and treat conditions like anxiety and depression.

How it helps

ACT helps by promoting psychological flexibility, allowing individuals to adopt healthier habits and behaviors. It aids in managing the cravings and emotional stress associated with quitting tobacco.

26



Auriculotherapy

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Attend sessions with a qualified and certified auriculotherapy practitioner, usually once or twice a week for 4-6 weeks. During these sessions, the practitioner will apply pressure or stimulate specific points on the outer ear that correspond to different body systems or organs for therapeutic effect.

Description

Auriculotherapy is a form of alternative medicine that involves stimulating specific points on the ear to alleviate various health issues, including pain, stress, and addiction. It is believed to work by affecting the central nervous system and promoting overall well-being.

How it helps

This form of ear acupuncture is thought to alleviate withdrawal symptoms and aid in tobacco cessation.

27



N-acetylcysteine (NAC)

IMPACT

0 / 5

EVIDENCE

0 / 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

NAC can help reduce the severity of nicotine cravings and withdrawal symptoms. It supports the body's antioxidant defenses and can contribute to a reduction in the compulsive desire to smoke.

28



Contingency Management and Community Reinforcement

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Engage in a contingency management program by attending scheduled meetings or therapy sessions where positive behaviors towards sobriety are rewarded. Simultaneously, participate in community reinforcement activities like joining support groups, engaging in sober recreational activities, or volunteer work, focusing on building a network that supports recovery. This approach should be integrated into your daily lifestyle for a minimum of several months to effectively reinforce positive behaviors and support sobriety.

Description

Contingency management and community reinforcement are behavioral therapies that provide incentives and positive reinforcement to individuals as they work towards overcoming substance abuse issues. These approaches can be effective in promoting abstinence and improving overall mental health and social well-being.

How it helps

These behavioral strategies reinforce abstinence from tobacco by providing incentives, which can increase the likelihood of quitting.

29



Behavioral Sleep Extension

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

To implement behavioral sleep extension, aim to increase your total sleep time by going to bed 15 to 30 minutes earlier than your usual bedtime, or by allowing yourself to sleep later in the morning. Gradually increase this time as needed to reach a target of 7 to 9 hours of sleep per night, consistently, including on weekends. Adjust your daily schedule to accommodate this change, making sleep a priority.

Description

Behavioral sleep extension involves adopting healthier sleep habits to extend the duration and improve the quality of sleep. It can lead to improved cognitive function, mood, and overall well-being by addressing sleep deficiency.

How it helps

Improving sleep quality may indirectly assist in managing cravings and emotional regulation during tobacco cessation.

30



Motivational Enhancement Therapy

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Motivational Enhancement Therapy (MET) involves attending a series of structured counseling sessions. Typically, this starts with an initial assessment session followed by two to four individual treatment sessions with a trained therapist. The therapy focuses on increasing your internal motivation to change and is often completed over a period of one to two months.

Description

Motivational Enhancement Therapy (MET) is a counseling approach aimed at enhancing an individual's motivation to make positive behavioral changes, often used in addiction treatment to help clients explore their personal reasons for change and commit to healthier habits.

How it helps

This therapy increases an individual's motivation to quit, enhancing the likelihood of success in quitting tobacco.

31



Social Activity

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Participate in group activities or gatherings with friends, family, or community members at least twice a week. This could include joining clubs, attending local events, or scheduling regular outings with friends. Aim for these social engagements to last at least an hour each time to foster meaningful connections and conversations.

TYPICAL STARTING DOSE

1 hour

Description

Engaging in social activities, such as spending time with friends and family or participating in group events, can have numerous mental and emotional health benefits. It helps reduce feelings of loneliness, enhances mood, and promotes a sense of belonging and well-being.

Social activities involve physical and mental activities with others that you enjoy and find meaningful. There are plenty of ways to stay socially active and maintain social well-being as you age.

Research has shown that a socially active lifestyle [\[R\]](#):

- Makes you less likely to develop certain chronic conditions.
- May promote a longer lifespan.
- Can improve mood and mental health.
- Can improve memory and other aspects of cognition.

How it helps

Engaging in a supportive social network can provide encouragement and accountability during the quitting process.

32



Mindfulness Meditation

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Practice mindfulness meditation for 10-20 minutes daily. Find a quiet, comfortable place to sit or lie down, then focus on your breath, observing thoughts and sensations without judgment. Consistency is key, so try to incorporate it into your daily routine, perhaps in the morning or before bed.

TYPICAL STARTING DOSE

30 minutes

Description

Mindfulness meditation involves focused attention on the breath or a specific point of focus to cultivate mindfulness and reduce stress. Regular meditation practice is associated with improved mental clarity, emotional regulation, and overall well-being.

How it helps

Mindfulness techniques help reduce stress and cravings, which can be beneficial for individuals trying to quit tobacco.

33



Neurofeedback

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Attend neurofeedback sessions with a trained therapist, usually once or twice a week, for a minimum of 20 sessions. Each session typically lasts 30 to 60 minutes where sensors are placed on your scalp to monitor brainwave activity, and feedback is given in real-time to help you learn to control or alter your brain functions.

TYPICAL STARTING DOSE

1 hour

Description

Neurofeedback is a therapeutic technique that helps individuals regulate brain activity, potentially improving focus, reducing anxiety, and enhancing cognitive function by providing real-time feedback on brainwave patterns.

How it helps

Neurofeedback, a type of biofeedback, helps in tobacco addiction by training your brain to change its habitual response to cravings. It helps to reduce anxiety and stress, often triggers for tobacco use, thus promoting long-term smoking cessation.

This study introduced FC-added rtfMRI-NF to reduce cigarette cravings in heavy smokers. FC-added rtfMRI-NF showed increased neuronal activity, connectivity, and better craving reduction compared to traditional activity-based rtfMRI-NF, suggesting enhanced volitional control over brain activity and function [\[R\]](#).