A guide for tuberculosis patients to quit smoking
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This self-help material was developed based on WHO Capacity Building Training Package 4 entitled “Strengthening health systems for treating tobacco dependence in primary care” and A WHO/The Union Monograph on TB and tobacco control: joining efforts to control two related global epidemics. Its target audience are TB patients who smoke. It aims to give advice and information to improve smoker’ readiness to quit and to help those who are ready to quit to plan a quit attempt. The content of this self-help material includes:

1. How to get ready to quit (for TB patients not ready to quit, focusing on the additional risks of smoking while diagnosed with TB);

2. How to plan and make quit attempts (for TB patients ready to quit);

3. Local tobacco cessation support resources.
I. GETTING READY TO QUIT - THE ADDITIONAL RISKS OF SMOKING WHILE DIAGNOSED WITH TUBERCULOSIS

Quitting tobacco is a difficult task, but we are here to help. We understand that you might not think it’s important to quit or that you can’t be successful. As a person with tuberculosis (TB), it is even more important to quit smoking. Here you can find information about why quitting tobacco is important for you and your family; the great risks of smoking for people having TB; the benefits of quitting and how to improve your confidence in making a quit attempt. We hope you find this information useful, and also hope you will continue to seek advice and suggestions on how to get ready to make a quit attempt.

i. THE IMPACT OF TOBACCO SMOKING ON YOU AND YOUR FAMILY

Tobacco smoking has both health and non-health related impacts to you and those around you.

1. HEALTH RISKS OF SMOKING TO THE SMOKER WITH TB

Tobacco kills up to half of its users because tobacco products are made of extremely toxic materials. Tobacco smoke contains more than 7000 chemicals, of which at least 250 are known to be harmful and at least 69 are known to cause cancer. Here are some of the chemicals contained in tobacco smoke:

- Stearic acid (which is used to make candle wax)
- Butane (the gas inside a lighter)
- Paint
- Methanol (gas commonly used for rocket fuel)
- Acetic acid (a main component of vinegar)
- Hexamine (a common component of barbeque starters)
- Methane (sewer gas)
- Nicotine (an addictive substance commonly used for insecticides)
- Cadmium (a main ingredient in batteries)
- Arsenic (poison)
- Toluene (Industrial solvent)
- Ammonia (toxic component of detergents)
- Carbon monoxide (gas from car exhaust)
Smoking causes a wide spectrum of diseases including TB. As a smoker, you are at an increased risk of many acute and chronic diseases, such as shortness of breath, chronic respiratory diseases, many types of cancer and heart disease. Unfortunately, you are not JUST a smoker, you are a smoker with TB. The combination of the two greatly increases your health risks:

- Smoking increases the severity of your TB symptoms. Smokers with TB are more likely to have:
  - Cough
  - Dyspnea
  - Cavitary lesions in the lung
  - Positive sputum culture (this means that smokers are more likely to spread TB as well)
  - Drug resistance
- Smoking will significantly increase your probability of having recurrent TB
- Smoking greatly increases your chance of dying from TB

2. HEALTH RISKS TO THE FAMILY

Smoking puts your family at risk. Second hand smoke exposure puts members of your household at an increased risk for the following diseases:

<table>
<thead>
<tr>
<th>Diseases in children</th>
<th>Diseases in adults</th>
</tr>
</thead>
<tbody>
<tr>
<td>sudden infant death syndrome;</td>
<td>coronary heart disease;</td>
</tr>
<tr>
<td>acute respiratory illnesses;</td>
<td>nasal irritation;</td>
</tr>
<tr>
<td>middle ear disease;</td>
<td>lung cancer;</td>
</tr>
<tr>
<td>chronic respiratory symptoms.</td>
<td>reproductive effects in women (low birth weight).</td>
</tr>
</tbody>
</table>

Exposure to secondhand smoke will also significantly increase the risks of having TB infection and TB disease for your family.
3. THE COST OF SMOKING TO THE SMOKER AND SMOKER’S FAMILY

The cost of smoking to the smoker. Tobacco smoking takes away not just your health but wealth. It is estimated that 5-15% of a smoker’s disposable income is spent on tobacco, which could be an enormous economic burden on you and your family. Below is a cost calculator, which can help you find out how much money you have spent on cigarettes.

<table>
<thead>
<tr>
<th>Number of packs you smoke a year*</th>
<th>Number of years you have smoked</th>
<th>The average cigarette pack price</th>
<th>=</th>
<th>How much you have spent on cigarettes during your lifetime</th>
</tr>
</thead>
</table>

*: For day to year conversion, see below table

<table>
<thead>
<tr>
<th>1 pack a day</th>
<th>1 ½ packs a day</th>
<th>2 packs a day</th>
<th>2 ½ packs a day</th>
<th>3 packs a day</th>
</tr>
</thead>
<tbody>
<tr>
<td>365 packs a year</td>
<td>548 packs a year</td>
<td>730 packs a year</td>
<td>913 packs a year</td>
<td>1095 packs a year</td>
</tr>
</tbody>
</table>

Smoking is financially taxing on the family as well. Tobacco use causes an acknowledgeable amount of suffering for families and individuals associating with smokers. This suffering manifests itself in the form of diminished quality of life, death, and financial burden. Tobacco products are not only harmful, but they’re expensive as well.

4. SOCIAL CONSEQUENCES OF SMOKING TO THE SMOKER AND SMOKER’S FAMILY

Smoking affects social interaction and relationships negatively. In most cultures, people see smokers negatively. There is a stigma attached to smoking (for example, people may think the smoker is smelly, disgusting/dirty, unhealthy…). As a smoker, your personal relationship may be affected because many people don’t consider being in a relationship with a smoker. As a smoker, your children are more likely to smoke and to be heavier smokers at young ages.

ii. REWARDS OF QUITTING

The good news is that there are great benefits from quitting smoking, with both immediate and long term gains.

1. HEALTH BENEFITS

Quitting will help you minimize the previously mentioned negative effects, both health and non-health related. Quitting now, or making efforts to quit, will greatly decrease your chances of these long term health risks. As shown below, quitting has immediate and long term benefits, quitting adds years of life.
I. GETTING READY TO QUIT - THE ADDITIONAL RISKS OF SMOKING WHILE DIAGNOSED WITH TUBERCULOSIS

A GUIDE FOR TUBERCULOSIS PATIENTS TO QUIT SMOKING

As a TB patient, quitting smoking can help you:
- Improve your treatment outcomes
- Reduce your chance of having recurrent TB and dying from TB.

2. ECONOMIC BENEFITS

Quitting also has very clear and tangible financial benefits. Quitting smoking can put more money in your pocket!

### Fact sheet: Health benefits of smoking cessation

<table>
<thead>
<tr>
<th>Time since quitting</th>
<th>Beneficial health changes that take place</th>
</tr>
</thead>
<tbody>
<tr>
<td>Within 20 minutes</td>
<td>Your heart rate and blood pressure drop.</td>
</tr>
<tr>
<td>12 hours</td>
<td>The carbon monoxide level in your blood drops to normal.</td>
</tr>
<tr>
<td>2-12 weeks</td>
<td>Your circulation improves and your lung function increases.</td>
</tr>
<tr>
<td>1-9 months</td>
<td>Coughing and shortness of breath decrease.</td>
</tr>
<tr>
<td>1 year</td>
<td>Your risk of coronary heart disease is about half that of a smoker.</td>
</tr>
<tr>
<td>5 years</td>
<td>Your stroke risk is reduced to that of a non-smoker 5 to 15 years after quitting.</td>
</tr>
<tr>
<td>10 years</td>
<td>Your risk of lung cancer falls to about half that of a smoker and your risk of cancer of the mouth, throat, esophagus, bladder, cervix, and pancreas decreases.</td>
</tr>
<tr>
<td>15 years</td>
<td>The risk of coronary heart disease is that of a non-smoker’s.</td>
</tr>
</tbody>
</table>

B. Benefits for all ages and people who have already developed smoking-related health problems. They can still benefit from quitting.

<table>
<thead>
<tr>
<th>Time of quitting smoking</th>
<th>Benefits in comparison with those who continued</th>
</tr>
</thead>
<tbody>
<tr>
<td>At about 30</td>
<td>Gain almost 10 years of life expectancy</td>
</tr>
<tr>
<td>At about 40</td>
<td>Gain 9 years of life expectancy</td>
</tr>
<tr>
<td>At about 50</td>
<td>Gain 6 years of life expectancy</td>
</tr>
<tr>
<td>At about 60</td>
<td>Gain 3 years of life expectancy</td>
</tr>
<tr>
<td>After the onset of life-threatening disease</td>
<td>Rapid benefit, people who quit smoking after having a heart attack reduce their chances of having another heart attack by 50 per cent.</td>
</tr>
</tbody>
</table>

C. Quitting smoking decreases the excess risk of many diseases related to second-hand smoke in children, such as respiratory diseases (e.g., asthma) and ear infections.

D. Quitting smoking reduces the chances of impotence, having difficulty getting pregnant, having premature births, babies with low birth weights, and miscarriage.
The quit & save exercise can help you understand how much money you can save if you quit.

<table>
<thead>
<tr>
<th>Quit &amp; Save</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>How much money can you save if you quit?</strong></td>
</tr>
<tr>
<td>Total money spent on tobacco per day</td>
</tr>
<tr>
<td>Amount of money spent per month</td>
</tr>
<tr>
<td>Amount of money spent per year</td>
</tr>
<tr>
<td>Amount of money spent in 10 years</td>
</tr>
<tr>
<td><strong>What you can buy with the money saved?</strong></td>
</tr>
</tbody>
</table>

3. **SOCIAL BENEFITS**

You will feel less isolated - quitting means you can go anywhere, not just where you can smoke. You will improve your relationships with your family, friends and employer. You will be more productive - you don’t have to keep stopping what you are doing to have a smoke. You will be able to expand your social interactions - you don’t have to restrict yourself to talking to other smokers. When you quit smoking, your children become less likely to start smoking and more likely to quit if they already smoke.

iii. **HOW TO IMPROVE YOUR CONFIDENCE IN QUITTING**

Many smokers are afraid to quit because they have tried to quit in the past and were unsuccessful. They think it will be too hard because they don’t believe they can overcome withdrawal symptoms, they feel like they have no support, or just don’t think they are capable of success. Here are a few suggestions to help improve your confidence:

1. Try to quit smoking and being smoke free for 1 day, then 2, and so on.

2. Follow role models. Observe those around you that have recently quit and practice their behaviors. What actions and reactions of theirs can you adopt? In the United States alone, almost 50 million smokers have quit smoking successfully on their own.

3. Look at each quit attempt as a learning process. Each time, you learn what doesn’t work for you and how you can be more successful next time. You should know that it’s common for smokers trying to quit to make multiple attempts before they are successful. But they do achieve success!

4. Improve your negative mood towards quitting. Many smokers associate fear, stress, and anxiety with trying to quit. However, if you surround yourself with the proper support, such as friends and family and maintain a healthy lifestyle by eating well, exercising, and getting enough sleep you will find that any stress, fear, or anxiety that you are anticipating can be properly managed. If you do begin to feel any of these things, yoga, meditation, and other relaxation methods, are great coping mechanisms.
II. Planning and making quit attempts

It’s great that you’ve made the decision to quit. As a TB patient, it is even more crucial for you to commit to quit smoking for good. Smoking can’t fit your values, priorities, and goals such as curing your TB disease, living longer, living better and being a good role model for your kids. You are choosing to make a positive change for yourself! Quitting starts with the first action you take: developing a quit plan. Here you will find steps, advice, and a list of supportive resources to help in planning and making your quit attempts. Always remember that you can be successful. You will be able to quit, as long as you keep your goals in sight, your head held high, and your “eye on the prize”!

i. DEVELOPING A QUIT PLAN

Your first step to quitting is to develop a quit plan. Here are key elements of a successful quit plan as outlined by the STAR acronym.

1. Set a quit date. It is important to set a quit date as soon as possible. Giving yourself a short period to quit will keep you focused and motivated to achieve your goal. Choosing your birthday or some other meaningful day is a good idea, but you don’t have to always follow suit. You can start quitting today!

2. Tell your friends, family, and coworkers. It is important to share your goal to quit with those you interact frequently.
   - Ask them for support. They can support you by reminding you of your goal to quit and encouraging you to not give in to temptations like cravings. By telling your friends, family, and coworkers you might also inspire those of them who smoke to create a quit plan with you. Having a “quit buddy” is a great way to keep both of you accountable and on track to quitting.
   - Ask them for understanding. If you have friends or family that smoke, it is a good idea to ask them to refrain from lighting up when you’re around!

3. Anticipate challenges to the upcoming quit attempt. Quitting smoking is no easy feat, so you are brave and courageous for committing to this goal! It’s important that you anticipate triggers and challenges in the upcoming attempt, particularly during the critical first few weeks. The first few days and weeks will be the hardest due to potential nicotine withdrawal symptoms as well as the obstacles presented by breaking any habit (see more information below on how to successfully overcome them).

4. Remove tobacco products from your environment. It’s important to minimize exposure to smoking cues. If the tobacco products are still around, you will be more tempted to pick them up and smoke. It’s best to rid yourself of such temptations by making a smoke free house, avoiding smoking areas, and asking your peers to not smoke around you. If you live with other smokers who are not yet ready to quit, ask them to smoke outside the home and cars to best achieve your smoke-free environment.
ii. STRATEGIES AND SKILLS TO OVERCOME COMMON BARRIERS AND CHALLENGES TO QUITTING

In order for you to develop and implement your quit plan successfully, it is important that you familiarize yourself with the common challenges and barriers to quitting and effective coping strategies and skills. The challenges to quitting are typically classified into three categories: physical addiction, behavioral and social connections, and psychological or emotional connections.

1. PHYSICAL ADDICTION

Nicotine, a harmful chemical in tobacco products, is an addictive substance. It affects the dopamine systems in your brain similar to that of heroin and cocaine: nicotine increases the number of nicotinic receptors in the brain. As a smoker, your brain and body become used to functioning on certain level of nicotine. Your nicotine level will drop dramatically one or two hours after your last cigarette (whether it’s for quitting or simply the natural break between tobacco smoking), and then you will crave nicotine (cigarettes). When you quit, it is important to remember that, the absence of nicotine in your brain will make you feel uncomfortable and cause withdrawal symptoms.

Nicotine withdrawal symptoms refer to a group of physical and mental changes that may occur from suddenly stopping the use of tobacco such as headaches, coughing, cravings, increased appetite or weight gain, mood changes (sadness, irritability, frustration, or anger), restless, decreased heart rate, difficulty concentrating, influenza-like symptoms and insomnia. The good news is that these symptoms are normally temporary (2-4 weeks) and will subside as your body learns, again, how to function without the high levels of nicotine. There are also effective methods available to help you overcome them.

Just because you quit smoking does not mean you will experience all, if any, of the withdrawal symptoms. But it important to prepare yourself for the possibility. There are two ways to deal with nicotine withdrawal symptoms: cognitive-behavioral therapies and pharmacological/medical therapies. In the following tables, you will find more information on how to use cognitive-behavioral and pharmacological coping mechanisms to overcome nicotine withdrawal symptoms.

1.1 Cognitive-behavioral therapies

Cognitive-behavioral therapies can effectively help smokers alleviate withdrawal symptoms. Table 1 provides you some suggested cognitive or behavioral interventions.

<table>
<thead>
<tr>
<th>Withdrawal symptoms</th>
<th>Cognitive-behavioral therapies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headaches</td>
<td>If you are experiencing frequent headaches, make sure you are getting enough sleep, eating regularly, and partaking in physical activity. These lifestyle changes should help keep headaches at bay and/or lesson their severity.</td>
</tr>
<tr>
<td>Coughing</td>
<td>Staying hydrated is key to manage any coughing you may experience. A spoonful of honey, warm teas, juices, inhaling vapors, and avoiding dairy are common “remedies” to deal with coughing.</td>
</tr>
</tbody>
</table>
| Cravings             | The 4Ds Strategy to Deal with Smoking Cravings  
1) Delay: set a time limit before you give in to smoking a cigarette. Delay as long as you can. If you feel that you must give in to your urge, move on to step 2.  
2) Deep breathing: take 10 deep breaths to relax yourself. Try to meditate with deep breathing to relax yourself from within until the urge passes. If the urge does not subside, move on to next step.  
3) Drink water: drinking water is a healthy alternative to sticking a cigarette in your mouth. Water also helps flush out toxins to refresh your body. If you still crave for cigarettes, move on to next step.  
4) Do Something else to distract yourself: read, go for a walk, listen to music, watch TV- engage in any hobby other than smoking! |
1.2 Pharmacological therapies

In addition to behavioral therapies, there are also pharmacological therapies available to help overcome nicotine withdrawal symptoms. There are two major types of medication available that may be able to relieve withdrawal symptoms: nicotine replacement therapies (NRTs) and non-nicotine replacement therapies. NRTs include things such as nicotine gum and patch whereas non-nicotine therapies include medications like Bupropion and Varenicline. Table 2 can help you better understand the available dosage, proper usage and side effects of the aforementioned medications.

Table 2. Description of NRT, Bupropion and Varenicline

<table>
<thead>
<tr>
<th>Medication</th>
<th>How to use</th>
<th>Side effects and Warnings</th>
</tr>
</thead>
</table>
| Nicotine gum (over the counter): delivers nicotine through the lining of the mouth. (available as 2mg, 4mg) | Dosing:  
- Based on cigarettes/day (cpd)  
  >20cpd: 4mg  
  ≤20cpd: 2mg  
- Based on time to first cigarette of the day  
  ≤30 min: 4mg  
  >30 min: 2mg  
Initial dosage is 1-2 pieces every 1-2 hours (10/12 pieces a day). Taper as tolerable.  
Duration of use: Up to 12 weeks with no more than 24 pieces used per day  
How to use: It isn’t chewed like regular but chewed briefly until you notice a “peppery” taste. Then place it between cheek and gum for about 30 minutes. | Hiccups, jaw ache, stomach irritation, sore mouth |
2. EMOTIONAL/PSYCHOLOGICAL CONNECTIONS

You may not have realized this, but, as a smoker, you link cigarettes and smoking with certain emotions, thoughts, and beliefs. Part of quitting involves breaking those subconscious connections. Some common links that smokers form include smoking when they feel stressed, happy, sad or angry. In fact, using cigarettes to cope with these feelings is misguided. It does not help solve the source of your problems.

In addition to linking emotions or feelings with smoking, it is also common to link certain beliefs with smoking. These beliefs include, and are not limited to:

- “Smoking helps me relax.”
- “Smoking isn’t really harmful!”
- “It’s cool to smoke!”
- “It keeps my weight down.”

In order to avoid being derailed by such emotional or psychological roadblocks, it is important to remember and remind yourself of the risks of smoking and the benefits quitting. You can create positive self-talks based on the benefits of quitting, such as “quitting can help improve my TB treatment outcomes”, “quitting can reduce my chance of having recurrent TB”, to help you break the connections between quitting and negative beliefs.
3. BEHAVIORAL AND SOCIAL CONNECTIONS

By this time your smoking becomes a habit – an addictive habit. It is so intimately tied to your everyday activities. To quit smoking is to, once again, break these connections that have formed the habit. Your smoking may be associated with other habits or behavior such as watching television, talking on the phone, eating, and hanging out with friends. Below are just a few suggestions on how to begin breaking the links of smoking and certain behaviors.

<table>
<thead>
<tr>
<th>Action/behavior</th>
<th>Suggestion to break the link</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smoking associated with eating</td>
<td>Begin a new activity immediately after eating. Distract yourself from the temptations and urges. Wash the dishes, exercise, read, or do other household chores are just a few examples.</td>
</tr>
<tr>
<td>Smoking as a social activity (while with friends or coworkers)</td>
<td>Avoid these situations until you have successfully quit smoking. You do not have to cease ties with your friends all together, just avoid going to dinner, or out, with them until you are strong in your commitment to abstain.</td>
</tr>
<tr>
<td>Smoking as a stress reliever</td>
<td>This is a common misconception believed by many smokers. Smoking has absolutely no connection to stress relief. However, there are many other ways to deal with stress. Drink water or tea, carry around a stress ball to keep your hands busy, practice deep breathing or exercise to relieve stress.</td>
</tr>
<tr>
<td>Smoking in the car</td>
<td>Remove all cigarettes from the car, listen to music, take public transportation, or carpool to help avoid temptation.</td>
</tr>
<tr>
<td>Smoking while on the phone</td>
<td>Engage in another activity while on the phone. Whether it’s playing with a stress ball, or walking around, distract yourself from the urge to smoke.</td>
</tr>
</tbody>
</table>

It is important to always keep your end goal at the forefront of your mind so that you are not derailed by your connected habits. If you find yourself craving a cigarette, get up and remove yourself from the situation – whatever it may be! Do what you must to distract yourself until the tied habits are no longer a trigger for smoking cravings. Typically cravings/urges are brief, lasting only 1 to 2 minutes.

These three categories, while separate on paper, are not necessarily separate obstacles. Success in dealing with symptoms of one category can help you deal with symptoms from the other categories as well. Every quit attempt is unique to the smoker trying to quit and you may experience challenges and barriers not listed here, you make experience all of them, or you may experience none of them.

iii. PREPARING FOR RELAPSE

Every quit attempt is a positive step in the right direction towards quitting permanently. It might take multiple quit attempts, but each time you resume your attempt to quit, you move farther and farther in the right direction and will make it easier for you to stop next time. Relapsing and making mistakes are only natural. Do not let a relapse hinder your confidence - a relapse does not mean failure. Use any relapse as a learning experience in how to develop better coping skills, and to adjust them for future attempts to ensure even greater success.

The best way to prevent relapses is to use effective treatments. Effective and approved treatments include self-help materials; advice from healthcare providers; individual behavioral counseling; group behavior counseling; telephone counseling; “Quit and Win” contests and the above-mentioned medications.

To prevent relapse, you will also need to avoid using unapproved therapies. Many communities offer common, alternative therapies such as E-cigarettes, acupuncture, laser treatment, and other alternative measures. These alternative therapies hold claims to aiding in quit attempts but there is no or not enough evidence to support that they can improve quit rate and increase quit attempt success.
If you are interested in finding more about the importance of being a non-smoker, how to be more confident in quitting and how to successfully quit smoking, we suggest you turn to your community for other available resources. Your TB care providers can be a great source of support in your efforts to quit smoking. There are also many other resources within your own community such as support groups and toll free tobacco quit lines that can support you in your journey to quit. You may also find useful online resources.

REFERENCES AND RESOURCES


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