

FAFP2 Pharmaceutical care II

Seminar:

Pharmacist's role in quitting smoking

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Learning outcomes of today

- Pharmacist interventions
 - 3A: ask, advice assist
- Withdrawal symptoms
- Signs of addiction

- Varenicline
- Bupropion

- Nicotine Replacement Therapy (NRT)

3A: ASK, ADVISE, ASSIST

Pharmacist interventions

3 A's	Action	Strategies for implementation
<p>Ask - Systematically identify all tobacco users at every visit.</p>	<ul style="list-style-type: none">• Ask ALL of your patients at every encounter if they use tobacco and document it.• Make it part of your routine.	<ul style="list-style-type: none">• Tobacco use should be asked about in a friendly way – it is not an accusation.• Keep it simple, some sample questions may include:<ul style="list-style-type: none">– “Do you smoke cigarettes?”– “Do you use any tobacco products?”

3A: ASK, ADVISE, ASSIST

Pharmacist interventions

3 A's	Action	Strategies for implementation
<p>Advise - Persuade all tobacco users that they need to quit</p>	<ul style="list-style-type: none">• Urge every tobacco user to quit in a clear, strong and personalized manner.	<p>Advice should be:</p> <ul style="list-style-type: none">• Clear – “It is important that you quit smoking (or using chewing tobacco) now, and I can help you.” “Cutting down while you are ill is not enough.” “Occasional or light smoking is still dangerous.”• Strong – “As your doctor, I need you to know that quitting smoking is the most important thing you can do to protect your health now and in the future. We are here to help you.”• Personalized – Tie tobacco use to:<ul style="list-style-type: none">– <i>Demographics</i>: For example, women may be more likely to be interested in the effects of smoking on fertility than men.– <i>Health concerns</i>: Asthma sufferers may need to hear about the effect of smoking on respiratory function, while those with gum disease may be interested in the effects of smoking on oral health. “Continuing to smoke makes your asthma worse, and quitting may dramatically improve your health.”– <i>Social factors</i>: People with young children may be motivated by information on the effects of second-hand smoke, while a person struggling with money may want to consider the financial costs of smoking

3A: ASK, ADVISE, ASSIST

Pharmacist interventions

3 A's	Action	Strategies for implementation
<p>Assist - Help the patient with a quit plan</p>	<ul style="list-style-type: none">• Help the patient develop a quit plan• Provide practical counseling• Provide intra-treatment social support• Provide supplementary materials, including information on quit lines and other referral resources• Recommend the use of approved medication if needed	<ul style="list-style-type: none">• Use the STAR method to facilitate and help your patient to develop a quit plan:<ul style="list-style-type: none">– Set a quit date ideally within two weeks.– Tell family, friends, and coworkers about quitting, and ask for support.– Anticipate challenges to the upcoming quit attempt.– Remove tobacco products from the patient's environment and make the home smoke free.• Practical counseling should focus on three elements:<ul style="list-style-type: none">– Help the patient identify the danger situations (events, internal states, or activities that increase the risk of smoking or relapse).– Help the patient identify and practice cognitive and behavioral coping skills to address the danger situations.– Provide basic information about smoking and quitting• Intra-treatment social support includes:<ul style="list-style-type: none">– Encourage the patient in the quit attempt– Communicate caring and concern– Encourage the patient to talk about the quitting process• Make sure you have a list of existing local tobacco cessation services (quit lines, tobacco cessation clinics and others) on hand for providing information whenever the patient inquires about them.• The support given to the patient needs to be described positively but realistically.

Withdrawal symptoms

The psychological symptoms of nicotine withdrawal include:

- a strong desire or craving for nicotine
- irritability or frustration
- low mood
- difficulty concentrating
- anxiety
- mood swings

Withdrawal symptoms

The physical symptoms of nicotine withdrawal include:

- headaches
- sweating
- restlessness
- tremors
- difficulty sleeping
- waking at night
- increased appetite
- abdominal cramps
- digestive issues, including constipation
- difficulty concentrating





**TIME
0**

Your last cigarette.

Congratulate yourself. Making the decision to quit is something to be proud of.

**TIME
0.5
HOURS**

Withdrawal symptoms can begin as early as 30 minutes after your last cigarette,¹ so it's important you are prepared right from the start.

**TIME
2-3
DAYS**

The symptoms reach their peak,¹ but remember, even when they are hard to deal with, they are a sign that your body is recovering from the nicotine addiction – try to stay focused on that.²

**TIME
+1-2
WEEKS**

You've made it. You survived the hardest part of quitting³ and will start to feel better with time. While the worst of it is over, there will be some symptoms that continue and that you'll need to overcome to stay quit.

Signs of addiction

- cannot stop smoking or chewing, despite attempts to quit
- has withdrawal symptoms when they try to quit (shaky hands, sweating, irritability, or rapid heart rate)
- must smoke or chew after every meal or after long periods of time without using, such as after a movie or work meeting
- needs tobacco products to feel “normal” or turns to them during times of stress
- gives up activities or won't attend events where smoking or tobacco use is not allowed
- continues to smoke despite health problems



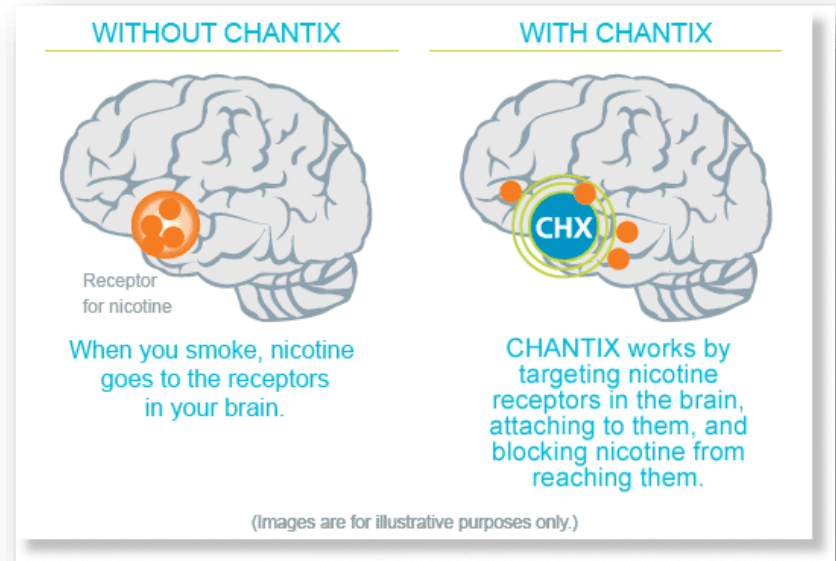
Varenicline

brand names



Varenicline

pharmacology



- agonist at nicotinic receptors
- acts on mesolimbic dopamine system associated with nicotine addiction, where it prevents nicotine stimulation
- stimulates nicotine activity but to lesser degree than nicotine does

Varenicline

side effects

- Insomnia
- Nausea
- Vomiting
- Headache
- Nasopharyngitis
- Application site pruritus



Varenicline

dosage and usage

- Take dose after eating with full glass of water
- Days 1 to 3: 0.5 mg orally once a day
- Days 4 to 7: 0.5 mg orally 2 times a day
- Days 8 to end of treatment:
1 mg orally 2 times a day
- Duration of therapy: **12 weeks**



Varenicline

dosage and usage

- The patient should set a date to stop smoking.
- Dosing should start 1 to 2 weeks before this date OR the patient may begin treatment and quit smoking between Days 8 and 35.
- In smoking cessation therapy, risk for relapse to smoking is elevated in the period immediately following the end of treatment.

Varenicline

contraindications

- Documented hypersensitivity or skin reactions to drug or components of formulation
- Nonsmokers
- There are no controlled data in human pregnancy.



Varenicline

drug interactions

Tafenoquine:

increases the level of effect of varenicline



Cimetidine:

increases levels of varenicline by decreasing renal clearance



Varenicline

statistic

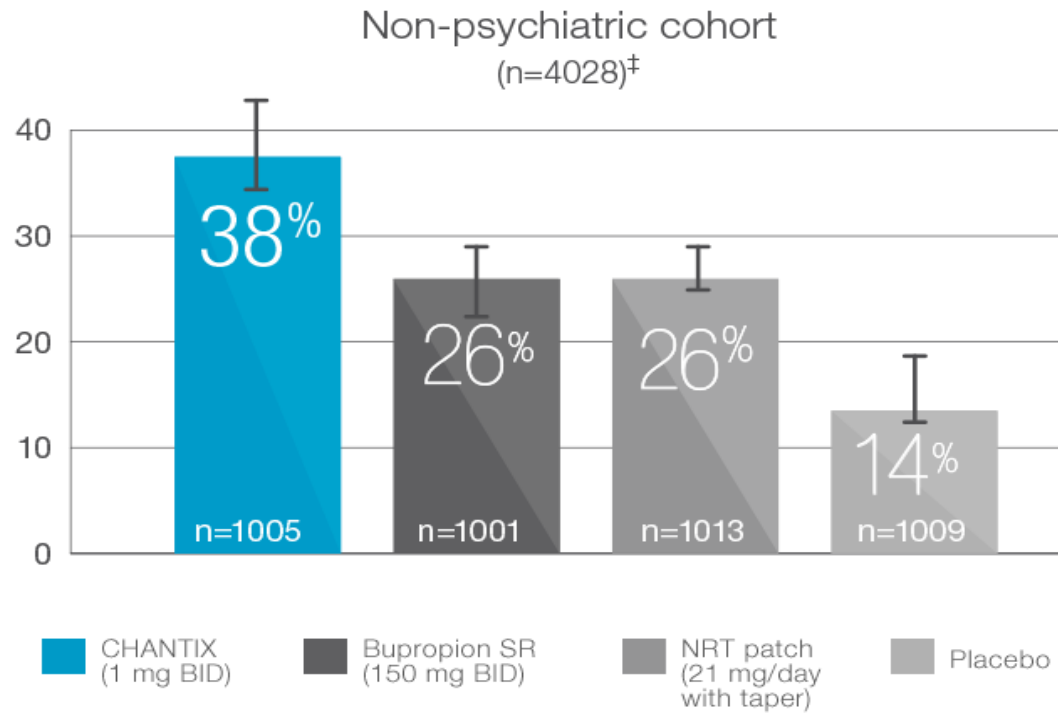
- The most common reasons given for discontinuing the medication were the side effects. No significant difference was determined between the groups in respect of the side-effects observed
- Studies confirmed that varenicline is more efficacious than bupropion for smoking cessation

<http://www.tobaccoinduceddiseases.org/A-comparison-of-the-efficacy-of-varenicline-and-bupropion-and-an-evaluation-of-the,69719,0,2.html>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4824380/>

Varenicline

statistic



<https://www.pfizerpro.com/product/chantix/hcp/efficacy>

Bupropion

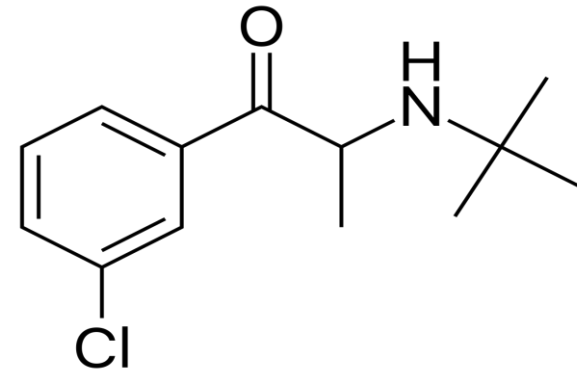
brand names



Bupropion

pharmacology

- antidepressant medication used to treat major depressive disorder and seasonal affective disorder
- used to help people stop smoking by reducing cravings and other withdrawal effects
- structurally unrelated to SSRIs, TCAs, MAOIs
- does not inhibit the activity of monoamine oxidase or the reuptake of serotonin
- norepinephrine dopamine reuptake inhibitor; may act through dopaminergic or noradrenergic pathways



Bupropion

side effects

- Headache (25 – 34 %)
- Dry mouth (17 – 28 %)
- Nausea (1 – 18 %)
- Weight loss (15 – 20 %)
- Insomnia (11 – 20 %)
- Agitation (2 – 32 %)
- Dizziness (6 – 22 %)
- Pharyngitis (3 – 13 %)

Bupropion

dosage and usage

for smoking cessation

Zyban: 150 mg PO qDay for 3 days

THEN

Increase to 150 mg q12hr

- should continue treatment for 7-12 weeks
- if patient successfully quits after 7-12 weeks, consider ongoing maintenance therapy based on individual patient risk/benefit

Dosing considerations (Smoking Cessation)

- Begin therapy 1 week before target quit date (usually second week of treatment)
- May be used in combination with nicotine patch (NRT)

Bupropion

contraindications

- **Hypersensitivity** to bupropion or other ingredients
- History of anorexia/bulimia; patients undergoing abrupt discontinuation of ethanol or sedatives including anticonvulsants, barbiturates, or benzodiazepines
- Coadministration of any other medications that contain bupropion, because seizures are dose dependent
- **Pregnancy category: C**
- **Lactation:** enters breast milk; use caution

Bupropion

drug interactions

- **eliglustat:** bupropion increases levels of eliglustat by affecting hepatic enzyme CYP2D6 metabolism. Contraindicated.
- **isocarboxazid:** and bupropion both increase dopaminergic effects. Contraindicated.
- **phenelzine:** and bupropion both increase dopaminergic effects. Contraindicated.
- **pimozide:** bupropion increases levels of pimozide by affecting hepatic enzyme CYP2D6 metabolism. Contraindicated.
- **rasagiline:** and bupropion both increase dopaminergic effects. Contraindicated.
- **selegiline:** and bupropion both increase dopaminergic effects. Contraindicated.
- **selegiline transdermal:** and bupropion both increase dopaminergic effects. Contraindicated.
- **tranylcypromine:** and bupropion both increase dopaminergic effects. Contraindicated.

NRT

what does it use for?

- **Nicotine Replacement Therapy**
- a medication that provides a low level of nicotine, without the tar, carbon monoxide and other poisonous chemicals present in tobacco smoke.

NRT

mechanism

- Binds to central nervous system (CNS) and peripheral **nicotine cholinergic receptors**
- Works by *reducing physical craving for nicotine*
 - Allows patient to focus on behavioral and psychological aspects of tobacco cessation



- *NRT products still contain nicotine, which is harmful and addictive, but they deliver smaller amounts than cigarettes and without any of the other harmful substances in tobacco, such as tar and carbon monoxide.*

NRT

precautions

- Recent myocardial infarction (MI) within past 2 weeks
- Serious arrhythmia
- Unstable angina

NRT

side effects

- Mouth soreness
- Dyspepsia
- Hiccups

Not recommended:

- Smokeless tobacco users
- Smokers using fewer than 10 cigarettes per day
- Adolescents
- Pregnancy

NRT

dosage and usage

Nicotine gum

Amount

> 25 cigarettes per day: 4 mg, 1 piece every 1-2 hours for first 6 weeks

< 25 cigarettes per day: 2 mg, 1 piece every 1-2 hours for first 6 weeks, then begin tapering

Directions for chewing

- Chew slowly
- Stop chewing after noticing peppery taste or tingling sensation
- Store in between cheek and gum



Cost: \$\$\$

NRT

Nicotine gum

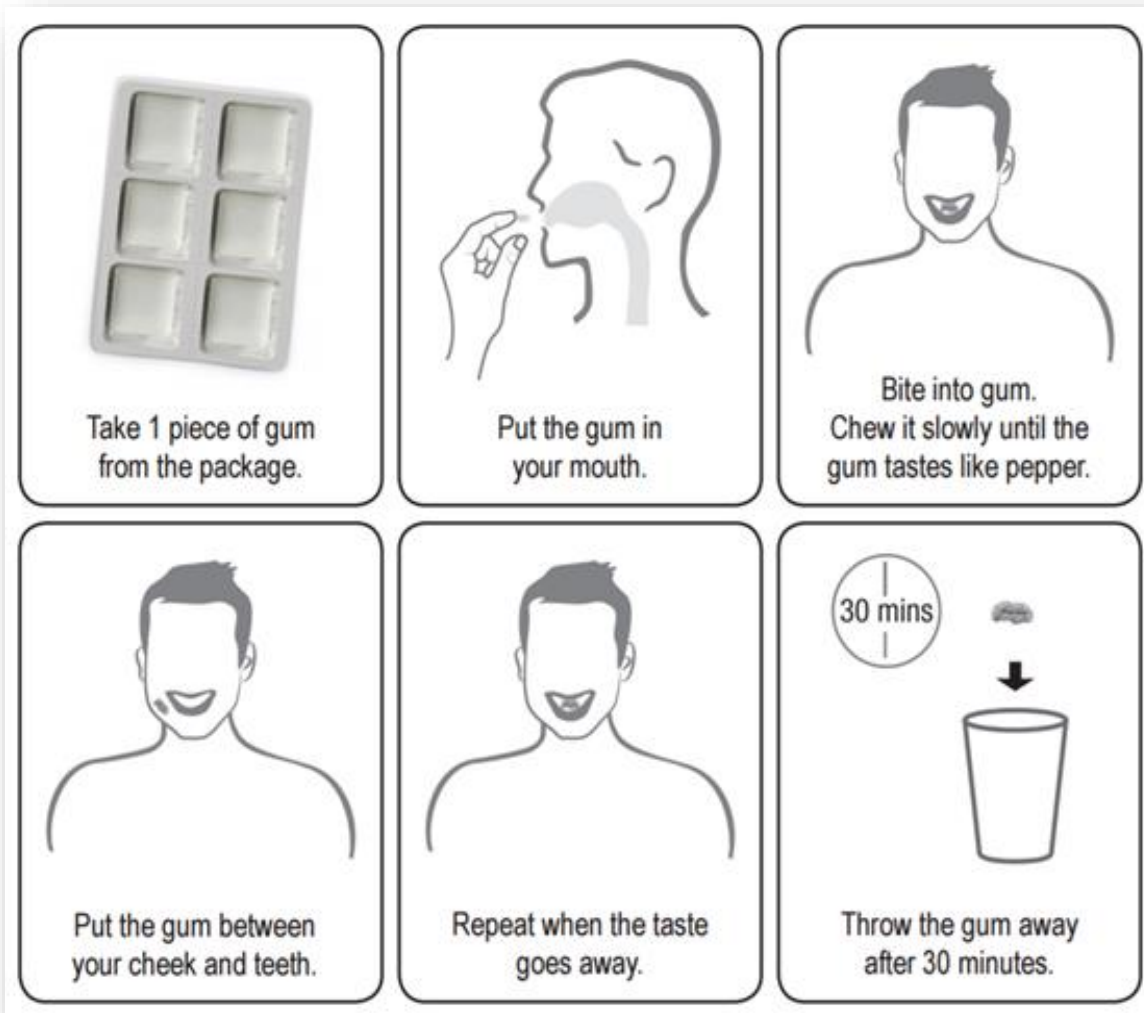
<https://www.youtube.com/watch?v=I4HiTBaxzq0>



Nicotine gum

Advantages and disadvantages

- Allows good control of nicotine dose
- Some people do not like the taste
- Unsuitable for people with dentures



NRT

dosage and usage

Nicotine lozenges

Amount

- Based on time of first cigarette of day
- If cigarette within 30 minutes of waking, use 4-mg lozenge
- Dosing forms 2 mg and 4 mg

Directions

- Use every 1-2 hours for first 6 weeks, then tapering to every 2-4 hours



Cost: \$\$\$

NRT

Nicotine lozenges

<https://www.youtube.com/watch?v=4m-t0VaPdBE>



Nicotine lozenges

Advantages and disadvantages

- Discreet and flexible, good control
- Nicotine is absorbed through the lining of the mouth, offering good control



NRT

dosage and usage

Nicotine sublingual tablet

Amount

- You can use one or two tablets each hour (one if you normally smoke 20 or fewer cigarettes a day, two if you normally smoke more than this amount).

Directions

- Place the sublingual tablet under your tongue and allow it to dissolve slowly. This allows the nicotine from the tablet to be absorbed into your bloodstream from the lining of your mouth.
- Do not chew or swallow the tablets.
- Do not use more than 40 tablets each day. If you are trying to quit smoking completely, use the tablets for around three months before you gradually reduce using them.

NRT

Nicotine sublingual tablet

Side effects:

- nausea, vomiting, drowsiness, dizziness, confusion, constipation, dry mouth, headache, tired feeling, or white patches or sores inside your mouth or on your lips.

Nicotine sublingual tablet

Advantages and disadvantages

- Discreet and flexible, good control
- Nicotine is absorbed through the lining of the mouth, offering good control



NRT

dosage and usage

Nicotine nasal spray

Amount

- Start with 2 sprays, one squirt in each nostril

Directions

- One squirt in each nostril, using 1-2 doses every hour, (maximum dosing - 5 doses per hour)

Side effects

- Hot peppery taste
- Sneezing , Cough
- Watery eyes
- Runny nose



Cost: \$\$\$

NRT

Nicotine nasal spray

<https://www.youtube.com/watch?v=kWak4pc2qyo>

- 1 Insert the spray tip into one nostril, pointing the top towards the back of your nose.



NICORETTE® is a stop smoking aid. Contains nicotine. Always read the label. Requires willpower.



Nicotine nasal spray

Advantages and disadvantages

- Fast acting, rapid delivery of nicotine similar to cigarettes
- Good for heavy smokers
- Can cause nose and throat irritation, coughing, and watering eyes



NRT

dosage and usage

Nicotine inhaler

Amount

- Delivers 4 mg of nicotine

Directions

- Start with 6 cartridges daily for first 3-6 weeks
- Maximum: 16 cartridges daily
- Recommended for up to 3 months

Side effects:

- Cough, Headache, Rhinitis, Dyspepsia, Mouth irritation



Cost: \$\$\$

NRT

Nicotine inhaler

<https://www.youtube.com/watch?v=aoAvKh0Rc3c>

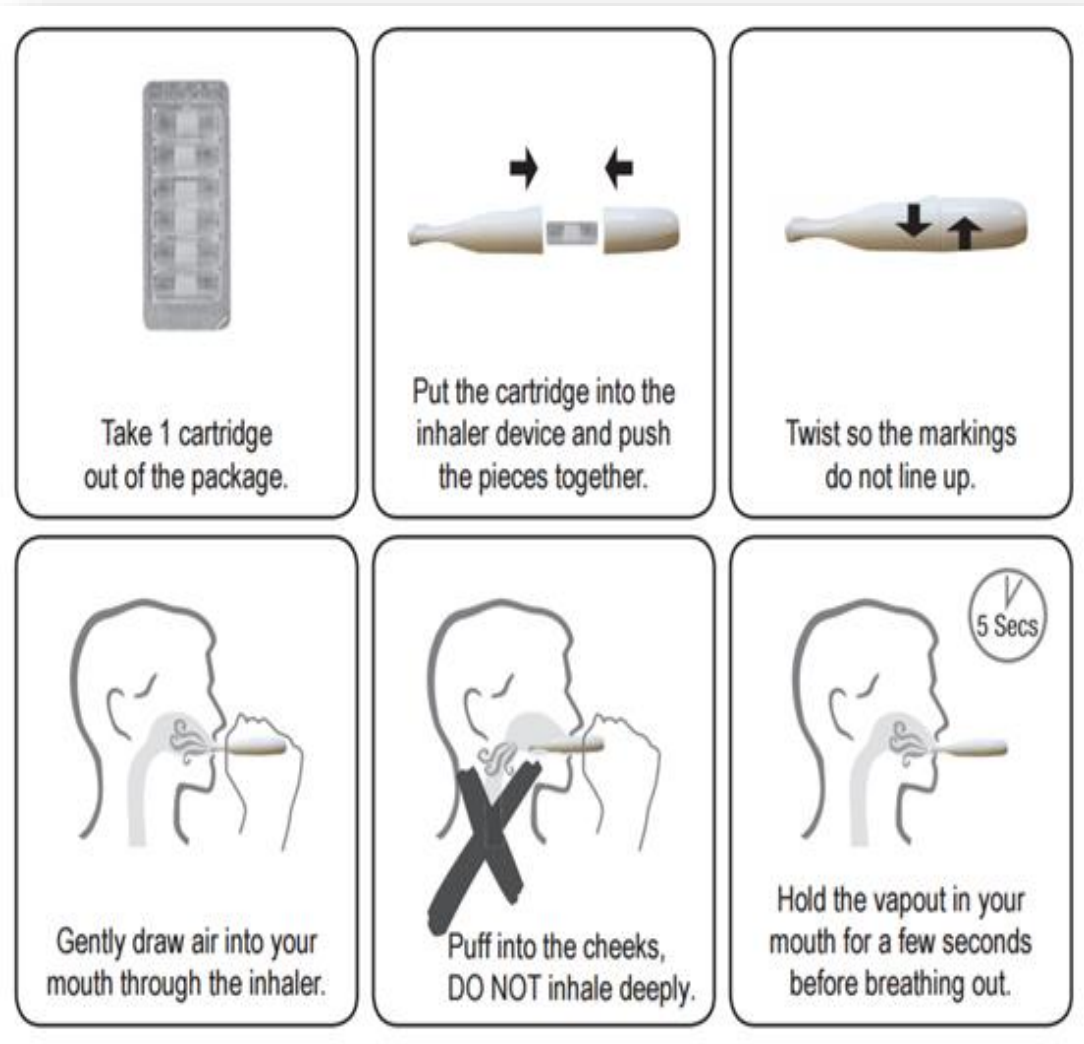


0.35-
3.10

Nicotine inhaler

Advantages and disadvantages

- Good for people who miss the ritual of smoking



NRT

dosage and usage

Nicotine patch

Amount

Dosing forms: 7, 14, and 21 mg

< 10 cigarettes per day: start with 14-mg patch for 6 weeks, decreasing to 7 mg for additional 2 weeks

> 10 cigarettes per day: start with 21-mg patch for 6 weeks, reducing to 14 mg for 2 weeks, and 7 mg for 2 weeks

Directions

- Apply to upper body/upper outer part of arm

Side effects:

- Localized itching burning and tingling, abnormal dreaming



Cost: \$\$

NRT

Nicotine patch

<https://www.youtube.com/watch?v=mznlQQFAsiM>



The NRT Patch

Kathy Hayward
BSP, CRE, CDE

1.40-3.00

Nicotine patch

Advantages and disadvantages

- Discreet and easy to use
- Sustained release can provide extended coverage
- May help with early morning cravings
- 24 hour patches may disturb sleep
- Does not mimic the highs and lows associated with nicotine

