



## Complete Summary

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### GUIDELINE TITLE

Guidelines for smoking cessation: revised 2002.

### BIBLIOGRAPHIC SOURCE(S)

National Advisory Committee on Health and Disability. Guidelines for smoking cessation: revised 2002. Wellington (New Zealand): National Advisory Committee on Health and Disability (National Health Committee); 2002 May. 33 p. [42 references]

## COMPLETE SUMMARY CONTENT

SCOPE  
METHODOLOGY - including Rating Scheme and Cost Analysis  
RECOMMENDATIONS  
EVIDENCE SUPPORTING THE RECOMMENDATIONS  
BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS  
CONTRAINDICATIONS  
QUALIFYING STATEMENTS  
IMPLEMENTATION OF THE GUIDELINE  
INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT  
CATEGORIES  
IDENTIFYING INFORMATION AND AVAILABILITY

## SCOPE

### DISEASE/CONDITION(S)

Smoking

### GUIDELINE CATEGORY

Counseling  
Prevention  
Treatment

### CLINICAL SPECIALTY

Family Practice  
Internal Medicine  
Preventive Medicine  
Psychology

### INTENDED USERS

Advanced Practice Nurses  
Allied Health Personnel  
Dentists  
Health Care Providers  
Nurses  
Pharmacists  
Physician Assistants  
Physicians  
Psychologists/Non-physician Behavioral Health Clinicians  
Public Health Departments  
Respiratory Care Practitioners  
Substance Use Disorders Treatment Providers

## GUIDELINE OBJECTIVE(S)

### General Aim

To increase the quit rate among smokers seen by health workers

### Specific Aims

- To reinforce the importance of smoking as a preventable adverse health factor
- To promote the integration of smoking cessation interventions into routine clinical care throughout the health system
- To improve the information and support given people who want to stop smoking
- To ensure all health workers feel confident in the advice they give and the resources available to support smoking cessation
- To promote the use of nicotine replacement therapy, as an adjunct to ongoing support for people attempting to quit

## TARGET POPULATION

Smokers in New Zealand, including pregnant women, children and adolescents, and native Maori people

## INTERVENTIONS AND PRACTICES CONSIDERED

### Interventions Considered and Recommended

1. Behavioural interventions
  - Smoking cessation advice by health workers
  - Individual behavioral counselling for smoking cessation
  - Self-help interventions for smoking cessation
  - Supportive group sessions for cessation
  - Counselling men at high risk of ischaemic heart disease
  - Toll-free telephone help-lines
  - Specialist smoking cessation clinics
2. Pharmacologic aids to smoking cessation

- Nicotine replacement therapy (NRT), including nicotine gum, nicotine spray, nicotine patch, nicotine inhaler (brand names for NRT include Nicorette, Nicotinell, Nicobate)
- Bupropion (Zyban, Wellbutrin SR)
- Nortriptyline

#### Interventions Considered but not Recommended

1. Acupuncture
2. Homeopathy
3. Hypnotherapy
4. Exercise
5. Behavior modification therapy
6. Aversion therapy
7. Pharmacologic aids to smoking cessation
  - Nicobrevin
  - Lobeline
  - Anxiolytics
  - Clonidine (not recommended as first-line therapy, but may be considered for second-line therapy)

#### Special Considerations for the Following Groups

1. Pregnant women
2. Children and adolescents
3. Other high-risk populations within New Zealand, including Maori

#### MAJOR OUTCOMES CONSIDERED

- Morbidity and mortality related to smoking in New Zealand population groups
- Therapeutic effectiveness of smoking cessation interventions, as measured by:
  - Quit rates
  - Odds of quitting
  - Being smoke-free at 12 months
  - Relieving withdrawal symptoms
  - Abstinence
- Cost-effectiveness of smoking cessation interventions
- Risks to the fetus of smoking in pregnancy and effects of smoking cessation interventions on:
  - Low and very low birthweight
  - Pre-term birth
  - Perinatal mortality
- Smoking prevalence among various demographic groups in New Zealand
- Adverse effects of smoking cessation interventions

## METHODOLOGY

#### METHODS USED TO COLLECT/SELECT EVIDENCE

Hand-searches of Published Literature (Primary Sources)  
Hand-searches of Published Literature (Secondary Sources)  
Searches of Electronic Databases

#### DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

For the 2002 guideline revision, a systematic literature review was undertaken for the period 1999 to 2001 and used to update the original background and literature review document. The literature review relied heavily on the Cochrane library. However, there was an extensive search for information on other databases, namely, Medline and DARE. Search terms included: smoking, smoking cessation, tobacco, cigarettes, behavioural interventions for smoking cessation, behavior therapy for smoking cessation, smoking cessation related issues, smoking cessation for special interest groups, drug therapy for smoking cessation, effectiveness of smoking cessation interventions. The US Guidelines on Treating Tobacco Dependence was also used.

#### NUMBER OF SOURCE DOCUMENTS

Not stated

#### METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

#### RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

For the New Zealand Guidelines for Smoking Cessation evidence quality was graded using The US Preventive Services Task Force grading system.

I

Evidence obtained from at least one properly randomised controlled trial (RCT).

II-I

Evidence obtained from well-designed controlled trials without randomisation

II-II

Evidence obtained from well-designed cohort or case-control analytic studies, preferably from more than one centre or research group

II-III

Evidence obtained from multiple time series with or without intervention

III

Opinions of respected authorities, based on clinical experience

#### METHODS USED TO ANALYZE THE EVIDENCE

Review of Published Meta-Analyses  
Systematic Review with Evidence Tables

#### DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

The material that was collected and used was evaluated using a "critical reading of scientific research" template that evaluated the study objectives, the study design, what information was collected, internal and external validity and causation. Modifications were made to the Guidelines for Smoking Cessation that reflected changes in the background and literature review document.

#### METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

#### RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

#### COST ANALYSIS

Cost-effectiveness of Smoking Cessation

- Multiple studies have evaluated the cost-effectiveness of various smoking cessation interventions. Puget Sound Group Health Co-operative found smoking cessation interventions cost less than US\$1,000 per year of life saved. For comparison, cost estimates for the treatment of moderate hypertension and drug therapy for hyperlipidemia are approximately US\$10,000 and US\$60,000 per year of life saved, respectively.
- Another study found that women in a Health Maintenance Organisation (HMO) given access to a self-help programme were more likely to achieve cessation for most of their pregnancy (22.2 percent versus 8.6 percent), and that this had impacted favourably on pregnancy outcomes, and generated cost savings. The HMO saved approximately \$3 for every \$1 spent on the self-help programme.

#### METHOD OF GUIDELINE VALIDATION

Peer Review

#### DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Guidelines were Reviewed in the Following Manner

1. Circulation of draft Guidelines to approximately 90 individuals and groups considered to have an interest in this area for comment and peer review

2. International peer review of the draft Guidelines by two individuals who have led the development of smoking cessation guidelines--Professor Brian Oldenburg, Queensland University, in Australia; and Ann McNeill PhD, Health Education Authority, Great Britain
3. Focus group discussion with current smokers to determine how they might react to the use of the Guidelines in practice
4. Analysis of feedback and peer review on the draft Guidelines and annotation into the final Guidelines document

## RECOMMENDATIONS

### MAJOR RECOMMENDATIONS

#### Promoting Smoking Cessation

The Five A's: Ask, Assess, Advise, Assist, Arrange

##### I. Ask

The smoking status of every adult should be identified and prominently documented in the medical record. For current smokers and those who have quit in the past year, smoking status should be updated at each visit.

Determine if a person:

- Does not smoke
- Does smoke
- Recently quit smoking (<1 year)

Ask "Do you currently smoke?" If no, ask "Have you quit in the past year?"

Ask adults accompanying children, "Does anyone in your/this child's household smoke?"

Ask children over the age of 10, "Have you ever smoked a cigarette?"

POSITIVELY REINFORCE non-smoking, particularly with adolescents.

Place a smoking status and/or second-hand smoke sticker on the master problem list, or electronically document in computerised notes.

For identified smokers and recent quitters (within one year), update smoking status at each visit.

A smoking history could be completed by people while waiting. This assessment would gather information on addiction level, readiness to quit, prior quit attempts and barriers to cessation.

Attach the completed form to the person's chart or record for doctor/nurse review (where relevant).

Regularly revise smoking status and document, including date.

## II. Assess

Determine the willingness of smokers to make a quit attempt by asking every smoker how they feel about their smoking.

The purpose of determining a person's willingness to quit is to enable the most appropriate and beneficial assistance to facilitate smoking cessation.

Smoking cessation is a process occurring over time. A commonly accepted model is Prochaska & DiClemente's 'stages of change,' in which smokers are seen as moving through a series of stages:

Precontemplative (not considering quitting)

TO

Contemplative (planning to quit in the next six months)

TO

Action (ready to quit soon)

TO

Maintenance/relapse

Ask:

- "How do you feel about your smoking?"
- "What do you know about the effects of smoking on health?"
- "Have you ever thought of giving up smoking?"
- "What would it take for you to quit?"

If the person clearly states he/she is unwilling to make a quit attempt at this time, provide relevant information and assure them that their healthcare team is available to help when ready.

For smokers not wanting to quit, remember:

- In comparing quitting smoking with curing disease, we often do not take into account the highly addictive nature of nicotine and the smoking habit reinforced by millions of inhalations, and strongly bound up with lifestyle habits over many years.
- Change is a process which takes time, not an 'all or nothing' phenomenon.
- Success is progress through the stages, not just the act of quitting.
- People in all stages of change can be helped.
- Intervention must be matched to the stage of change.

- Relapse is a normal part of the process, not a failure.
- III. Advise

Provide brief cessation messages at nearly every encounter. These messages should be: clear, strong and personalised, supportive, and non-confrontational.

Specifically, advice should be:

- Clear  
"I think it is important for you to quit smoking and I can help you."
- Strong  
"As your doctor/health professional, 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. The staff here and I will help you."
- Personalised--Tie smoking to current health/illness, significant life events, social and economic costs, motivation level, readiness to quit and/or the impact of second-hand smoke on children and others in the household.  
"I know you're concerned about your cough and that your son gets so many colds. If you stop smoking, your cough should improve and your son might get fewer colds as well."

If the opportunity is right, provide motivational interventions as specified in the 5 R's. The purpose of these interventions is to get smokers themselves to identify the key issues for them personally.

- Relevance Encourage the smoker to identify why quitting is personally relevant
- Risks Ask the smoker to identify negative consequences of continued tobacco use for them in both the short and long term
- Rewards Ask the smoker to identify and discuss specific benefits of quitting
- Roadblocks Assist the smoker to identify barriers and specific impediments to quitting
- Repetition Reinforce the motivational message at every opportunity and reassure that repeated quit attempts are not unusual

It is important to note that not all of the 5 R 's apply to each of the stages in the cycle of change.

Use history, physical exam findings and significant life events to further personalise advice.

Provide reinforcement via consistent/repeated advice to stop smoking.

Positively reinforce non-smoking, particularly with adolescents.

#### IV. Assist

Provide assistance according to the person's readiness to quit. Relevant information is important for everyone, even those not ready to quit. Provide additional support for those with some interest in quitting.

##### Not considering quitting

- Advise that their healthcare team is available to help when they are ready.
- Time permitting, explore barriers to considering quitting and provide motivational interventions as specified in the 5 R's.
- Provide appropriate smoking cessation material.
- Discuss effects of second-hand smoke on children; encourage consideration of smoking outside at home, not smoking in the car.

##### Planning to quit but not soon

- Advise that their healthcare team is available to help.
- Encourage them to talk about the quitting process.
- Give them the free QUITLINE number (0800 778 778 in New Zealand) or other smoking cessation support.
- Time permitting, explore barriers to considering quitting and provide motivational interventions as specified in the 5 R's, especially the benefits of stopping i.e., rewards.

##### Ready to quit within the next month

As above, plus:

- Help them develop a quit plan:
  - Set a quit date.
  - Tell family, friends and co-workers about quitting and request understanding and support.
  - Anticipate challenges to planned quit attempt.
  - Remove tobacco products from the environment.
- Provide practical counselling (problem solving/skills training):
  - Total abstinence is essential. "Not even a single puff after the quit date".
  - Identify what helped and what hurt in previous quit attempts.
  - Discuss challenges/triggers and how patient will successfully overcome them.
  - Since alcohol can trigger relapse, the patient should consider limiting/abstaining from alcohol while quitting.
  - Quitting is more difficult when there is another smoker in the household. Patients should encourage housemates to quit with them or not smoke in their presence.
- Provide support and assist patient to gain support in their environment.

- Recommend pharmacotherapy as appropriate.
- If a patient is a member of a special high-risk population (for example adolescent, pregnant smoker) consider providing additional information and support.
- Be aware of and discuss the phenomenon of "switching addictions ", which is defined as a substitution of one chemical or behavioural addiction pattern for another. Be particularly aware of the switch between nicotine and alcohol addiction. The National Health Committee has produced useful guidelines for Recognising, Assessing and Treating Alcohol and Cannabis Abuse in Primary Care.
- Arrange follow-up (see below).

#### Quit in the past year

- Congratulate success and encourage abstinence.
- Use open-ended questions for example "How has stopping smoking helped you?"

#### Relapse prevention

- Reinforce the importance of permanent cessation.
- Health professionals should be aware that personal circumstances may make it difficult for people to stay quit.
- Make people aware of major triggers for example stress and alcohol.
- Use open-ended questions to identify what precipitated or is precipitating the relapse and encourage active discussion to identify strategies to overcome this. Problems could include:
  - Lack of support for cessation
  - Negative mood or depression
  - Strong or prolonged withdrawal symptoms
  - Weight gain
  - Flagging motivation/feeling deprived

#### Recently relapsed

- Ask what precipitated the relapse, and help identify strategies to overcome this in the future.
- Reaffirm person's ability to quit.
- Encourage them to set another quit date.
- Provide them with the free QUITLINE number (0800 778 778 in New Zealand) or other smoking cessation support.

Encourage Nicotine Replacement Therapy (NRT) except under exceptional circumstances.

Discuss Nicotine Replacement Therapy (NRT). Explain how these medicines increase smoking cessation success and decrease withdrawal symptoms.

NRT is effective for addicted smokers (more than 10 cigarettes per day) who are motivated to quit, especially when used as an adjunct to counselling/support with organized follow-up.

Inform NRT users not to smoke at all while using NRT and provide with copy of relevant 'information sheet' from these guidelines.

If previous failure or contraindication to NRT, discuss use of bupropion or nortriptyline.

V. Arrange (follow-up)

Arrange appropriate follow-up for all smokers.

Arrange appropriate follow-up for all smokers who are:

- not considering quitting
- planning to quit but not soon
- ready to quit within the next month
- and those who have recently quit as relapse prevention or for those who have recently relapsed.

Arrange follow-up (in person or by phone) with smokers who are ready to quit

- first follow-up within the first week
- second follow-up within the first month
- reinforce staying quit during visits in the first year post-cessation.

Follow-up by nurses, community workers and other health workers as well as doctors can be effective. Letters/phone calls may be more cost-effective than follow-up visits at the clinic.

Actions during follow-up contact -- congratulate success. If smoking has occurred, review circumstances and elicit recommitment to total abstinence. Remind patient that a lapse can be used as a learning experience. Identify problems already encountered and anticipate challenges in the immediate future. Assess pharmacotherapy use and problems.

Consider referral to more intensive treatment. Taking part in an organised programme increases the chance of success for any quit attempt. Especially encourage participation in an organised programme for smokers who have had multiple prior quit attempts or who have organ damage.

People planning to take part in a structured programme may benefit from a follow-up call in a week to ensure contact has been made. The free national QUITLINE (0800 778 778 in New Zealand) provides brief (about 10 minutes) support for people quitting smoking. Callers can join a call-back service for continuing support during the quitting period.

Aukati Kai Paipa, and other services focusing on Maori women are available in over 30 localities around the country. NRT Exchange Card Providers and other smoking cessation services are also available throughout New Zealand. Specialised services for pregnant women are available in many areas, and many hospitals now offer smoking cessation services. To find out what is available in your area, contact your local district health board (DHB)

smokefree officers, or for Maori services, contact Te Hotu Manawa Maori or your local iwi health provider.

Review NRT, bupropion or nortriptyline dose and adjust if there are symptoms of overdose or underdose. People who smoke at all during the first two weeks do not do nearly as well as those who don't.

### Recommendations for Primary Care Providers

- Implement a practice-wide system that ensures the smoking status of every patient is up to date.
- Include smoking status in routine data collected (include date).
  - Document smoking status as: Current smoker, Ex-smoker, Non-smoker
  - For providers using patient charts, use smoking status stickers
  - Notate on computer records: Smoker, Ex-smoker, Non-smoker
- Ask how the patient feels about their smoking.
- Be aware that the most important variable determining how smokers will respond to any intervention is their readiness to change.
- Have a structured and agreed approach to assisting smokers who are ready to quit. For instance, advice on a handout could include:
  - Set a quit date, ideally within two weeks
  - Inform friends, family, co-workers of plans and ask for support to quit
  - If the urge to smoke is strong, then: Delay (acting on the urge to smoke), Deep Breathe, Drink water, Do something else
  - Remove cigarettes from home, car and workplace and avoid smoking in these places
  - Review previous quit attempts--what helped, what didn't help, reasons for relapse
  - Anticipate challenges, particularly during the first few weeks, including nicotine withdrawal
  - Focus on the benefits and rewards of quitting
  - Totally stopping is essential--not even a single puff
  - Drinking alcohol is strongly associated with starting smoking again
  - The free QUITLINE number (0800 778 778 in New Zealand)
  - Contact details of free Aukati Kai Paipa Smoking Cessation Services and NRT Exchange Card Providers in their locality.
- Anticipate barriers and address them as appropriate for example fears about weight gain.
- Have culturally and educationally appropriate materials on smoking cessation (where available) in consulting rooms.
- Arrange smoking cessation training for all health workers.
- Offer smoking cessation support for health workers who smoke.
- Make health facilities smokefree.
- Contact and preferably network with local smoking cessation providers.

### Nicotine Replacement Therapy (NRT)

Suggested criteria for prescribing NRT

The smoker:

- is motivated to quit
- agrees to 100 percent cessation, quit date, and follow-up
- smokes more than 10 cigarettes (half a pack) per day

Note: Although studies indicate that NRT is more effective for those who smoke more than 10 cigarettes per day, smoking cessation is of considerable benefit to all smokers. There are numerous methods of smoking cessation, with NRT being one option.

- understands the benefits and risks and agrees to use NRT

#### Steps to providing NRT

1. Assess level of addiction/motivation.
2. Discuss different types of NRT (patch, gum, nasal spray or inhaler).
3. Consider contraindications/factors altering dosing.
4. Give free QUITLINE number 0800 778 778 (in New Zealand), contact details of free Aukati Kai Paipa Smoking Cessation Services and NRT Exchange Card Providers.
5. Prescribe appropriate dose of NRT, reviewing use and common side effects.
6. Underscore absolutely no smoking while on NRT both to avoid overdose symptoms and because studies have shown that smoking while using NRT markedly decreases likelihood of successful quit attempt.
7. Ensure follow-up within three to five days to assess correct dosing and possible effects.
8. Ensure person receives further follow-up to increase likelihood of success.

Note: if person continues to smoke any cigarettes, recommend stopping NRT.

More than eight weeks' treatment with NRT is not routinely recommended, as there is no evidence that treatment beyond eight to twelve weeks increases the success rate.

Refer to the original guideline document for specific dosing information for NRT as well as relative contraindications, overdose and withdrawal symptoms, and types of NRT available in New Zealand.

#### Antidepressants: Bupropion and Nortriptyline

Bupropion (Zyban™) is registered in New Zealand for use in smoking cessation and is recommended by the Medicines Adverse Reactions Committee (MARC) for use as a second-line agent. Nortriptyline (Norpress, Allegron) is not registered for use as a smoking cessation adjunct in New Zealand but there is good evidence for its efficacy and it can be prescribed under Section 25 of the Medicines Act 1981 with appropriate provisos.

Refer to the original guideline document for additional prescribing information on bupropion and nortriptyline, including precautions and adverse effects.

#### Combination Therapy

Combination NRT appears to have the potential to provide effective treatment of tobacco dependence in people whose dependence is refractory to monotherapy with NRT. There is currently insufficient evidence to recommend the use of NRT with bupropion or nortriptyline in combination.

There is no good evidence on which to base dose recommendations when using combination therapy. Useful principles are:

- initiate 'passive' therapy at a dose commensurate with the level of addiction
- introduce "as required" medication with a specified maximum number of daily doses where withdrawal symptoms are alleviated. Titrate to lowest frequency at which withdrawal symptoms are alleviated.

### Considerations for Special High-Risk Populations

#### Parents/caregivers of children

- Ask about exposure to second-hand smoke at Well Child visits, and give parents smoking cessation advice.
- Discuss the relationship of second-hand smoke to illness at potentially related acute care visits, such as asthma, otitis media and bronchiolitis.
- Children educated about the health effects of smoking can play an important role in convincing their parents to quit.
- Consider the Quit for our Kids programme (see page 30 of original guideline document).

#### Pre-adolescents and adolescents

- Ninety percent of smokers start before the age of 21. Smoking rates remain high among adolescents. Parental, sibling and peer smoking, as well as any experimentation, is a major risk factor.
- No cessation programme for teen smokers has been shown to work, so prevention is the key (e.g., repeated positive reinforcement of abstinence).
- Counselling and behavioural interventions shown to be effective with adults should be considered for use with children and adolescents. The content of these interventions should be modified to be developmentally appropriate.

#### Pregnant and breastfeeding women

- Encourage pregnant women who smoke to quit, and those who have quit to remain non-smokers after delivery.
- Although abstinence early in pregnancy will produce the greatest benefits to the fetus and expectant mother, quitting at any point in pregnancy can yield benefits. Therefore, clinicians should offer effective smoking cessation interventions to pregnant women at their prenatal visit as well as throughout their course of pregnancy.
- Give the free QUITLINE number (0800 778 778 in New Zealand), contact details of free services for pregnant women, Aukati Kai Paipa Smoking Cessation Services and NRT Exchange Card Providers in their locality.
- Self-help manuals have been shown to be helpful in this group.

- Most pregnant women who quit smoking while pregnant begin again after delivery--intervene with new parents often. Discuss nicotine delivery through breast milk.
- NRT should be considered when a pregnant/lactating woman is unable to quit, and when the likelihood of quitting, with its potential benefits, outweighs the risks of NRT and potential continued smoking. Keep in mind that the risks for the mother and fetus associated with smoking are greater than those associated with NRT use.

People with smoking-related organ damage, and those who have relapsed repeatedly

Specialists can greatly assist smokers by advising them to quit and relating their smoking to disease progression. Written follow-up emphasising this message and reporting results, such as lung function tests, have been shown to be effective.

Hospitalised smokers

- A hospitalisation provides a powerful opportunity to quit. Hospitalised patients are forced to cut down or quit and may be more motivated to remain so after discharge.
- Consider prescribing NRT during hospital stay.

Maori

- Maori are more likely to be in an environment with other smokers, which may make quitting more difficult. International evidence demonstrates that quit support initiatives have been less successful among lower socioeconomic groups.
- There are a number of kaupapa Maori cessation services that provide Maori with excellent support e.g., Aukati Kai Paipa and Noho Marae.
- Consider referral to culturally appropriate providers where possible. The QUITLINE (0800 778 778 in New Zealand) provides Maori advisors. Also consider providing contact details of Aukati Kai Paipa and other Maori smoking cessation services and NRT Exchange Card Providers in their area.

People with concurrent mental health problems or other chemical dependencies

- There is some evidence that smokers are at increased risk of depression and anxiety symptoms (when controlling for stressors and socioeconomic characteristics).
- Many people with mental health disorders, such as depression, anxiety and schizophrenia, and other chemical dependencies, also smoke.
- Nicotine is not an effective treatment for depression, anxiety and schizophrenia.
- Smokers should be asked about mental health problems and other chemical use, and referred to counsellors, mental health services or drug and alcohol services if indicated, in addition to being encouraged to quit.
- Smokers with mental health problems should be provided with effective smoking cessation treatments.

- Evidence indicates that smoking cessation interventions do not interfere with recovery from chemical dependency. Therefore, smokers receiving treatment for chemical dependency should be provided with effective smoking cessation treatments, including both counselling and pharmacotherapy.
- In 2001 the Department of Human Services Victoria released the Australian Guidelines for Smoking Reduction and Cessation for People with Schizophrenia which are available on the Internet at: [www.health.vic.gov.au/mentalhealth](http://www.health.vic.gov.au/mentalhealth).

#### People with heart conditions

- Separate analyses have now documented the lack of an association between the nicotine patch and acute cardiovascular events even in patients who continued to smoke intermittently while on the nicotine patches.
- It is more dangerous for patients with heart disease to continue smoking than to use NRT. Given the seriousness of their medical condition, cardiac patients who cannot quit should be among the first to be considered for NRT.
- Bupropion is a suitable treatment (if appropriate) for people with cardiovascular disease.

#### CLINICAL ALGORITHM(S)

None provided

### EVIDENCE SUPPORTING THE RECOMMENDATIONS

#### TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

Quality of evidence ratings are defined at the end of this field.

#### Counselling and Education

- Personal advice and encouragement to quit by health professionals in a consultation setting has a small but significant effect on quit rates. Quality of evidence: I
- Smoking cessation counselling can assist smokers to quit. Quality of evidence: I
- Self-help materials provide a small increase in quitting compared with no intervention. Tailoring materials to the characteristics of individual smokers and adding follow-up telephone calls improves effectiveness. Quality of evidence: I
- Groups are better than self-help and other less intensive interventions. Quality of evidence: I
- Specific counselling is effective for men at high risk of ischaemic heart disease. Quality of evidence: I
- Toll-free quitlines are valuable in supporting quit attempts. Effective promotion--through a mass media campaign, for instance--is a major factor in their success. Quality of evidence: II - II (at best)
- There is good evidence for some interventions provided in specialist clinics. Few studies examine the effect of the hospital setting as an independent factor. Quality of evidence: Good evidence for particular interventions.

Insufficient evidence for effectiveness of a hospital setting compared to a community setting.

### Behaviour Modification

- There is no evidence of benefit from aversion methods in general. There is some evidence for 'rapid smoking' but this is based on trials with significant methodological problems. Quality of evidence: I (no effect for aversion methods generally); insufficient for 'rapid smoking'.
- Behaviour modification therapy takes many forms and there is evidence of a small benefit when compared to no intervention. However, this effect appears to be no greater than simple advice from a health professional, while the cost is generally several times higher. Quality of evidence: I
- There is no conclusive evidence that hypnotherapy has more effect than no treatment. Quality of evidence: I
- There is insufficient research in exercise-based interventions. Quality of evidence: insufficient

### Nicotine Replacement Therapy

- NRT reduces withdrawal symptoms from smoking by supplying nicotine in a safe manner, without the harmful constituents contained in tobacco smoke. Strong evidence exists that all forms of NRT commercially available in New Zealand increase quit rates at 12 months approximately 1.5 to 2 fold compared with placebo, regardless of the setting. The effectiveness of NRT appears to be largely independent of the intensity of additional support provided to the smoker. There is no current evidence for a greater effect (on abstinence rates) of combinations of nicotine gum and patch compared with one form alone, or of nasal spray and patch compared with nasal spray alone. One study suggests that nasal spray and patch may be more effective than patch alone. There is no current evidence that routine use of the nicotine patch at doses higher than 22 mg/24 hours, or of combinations of different forms of NRT is more effective than standard dose monotherapy. NRT does not lead to an increased risk of adverse cardiovascular events in smokers with a history of cardiovascular disease. Quality of evidence: I
- The findings on combination therapy (combining one medication that allows for passive nicotine delivery [for example transdermal patch] with another medication that permits immediate nicotine delivery [for example gum, nasal spray, inhaler]) are not robust and further research is warranted. Quality of evidence: I

### Other Pharmacological Therapies

- There is evidence for the effectiveness of nortriptyline either alone or in combination with NRT. Quality of evidence: I
- Given the small sample size and possible methodological problems with blinding in the only RCT identified, it is not possible to comment on the effectiveness of Nicobrevin. Quality of evidence: insufficient
- A systematic review has concluded there is no evidence to support the effectiveness of Lobeline. Quality of evidence: insufficient

- There is no consistent evidence that anxiolytics aid smoking cessation, but the available evidence does not rule out a possible effect. Quality of evidence: I
- Although clonidine is effective in promoting smoking cessation, the high incidence of side effects precludes its use as first-line therapy. Quality of evidence: I

#### Other Therapies

- There is no clear evidence that acupuncture is effective for smoking cessation. The effect of acupuncture on withdrawal symptoms remains untested. Quality of evidence: I
- No trials of homeopathic and herbal products appear in the medical literature. Quality of evidence: insufficient

#### Smoking Cessation Programmes in Pregnancy

- Smoking cessation programmes in pregnancy appear to reduce smoking, low birthweight and pre-term birth, but no effect was detected for very low birthweight or perinatal mortality. Quality of evidence: I
- There is good evidence for counselling interventions for pregnant women who smoke. Self-help manuals, particularly material specifically directed to pregnancy, are more effective in this population than in other groups. Quality of evidence: I
- NRT should be considered for use in pregnant women who smoke more than 15 cigarettes/day, who are motivated to quit and who have attempted unsuccessfully to quit without NRT. NRT should only be used in conjunction with regular follow-up and other supportive measures and close monitoring for symptoms of over or under-dose. Quality of evidence: nil specific to pregnant women. More evidence on safety is desirable.

#### Smoking Cessation Programmes for Children and Adolescents

There is insufficient research in the area of cessation interventions for children and adolescents. Quality of evidence: insufficient

#### Definitions:

I

Evidence obtained from at least one properly randomised controlled trial (RCT)

II-I

Evidence obtained from well-designed controlled trials without randomisation

II-II

Evidence obtained from well-designed cohort or case-control analytic studies, preferably from more than one centre or research group

II-III

Evidence obtained from multiple time series with or without intervention

III

Opinions of respected authorities, based on clinical experience

## BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

### POTENTIAL BENEFITS

- It is beneficial to stop smoking at any age. The earlier smoking is stopped, the greater the health gain.
- Smoking cessation has major and immediate health benefits for smokers of all ages. Former smokers have fewer days of illness, fewer health complaints, and view themselves as healthier.
- Within one day of quitting, the chance of a heart attack decreases.
- Within two days of quitting, smell and taste are enhanced.
- Within two weeks to three months of quitting, circulation improves and lung function increases by up to 30 percent.
- Excess risk of heart disease is reduced by half after one year's abstinence. The risk of a major coronary event reduces to the level of a never smoker within five years. In those with existing heart disease, cessation reduces the risk of recurrent infarction or death by half.
- Former smokers live longer: after 10 to 15 years' abstinence, the risk of dying almost returns to that of people who never smoked. Smoking cessation at all ages, including in older people, reduces risk of premature death.
- Men who smoke are 17 times more likely than non-smokers to develop lung cancer. After 10 years' abstinence, former smokers' risk is only 30 to 50 percent that of continuing smokers, and continues to decline.
- Women who stop smoking before or during the first trimester of pregnancy reduce risks to their baby to a level comparable to that of women who have never smoked. Around one in four low birth weight infants could be prevented by eliminating smoking during pregnancy.
- The average weight gain of three kg and the adverse temporary psychological effects of quitting are far outweighed by the health benefits.

### POTENTIAL HARMS

#### Smoking cessation--Weight gain

#### Nicotine Replacement Therapy (NRT)

- Overdose -- upset stomach/abdominal pain, nausea/vomiting, diarrhoea, dizziness, tachycardia, change in hearing/vision, bad headache, flushing, confusion, hypotension
- Withdrawal symptoms/Underdose -- Craving, irritability, anxiety, sleep disturbance, impaired concentration, hunger, weight gain, depression
- Dependence

## Bupropion

- Seizures (should only be considered as a second-line intervention after unsuccessful trials with other smoking cessation treatments including NRT). The recommended dose of bupropion must not be exceeded since there is a dose-related risk of seizure.
- Overdose -- drowsiness and loss of consciousness
- Other undesirable effects -- see original guideline document for detailed listing.

## Nortriptyline

Nortriptyline sometimes caused sedation, constipation, urinary retention and cardiac problems and when taken as an overdose could be fatal. The most common side effect in both trials was dry mouth. (Prescribers should consult the manufacturer's product information sheets or Medsafe data sheets for information regarding dose, precautions, contraindications and side effects associated with nortriptyline.)

### Subgroups Most Likely to be Harmed:

- Women tend to gain slightly more weight than men and, for both sexes, people under the age of 55 and heavy smokers (more than 25 cigarettes per day) are at elevated risk of major weight gain.
- Risk of dependence on NRT is highest in those patients using nicotine nasal spray.
- Manufacturer's information states that nicotine passes to the fetus and affects its breathing movements and circulation, and that nicotine passes freely into breast milk in quantities that may affect the child even with therapeutic doses and that ideally nicotine should be avoided during breastfeeding. However, NRT should be considered when a pregnant or breastfeeding woman is unable to quit, and when the likelihood of quitting, with its potential benefits, outweighs the risks of NRT and potential continued smoking.
- Bupropion should be used with extreme caution in patients:
  - With clinical conditions that can lower the seizure threshold, such as alcohol abuse, diabetes treated with insulin or oral hypoglycaemic agents, or a history of head trauma
  - Taking medicine that can lower the seizure threshold, including antidepressants, antipsychotics, sedating antihistamines, antimalarials, tramadol, theophylline, systemic steroids and quinolones
- The safety and efficacy of bupropion for patients under 18 years of age or for use in pregnancy has not been established.

## CONTRAINDICATIONS

### CONTRAINDICATIONS

Contraindications to nicotine replacement therapy (NRT) may include:

- Hypersensitivity to nicotine

- Recent myocardial infarction (within three months)
- Unstable or progressive angina pectoris
- Prinzmetal's variant angina
- Severe cardiac arrhythmias
- Stroke in acute phase

Bupropion is contraindicated in patients:

- With seizure disorder (current or previous), central nervous system (CNS) tumour, bulimia or anorexia nervosa (current or previous)
- Withdrawing from alcohol or benzodiazepines
- Concomitantly receiving monoamine oxidase inhibitors (MAOIs)
- Hypersensitivity to bupropion or any of the components of the preparation
- Currently taking any other preparation containing bupropion

## QUALIFYING STATEMENTS

### QUALIFYING STATEMENTS

The guidelines are not meant to replace clinical judgement and the recommendations may not be appropriate for use in all circumstances. How the recommendations are implemented remains the provider's decision in the context of the individual smoker's circumstances. Each cessation provider is encouraged to individualise the way they develop or modify their systems to implement these guidelines.

## IMPLEMENTATION OF THE GUIDELINE

### DESCRIPTION OF IMPLEMENTATION STRATEGY

These guidelines were disseminated to general practices and a range of health providers and health professionals.

Refer to the original guideline document for a list of Resources/Services providing a range of smoking cessation interventions throughout New Zealand.

## INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

### IOM CARE NEED

Staying Healthy

### IOM DOMAIN

Effectiveness

Patient-centeredness

## IDENTIFYING INFORMATION AND AVAILABILITY

### BIBLIOGRAPHIC SOURCE(S)

National Advisory Committee on Health and Disability. Guidelines for smoking cessation: revised 2002. Wellington (New Zealand): National Advisory Committee on Health and Disability (National Health Committee); 2002 May. 33 p. [42 references]

### ADAPTATION

Not applicable: The guideline was not adapted from another source.

### DATE RELEASED

1999 Jul (revised 2002 May)

### GUIDELINE DEVELOPER(S)

New Zealand Guidelines Group - Private Nonprofit Organization

### SOURCE(S) OF FUNDING

The National Health Committee funded the Guidelines for Smoking Cessation review process. Publication and distribution of the Guidelines was funded by the National Health Committee and the Ministry of Health.

### GUIDELINE COMMITTEE

Guideline Working Group

### COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Working Group Members : Dr Diana North, Medical Director, National Heart Foundation, Vice Chair Smokefree Coalition; Dr Philip Barham, General Practitioner, RNZCGP nominee; Helen Glasgow, Executive Director, The Quit Group, Chair Smokefree Coalition; Dr Marewa Glover, School of Medicine, University of Auckland, Vice Chair Apaarangi Tautoko Auahi Kore; Donna MacLean, Practice Nurse, Pegasus Medical Group, Christchurch; Sue Taylor, National Smoking Cessation Manager and National Co-ordinator Aukati Kai Paipa, Te Hotu Manawa Māori; Jane Mills, National Quitline Manager, The Quit Group; Sue Graham, Pegasus Medical Group; Iutita Rusk, Pacific Heartbeat, National Heart Foundation; Teresea Olsen, Aukati Kai Paipa, Kokiri Marae; Liz Price, Health Promotion Programme Manager, Cancer Society of New Zealand; Tony Reeder, PhD, Social and Behavioural Research in Cancer Group, Department of Preventive and Social Medicine, Dunedin School of Medicine; Edith Rerekura, Quitline Adviser, Consumer Representative, Quitline; Candace Bagnall, Public Health Portfolio Manager, Auckland Office, Ministry of Health; Denise Barlow, Smoking Cessation Guidelines Facilitator, National Heart Foundation of New Zealand

## FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

## ENDORSER(S)

Action on Smoking and Health - Private Nonprofit Organization  
Aparangi Tautoko Auahi Kore Māori Smokefree Coalition - Private Nonprofit Organization  
Asthma and Respiratory Foundation of New Zealand, Inc., Te Taumatua Huango, Mate Ha o Aotearoa  
Australian and New Zealand College of Anaesthetists - Medical Specialty Society  
Cancer Society of New Zealand - Disease Specific Society  
Child Cancer Foundation - Private Nonprofit Research Organization  
Ministry of Education, New Zealand - National Government Agency [Non-U.S.]  
Ministry of Health, New Zealand - National Government Agency [Non-U.S.]  
National Advisory Committee on Core Health and Disability Support Services  
National Heart Foundation of New Zealand - Disease Specific Society  
New Zealand College of Clinical Psychologists - Professional Association  
New Zealand Guidelines Group - Private Nonprofit Organization  
New Zealand Occupational Health Nurses Association - Professional Association  
New Zealand Psychological Society - Professional Association  
New Zealand Society of Physiotherapists - Professional Association  
Pharmaceutical Society of New Zealand - Professional Association  
Pharmacy Guild of New Zealand, Inc. - Private For Profit Organization  
Royal Australasian College of Physicians - Professional Association  
Royal New Zealand College of General Practitioners - Medical Specialty Society  
Smokefree Coalition - Private Nonprofit Organization  
Social and Behavioural Research in Cancer Group, Dunedin School of Medicine - Medical Specialty Society  
Stroke Foundation of New Zealand, Inc. - Medical Specialty Society  
Te Ohu Rata o Aotearoa (Māori Medical Practitioner Association) - Professional Association  
The Quit Group, New Zealand

## GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previous version: National Advisory Committee on Health and Disability. Guidelines for smoking cessation. Wellington (New Zealand): National Advisory Committee on Health and Disability (National Health Committee); 1999.

The guideline is scheduled for review in March 2004.

## GUIDELINE AVAILABILITY

Electronic copies: Available in Portable Document Format (PDF) from the [New Zealand National Health Committee Web site](#).

Electronic copies also accessible from the [New Zealand Guideline Group Web site](#).

Print copies: Available from the New Zealand National Health Committee. To order hardcopy publications, e-mail [pubs@moh.govt.nz](mailto:pubs@moh.govt.nz) or send mail to Ministry of Health, C/-Wickliffe Limited; PO Box 932; Dunedin, New Zealand.

#### AVAILABILITY OF COMPANION DOCUMENTS

The following is available:

- Guidelines for smoking cessation. Revised literature review and background information. Wellington (New Zealand): National Advisory Committee on Health and Disability (National Health Committee); 2002 May.

Electronic copies: Available from the [New Zealand Guideline Group Web site](#).

Print copies: Available from the New Zealand National Health Committee. To order hardcopy publications, email [pubs@moh.govt.nz](mailto:pubs@moh.govt.nz) or send mail to Ministry of Health, C/-Wickliffe Limited; PO Box 932; Dunedin, New Zealand.

#### PATIENT RESOURCES

The following is available:

- Information for patients. In: National Advisory Committee on Health and Disability. Guidelines for smoking cessation: revised 2002. Wellington (New Zealand): National Advisory Committee on Health and Disability (National Health Committee); 2002 May. pp. 23-31.

Electronic copies: Available from the [New Zealand National Health Committee Web site](#).

Print copies: Available from the New Zealand National Health Committee. To order hardcopy publications, email [pubs@moh.govt.nz](mailto:pubs@moh.govt.nz) or send mail to Ministry of Health, C/-Wickliffe Limited; PO Box 932; Dunedin, New Zealand.

#### NGC STATUS

This NGC summary was completed by ECRI on March 21, 2003. The information was verified by the guideline developer on March 24, 2003.

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