

# Guidelines for Smoking Cessation

## CALENDAR 2002

### JANUARY

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| 9  | 10 | 11 | 12 | 13 | 14 | 15 |
| 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| 23 | 24 | 25 | 26 | 27 | 28 | 29 |

### MAY

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| 28 | 29 | 30 | 31 |    |    |    |

**QUIT NOW!**

### SEPTEMBER

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| 24 | 25 | 26 | 27 | 28 | 29 | 30 |

**Revised 2002**

The Guidelines for Smoking Cessation were initially developed in 1999 by a multidisciplinary team and this revision was guided by an advisory group consisting of:

- 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
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- Denise Barlow, Smoking Cessation Guidelines Facilitator, National Heart Foundation

The National Health Committee would like to acknowledge additional people who were involved in the original guidelines: Professor Boyd Swinburn, Dr Julia Carr, Cynthia Maling, Wilma Olsen, Anaru Waa, Dr Nick Wilson and a focus group of smokers.

## Endorsements

The following organisations have endorsed these guidelines:

- Action on Smoking and Health (ASH)
- Apaarangi Tautoko Auahi Kore (ATAK) The Māori Smokefree Coalition
- Australian and New Zealand College of Anaesthetists
- Cancer Society of New Zealand
- Child Cancer Foundation
- Ministry of Education
- Ministry of Health
- National Heart Foundation of New Zealand
- New Zealand College of Clinical Psychologists
- New Zealand Occupational Health Nurses Association
- New Zealand Psychological Society
- New Zealand Society of Physiotherapists
- Pharmaceutical Society of New Zealand
- Pharmacy Guild of New Zealand (Inc)
- Royal Australasian College of Physicians
- Royal New Zealand College of General Practitioners (RNZCGP)
- Smokefree Coalition
- Social and Behavioural Research in Cancer Group, Dunedin School of Medicine
- Stroke Foundation of New Zealand Inc.
- Te Ohu Rata o Aotearoa (Māori Medical Practitioner Association)
- The Asthma and Respiratory Foundation of New Zealand (Inc.) Te Taumatua Huango, Mate Ha o Aotearoa
- The Quit Group

The New Zealand Guidelines Group (NZGG) has appraised a final draft of this guideline using the international AGREE guidelines appraisal tool. The NZGG and the RNZCGP endorse this guideline with a recommendation that the link between the evidence and guideline recommendations is made more explicit in future editions.

# Guidelines for Smoking Cessation

*“Remember, smokers aren’t the problem. Tobacco is the problem. Smokers can be part of the solution even if they can’t quit at this time. Smokers can provide a smokefree environment for their family and fellow workers by smoking outside and not smoking in the car. This reduces the ‘vertical transmission’ of smoking-related illness and puts smokers in a win:win situation, assisting them to become active participants in a smokefree strategy.”*

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ON HEALTH AND DISABILITY  
HUNGA KAITIHIRO I TE HAUORA O TE TANGATA

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# Introduction

- There is good evidence that even brief advice from health professionals has a significant effect on smoking cessation rates. A supportive, ongoing relationship with a health professional is often an essential precursor to successful quitting. Success in quitting smoking depends less on any specific type of intervention than on delivering personalised empathic smoking cessation advice to smokers, and repeating it in different forms from several sources over a long period.
- Smoking cessation is a dynamic process that occurs over time rather than a single event. Smokers cycle through the stages of contemplation, quitting and relapse an average of three to four times before achieving permanent success.
- Tobacco dependence is a chronic condition that often requires repeated intervention. However, effective treatments exist that can produce long-term abstinence.
- These guidelines are designed for smoking cessation providers to assist all clients with smoking cessation. The guidelines will also be useful in other settings. The guidelines are based on comprehensive literature reviews and background information available at the time of publication.
- 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.

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## Process

The National Health Committee funded the development of these guidelines. Publication and distribution of the guidelines was funded by the National Health Committee and the Ministry of Health.

A guidelines team convened by the National Health Committee developed the *Guidelines for Smoking Cessation* in 1999.<sup>1</sup> The following process was undertaken in reviewing the guidelines in 2001/2002.

1. A new advisory group was formed consisting of some members of the original group and the some new members.
2. A systematic literature review was undertaken for the period 1999 to February 2002 and used to update the background and literature review document.
3. Modifications were made to the *Guidelines for Smoking Cessation* to reflect changes in the evidence and information about currently available services.
4. Feedback on the revised guidelines was sought from the advisory group and people who had worked with the previous New Zealand guidelines. The draft guidelines were further revised to reflect this feedback.
5. The revised guidelines were then sent out to a range of organisations for endorsement. Many organisations provided valuable feedback which was incorporated into the guidelines.

At the next revision, planned for 2004, the evidence and guidelines will be fully reviewed and recommendations graded to reflect the quality of supporting evidence.

A summary of current evidence for the effectiveness of smoking cessations interventions is on pages 12 to 14. A copy of the Revised Literature Review and Background Information (a full evidence summary) can be viewed on, and downloaded from, the New Zealand Guidelines Group website (<http://www.nzgg.org.nz>). The Guidelines are also on the website or can be ordered by phoning 04-496 2277, writing to: Ministry of Health Publications c/- Wickliffe Press PO Box 932, Dunedin or emailing [moh@wickliffe.co.nz](mailto:moh@wickliffe.co.nz).

# Promoting smoking cessation

## THE FIVE A'S: ASK, ASSESS, ADVISE, ASSIST, ARRANGE<sup>i</sup>

### 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.

### II. ASSESS

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

### III. ADVISE

Provide brief cessation messages at nearly every encounter. These messages should be:

- clear, strong and personalised
- supportive
- non-confrontational.

### 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:

- offer self-help material
- assist in setting a quit date and help develop a quit plan
- provide practical counselling and support
- explore barriers to successful cessation and strategise solutions
- offer referral to organised cessation support (eg, the free QUITLINE – 0800 778 778)
- encourage nicotine replacement therapy as first-line pharmacotherapy or 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 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.

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i Note that the US Guidelines propose a different order for the Five A's, placing 'Advise' before 'Assess'. However, it was felt that providing strong advice to smokers early in an interview may close off opportunities to elicit their willingness to quit.

# The Five A's

## I. ASK

### Identify and document smoking status

|   |   |
|---|---|
| <p><b>Identify every adult's smoking status</b></p> <p><b>Identify the smoking status of a child's parents/caregivers at Well Child visits, and at acute care visits for conditions potentially impacted by second-hand smoke</b></p> | <p>Determine if a person:</p> <ul style="list-style-type: none"><li>• does not smoke</li><li>• does smoke</li><li>• recently quit smoking (&lt;1 year).</li></ul> <p>Ask <b>"Do you currently smoke?"</b> If no, ask <b>"Have you quit in the past year?"</b></p> <p>Ask adults accompanying children, <b>"Does anyone in your/this child's household smoke?"</b></p> <p>Ask children over the age of 10, <b>"Have you ever smoked a cigarette?"</b></p> <p><b>POSITIVELY REINFORCE non-smoking, particularly with adolescents.</b></p> |
| <p><b>Highlight smoking status and/or exposure to second-hand smoke in the medical record</b></p>   | <p>Place a smoking status and/or second-hand smoke sticker on the master problem list, or electronically document in computerised notes.</p> <p>For identified smokers and recent quitters (within one year), update smoking status at each visit.</p>  |
| <p><b>Obtain a smoking history on all smokers</b></p>   | <p>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.</p> <p>Attach the completed form to the person's chart or record for doctor/nurse review (where relevant).</p> <p>Regularly revise smoking status and document, including date.</p>   |

## II. ASSESS

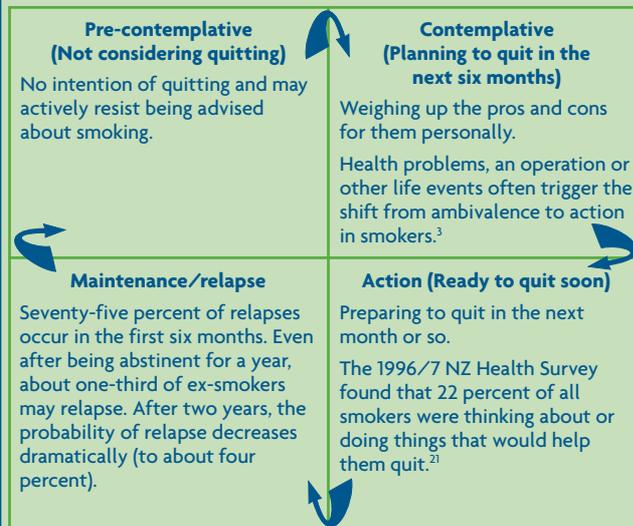
### Assess a person's willingness to quit

#### Assess willingness to quit

ASK: "HOW DO YOU FEEL ABOUT YOUR 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',<sup>2</sup> in which smokers are seen as moving through a series of stages. These are summarised in the table below.<sup>3</sup>



ASK: "HOW DO YOU FEEL ABOUT YOUR SMOKING?"

Examples of useful additional questions:<sup>3</sup>

- "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.<sup>3</sup>
- 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

Offer cessation advice on a regular basis, over an extended period, to all smokers

#### Advise those people who smoke to stop

Brief, repetitive, consistent, positive reminders to quit from multiple providers (or reinforcement of a recent quit attempt) double success rates.

Advice and assistance are useful whatever the stage of change a smoker is at.

Use messages that are clear, strong, 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**.<sup>4</sup> 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.

## IV. ASSIST

Offer appropriate treatment and assistance to smokers or recent quitters

Offer nicotine replacement therapy

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### Provide assistance according to the person's readiness to quit

#### 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) 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 ie, 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*.<sup>5</sup>
- 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) 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 organised 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 follow-up for smokers

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|  |   |
|--|---|
| <p><b>For all smokers</b></p>  | <p>Arrange appropriate follow-up for all smokers who are:</p> <ul style="list-style-type: none"> <li>– not considering quitting</li> <li>– planning to quit but not soon</li> <li>– ready to quit within the next month</li> <li>– and those who have recently quit as relapse prevention or for those who have recently relapsed.</li> </ul>   |
| <p><b>For smokers ready to quit</b></p>  | <p>Most smokers quit ‘on their own’, but support and follow-up contacts increase success rates.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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) provides brief (about 10 minutes) support for people quitting smoking. Callers can join a call-back service for continuing support during the quitting period.</p> <p>Aukati Kai Paipa, and other services focusing on Māori 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 DHB smokefree officers, or for Māori services, contact Te Hotu Manawa Māori or your local iwi health provider.</p> |
| <p><b>People on NRT (or bupropion or nortriptyline) should be reassessed</b></p> | <p>Review NRT, bupropion or nortriptyline dose and adjust if there are symptoms of overdose or underdose (see pages 15–19).</p> <p>People who smoke at all during the first two weeks do not do nearly as well as those who don’t.</p>  |

# 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**
- 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.

## Evidence summary

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- Tobacco smoking is estimated to kill between 4,300 and 4,700 New Zealanders each year.<sup>6</sup> Nearly half of these deaths occur in middle age (35–69 years).<sup>7</sup>
- Most of those killed by tobacco are not particularly heavy smokers and most started as teenagers.<sup>7</sup>
- Approximately 50 percent of smokers die prematurely from their smoking, on average 14 years earlier than non-smokers.<sup>6</sup>
- Smoking kills one in two of those who continue to smoke past age 35.<sup>8</sup>
- There is evidence that smoking can cause about 40 different diseases.<sup>8</sup>
- For Māori, the preventable mortality attributed to smoking is 21 percent of deaths in females and 22 percent in males.<sup>6</sup>
- For Pacific peoples, the preventable mortality attributed to smoking is eight percent of deaths in females and 19 percent in males.<sup>6</sup>
- For European/other ethnic groups, the preventable mortality attributed to smoking is 10 percent of deaths in females and 19 percent in males.<sup>6</sup>
- Smoking is socioeconomically patterned with higher rates of smoking in lower socio-economic groups. Thus tobacco smoking produces a greater relative burden of disease and premature death in lower socioeconomic groups and is a major contributor to socioeconomic inequalities in health.<sup>9</sup>
- Smoking, especially current smoking, is a crucial and extremely modifiable independent determinant of stroke.<sup>10</sup> A New Zealand study has confirmed that passive smoking as well as active smoking increases the risk of acute stroke.<sup>11</sup>
- Second-hand smoke (also called environmental tobacco smoke or ETS) is a Class A carcinogen and contains approximately 4,000 chemicals.<sup>12,13</sup>
- Past exposures to second-hand tobacco smoke causes the death of an estimated 347 people per year in New Zealand.<sup>14</sup> Exposure of children to second-hand smoke:
  - can cause middle ear effusion<sup>15</sup>
  - increases the risk of croup, pneumonia and bronchiolitis by 60 percent in the first 18 months of life<sup>16</sup>
  - increases the frequency and severity of asthma episodes<sup>17</sup>
  - is a risk factor for induction of asthma in asymptomatic children.<sup>18</sup>

## Benefits of smoking cessation

*These points may be helpful in motivating people to quit smoking. Many smokers deny being at increased risk of cancer and heart disease and more accurate perception of risk may assist cessation efforts.<sup>19</sup>*

- It is beneficial to stop smoking at any age. The earlier smoking is stopped, the greater the health gain.<sup>8</sup>
- 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.<sup>20,21</sup>
- 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.<sup>22</sup> In those with existing heart disease, cessation reduces the risk of recurrent infarction or death by half.<sup>20</sup>
- Former smokers live longer: after 10 to 15 years' abstinence, the risk of dying almost returns to that of people who never smoked.<sup>23</sup> Smoking cessation at all ages, including in older people, reduces risk of premature death.<sup>23</sup>

- Men who smoke are 17 times more likely than non-smokers to develop lung cancer.<sup>6</sup> After 10 years' abstinence, former smokers' risk is only 30 to 50 percent that of continuing smokers, and continues to decline.<sup>20</sup>
- 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.<sup>20</sup> Around one in four low birth weight infants could be prevented by eliminating smoking during pregnancy.<sup>20</sup>
- The average weight gain of three kg and the adverse temporary psychological effects of quitting are far outweighed by the health benefits.<sup>24</sup>

## Evidence for effectiveness of health professional intervention

- A Cochrane review of 16 RCTs found simple advice from doctors had a significant effect on cessation rates (OR<sup>ii</sup> for quitting 1.69; 95% confidence interval 1.45–1.98).<sup>25</sup>
- When trained providers are routinely prompted to intervene with people who smoke, they achieve significant reductions in smoking prevalence (up to 15 percent cessation rates compared with 5 to 10 percent in non-intervention sites).<sup>20</sup>
- Doctors and other health professionals using multiple types of intervention to deliver individualised advice on multiple occasions produce the best results. Frequent and consistent interventions over time are more important than the type of intervention.<sup>20</sup>

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## Consumer satisfaction

- When smokers in a clinic with follow-up systems for smokers were asked about their response to the programme, 75 percent were more satisfied with their overall care because of the stop-smoking efforts.<sup>26</sup>

## Nicotine Replacement Therapy (NRT)

- Systematic review shows that all forms of NRT commercially available in New Zealand (nicotine gum, transdermal patch, nicotine nasal spray and nicotine inhaler) increase quit rates at 12 months approximately 1.5 to 2 fold compared with placebo, regardless of the setting.<sup>27</sup>
- The effectiveness of NRT appears to be largely independent of the intensity of additional support provided to the smoker. Provision of more intense levels of support, although beneficial in facilitating the likelihood of quitting, is not essential to the success of NRT.<sup>27</sup>
- A more extensive discussion of evidence for the effectiveness of NRT is given in the Smoking Cessation Guidelines Evidence Review and Background. (See page three for information regarding acquiring this document).

## Antidepressants

- Nicotine replacement therapy has been the mainstay of pharmacotherapy for tobacco addiction, but two other medications, the antidepressant drugs bupropion and nortriptyline, have also been shown to be effective.<sup>28</sup> Results of RCTs of bupropion and nortriptyline are sufficient to endorse their use in clinical practice.<sup>29</sup>
- Bupropion is recommended by the Medicines Adverse Reactions Committee (MARC) as second-line pharmacotherapy in New Zealand, although it is not publicly subsidised.

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ii Odds Ratios (OR): The OR is the ratio of the odds of exposure among cases compared with controls. For example an OR of 1.6 indicates that people who receive simple smoking cessation advice from their doctor have an increase chance of quitting by 1.6 times compared to those who do not receive simple smoking advice from their doctor.

- Nortriptyline is not registered for use as a smoking cessation adjunct but can be prescribed for this purpose under Section 25 of the Medicines Act 1981 (see page 19 for further information). As nortriptyline is fully subsidised it should be considered as a second-line agent, in particular for people who cannot afford bupropion.
- Bupropion is now recommended for first-line pharmacotherapy alongside nicotine replacement therapy and nortriptyline as second-line in the updated US clinical practice guideline.<sup>4</sup>

## 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.<sup>20</sup> 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.
- Ershoff et al 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.<sup>30</sup> The HMO saved approximately \$3 for every \$1 spent on the self-help programme.

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## Smoking cessation programmes

- Cross-sectional studies from the United States indicate that 90 percent of former smokers use individual methods rather than organised programmes to help them quit.<sup>31</sup> However, formal cessation programmes play a number of important roles:
  - they tend to be utilised by more heavily addicted smokers who have made multiple quit attempts
  - for the individual smoker, taking part in a structured programme increases the likelihood of successfully becoming a non-smoker for any given quit attempt
  - they reduce pressure on the health care system by removing the need for multiple follow-up visits.
- An evaluation of the Aukati Kai Paipa 2000 programme has been undertaken for the Ministry of Health. The report is being finalised currently and will be publicly released in late 2002. The programme appears successful in delivering cessation services in an appropriate, culturally safe manner to a population group that may not access other cessation services. Preliminary indications are that the programme has been successful in reducing smoking prevalence among Māori women and their whanau.
  - The indicative quit rate for the programme appears significantly higher at 12 months (23%) than the latent quit rate for Māori women not on the programme (12.5%).
  - Participants who did not quit showed a reduction in tobacco consumption.
  - Findings indicate that the use of NRT enhanced the quit rate.

# Nicotine Replacement Therapy (NRT)

## Rationale

NRT is the use of a product containing nicotine to replace nicotine previously taken in by smoking. NRT decreases withdrawal symptoms and improves cessation outcomes for many people. NRT is not the mainstay of smoking cessation but is an effective supplement to behavioural interventions and good support.

NRT is currently available in New Zealand both over-the-counter at pharmacies and from the Quitline and authorised nicotine patch and gum providers. NRT is available as nicotine patches and nicotine gum (both over-the-counter at pharmacies), nicotine nasal spray (prescription medicine), and nicotine inhaler (pharmacist only).

## Government subsidised NRT

Since November 2000, subsidised nicotine patches and gum have become available through the Quitline and smoking cessation providers who are part of the health provider exchange card programme. Health providers must meet certain criteria to become an exchange card provider. The health provider provides the patient with an exchange card for a four-week supply of NRT, which can be exchanged at a community pharmacy. The user pays a co-payment of \$5.00. The Quit Group administers this programme.

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## 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<sup>iii</sup>
- 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**, 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.<sup>27,32</sup>

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<sup>iii</sup> 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.

## Relative contraindications/relevant medical conditions

Properly dosed NRT supplies nicotine at a lower dosage than a smoker receives through smoking. NRT supplies none of the other 4,000 noxious chemicals in tobacco smoke.

Contraindications to NRT may include: hypersensitivity to nicotine, recent myocardial infarction (within three months), unstable or progressive angina pectoris, Prinzmetal's variant angina, severe cardiac arrhythmias or stroke in acute phase.

### Use of NRT in pregnant and breastfeeding women

Manufacturers' 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 breast-feeding. 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.

### Myocardial infarction/coronary artery disease

NRT should start at a lower dose. Dose may be increased if withdrawal symptoms occur. Follow closely. *Note: use cautiously (after discussion with specialist) in people in the immediate post-MI period (four weeks), those with serious arrhythmias, or those with severe or worsening angina.*

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### Suggested NRT dose for different daily smoking levels

| Type of NRT | <10 cigarettes/day | 10–20 cigarettes/day                              | >20 cigarettes/day                                |
|-------------|--------------------|---|---|
| Patches     | none               | 14 mg (Nicabate and Nicotinell) 10 mg (Nicorette) | 21 mg (Nicabate and Nicotinell) 15 mg (Nicorette) |
| Gum         | none               | 2 mg gum, 8–12 per day                            | 4 mg gum, 8–12 per day                            |
| Nasal Spray | none               | 1 mg (2 sprays) each hour 8–12 times per day      | 1–3 mg (2–6 sprays) each hour 8–12 times per day  |
| Inhaler     | none               | 6–12 cartridges per day                           | not recommended                                   |

## Overdose symptoms of NRT

Upset stomach/abdominal pain, nausea/vomiting, diarrhoea, dizziness, tachycardia (racing heart), change in hearing/vision, bad headache, flushing, confusion, hypotension (low blood pressure).

## Withdrawal symptoms/underdose of NRT

Craving, irritability, anxiety, sleep disturbance, impaired concentration, hunger, weight gain, depression.

**Recommendation:** start with a higher dose for two to four weeks, then decrease to next dose for two weeks and so on. No studies have shown that treatment beyond eight to 12 weeks increases treatment effectiveness.

## NRT available in New Zealand

### Nicotine patches

- Brands available in New Zealand include:
  - *Nicabate TTS* and *Nicotinell TTS* strength: 7 mg, 14 mg, 21 mg (24 hours)
  - *Nicorette* doses: 5 mg, 10 mg, 15 mg (16 hours)
  - *Nicotrol* doses: 5 mg, 10 mg, 15 mg, (16 hours),
- one 21 mg patch/day is roughly equivalent to smoking one cigarette/hour
- after 24 hours use, patch retains 60 percent of original dose
- toxic to children, small pets
- all high dose patches deliver an average of 0.9 mg/hour of nicotine through the skin
- consider number of cigarettes smoked per day and body weight.

### Nicotine gum

The patch may be preferable to the gum because there are fewer compliance problems and it is easier to use. Gum can be used if the person prefers it, has not been successful using the patch and other modes of delivery, or has severe skin reaction or other contraindications to patch use. Gum comes in two doses – 2 and 4 milligrams (mg). The four mg dose is reserved for highly dependent smokers or those who have not been successful with the 2 mg dose. Prescribing considerations are generally similar to those for the patch.

The gum is chewed until a peppery taste emerges, then ‘parked’ between the cheek and gum. The gum should be slowly and intermittently chewed and ‘parked’ for about 30 minutes on a fixed schedule (one piece every one to two hours) for eight weeks. The two mg dose maximum is 30/day; the four mg maximum is 20/day.

Brands available in New Zealand include: *Nicorette* and *Nicotinell*.

### Nicotine nasal spray

Nicotine nasal spray is designed to deliver nicotine more rapidly than patches, gum or inhaler, and utilises a device similar to nasal antihistamine sprays.<sup>33</sup> It is not available over-the-counter and must be prescribed by a doctor.

Smokers use one to two doses per hour for eight weeks. Peak levels occur within 10 minutes and are about two-thirds those of cigarettes.<sup>34</sup> The large majority of smokers initially experience nasal and throat irritation, rhinitis, sneezing, coughing and watering eyes. Tolerance to these effects occurs in the first week.<sup>33</sup> Nicotine nasal spray is generally reserved for people with high levels of nicotine addiction for example heavy smokers.

Brands available in New Zealand include: *Nicorette*.

### Nicotine inhaler

The inhaler is a plastic rod with a nicotine plug providing a nicotine vapour when puffed on. The nicotine inhaler is a pharmacist only medicine. Although designated an inhaler, this is a misnomer because the device does not deliver a significant amount of nicotine to the lungs; rather it delivers nicotine to the mouth when either deep or shallow puffs are taken.<sup>35</sup> Peak levels are about half those of cigarettes.

The major difference between the inhaler and other forms of NRT is that the inhaler substitutes for some of the behavioural features of smoking.<sup>33</sup>

Brands available in New Zealand include: *Nicorette*.

# Antidepressants: Bupropion and Nortriptyline

Bupropion (*Zyban<sup>TM</sup>*) 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.

As bupropion is registered and promoted for use in smoking cessation in New Zealand, and is recommended as a first-line agent in the US Guidelines, it is discussed in greater detail in this section.

## Bupropion

Bupropion is an atypical antidepressant that has been shown to be effective in treating cigarette smokers by assisting with nicotine withdrawal. Bupropion's efficacy in smoking cessation does not appear to be due to its antidepressant effects.<sup>36</sup> The exact mechanism by which bupropion works is unknown but it is presumed to alleviate cravings associated with nicotine withdrawal by affecting noradrenaline and dopamine, two chemicals in the brain that may be key components of the nicotine addiction pathway.<sup>28</sup>

The most recent Cochrane review suggests that existing evidence is sufficient to endorse the use of bupropion in clinical practice.<sup>29</sup> In May 2000 bupropion (*Zyban<sup>TM</sup>*) was registered/approved in New Zealand. It is not subsidised in New Zealand currently, but is being widely used in New Zealand and other countries with reported success.<sup>iv</sup>

The Centre for Adverse Reactions Monitoring (CARM) has recorded 218 reports of adverse reactions (no causality established) associated with bupropion use, out of the 30,000 people who have used bupropion since it was launched in New Zealand in May 2000. Following a review of adverse reactions in bupropion, the Medical Adverse Reactions Committee has recently recommended that bupropion should only be considered as a **second-line intervention** after unsuccessful trials with other smoking cessation treatments including NRT.

## Precautions for prescribing bupropion

Bupropion is contraindicated in patients:

- with seizure disorder (current or previous), CNS tumour, bulimia or anorexia nervosa (current or previous)
- withdrawing from alcohol or benzodiazepines
- concomitantly receiving monoamine oxidase inhibitors (MAOIs)
- with hypersensitivity to bupropion or any of the components of the preparation currently taking any other preparation containing bupropion.<sup>37</sup>

Bupropion must not be used in patients with predisposing risk factors unless there is a compelling clinical justification for which the potential medical benefit of smoking cessation outweighs the potential increased risk of seizure. The safety and efficacy of bupropion for in patients under 18 years of age or for use in pregnancy has not been established.<sup>38</sup>

### **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.<sup>37</sup>

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iv Bupropion is now recommended for first-line pharmacotherapy alongside nicotine replacement therapy, in the updated US clinical practice guideline.<sup>4</sup> The National Institute for Clinical Excellence recommends NRT and bupropion for smokers who have expressed a desire to quit smoking.<sup>38</sup>

## Overdose symptoms of bupropion

Drowsiness and loss of consciousness.

## Undesirable effects

Fever, chest pain, asthenia, tachycardia, vasodilation, postural hypotension, increased blood pressure, flushing, syncope, seizures, insomnia, tremor, concentration disturbance, headache, dizziness, depression, confusion, hallucination, agitation, anxiety, anorexia, dry mouth, gastrointestinal disturbance including nausea and vomiting, abdominal pain, constipation, rash, pruritus, sweating, tinnitus, visual disturbance, taste disorders.<sup>37</sup>

### Recommended dose

The suggested dose is 150mg taken daily for three days increasing to 150mg twice daily thereafter. There should be an interval of at least eight hours between successive doses. Patients should be treated for at least seven weeks.

The Manufacturer recommends that *Zyban*<sup>TM</sup> tablets should be swallowed whole and not crushed or chewed.

The recommended dose of bupropion must not be exceeded since there is a dose-related risk of seizure.

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## Cost

The cost of *Zyban*<sup>TM</sup> is \$188.00 for approximately a four-week supply.

## Nortriptyline

A Cochrane review found RCT evidence that nortriptyline is an effective smoking cessation adjunct, with approximately equivalent efficacy to bupropion.<sup>29</sup> The US Guidelines conclude that the strength of evidence for the effectiveness of nortriptyline deserves a 'B' grading, while the evidence for Bupropion warrants an 'A' grade.<sup>4</sup> The efficacy of nortriptyline is independent of its antidepressant effects. In studies of its use as an antidepressant, 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 the smoking cessation trials was dry mouth.

While not registered for use in New Zealand as a smoking cessation adjunct, nortriptyline can be prescribed for this purpose under Section 25 of the Medicines Act 1981, which allows 'off-label' prescribing for non-approved indications. In doing so, the Code of Health and Disability Service Consumer's Rights would expect the prescriber to inform the patient that nortriptyline is not officially approved for this indication, provide evidence about the benefits and harms and seek informed consent for its use. In the case of nortriptyline, there is good evidence to support its use in smoking cessation and considerable evidence from its use as an antidepressant about its safety profile. As nortriptyline is fully subsidised, it should be considered in particular as a second-line agent for people who cannot afford bupropion.

Nortriptyline is recommended as a second-line agent in the US Guidelines because it is not registered for smoking cessation in the USA and there are more concerns about potential side-effects than with first-line medications. According to the US Guidelines, second-line treatments should be "prescribed for use on a case-by-case basis after first-line treatments have been used or considered".<sup>4</sup>

Prescribers should consult the manufacturers' product information sheets or Medsafe data sheets for information regarding dose, precautions, contraindications and side effects associated with nortriptyline.<sup>v</sup>

<sup>v</sup> The Medsafe data sheets are at <http://www.medsafe.govt.nz/Profes/Datasheet/n/Norpresstab.htm> and <http://www.medsafe.govt.nz/Profes/Datasheet/a/Allegrontab.htm> for *Norpress* and *Allegron* respectively.

# Combination therapy

## Rationale

A strategy for further improving the efficacy of NRT is to combine one medication that allows for passive nicotine delivery (for example transdermal patch) with another medication that permits “as required” nicotine delivery (for example gum, nasal spray, inhaler).<sup>39</sup>

The rationale for combining NRT medications is that smokers may need both a slow delivery system to achieve a constant concentration of nicotine to relieve cravings and tobacco withdrawal symptoms, as well as a faster acting preparation that can be administered on demand for immediate relief of breakthrough cravings and withdrawal symptoms.<sup>39</sup>

The US Guideline offers the following recommendation: “Combining the nicotine patch with a self-administered form of nicotine replacement therapy (either the nicotine gum or nicotine nasal spray) is more efficacious than a single form of nicotine replacement, and patients should be encouraged to use such combined treatments if they are unable to quit using a single type of first-line pharmacotherapy”.<sup>4</sup>

Present data show that there are conditions under which combinations of NRT products provide greater efficacy in relieving withdrawal and enabling cessation than monotherapy, but the findings are not robust and additional research is warranted to better understand the magnitude and generality of the benefits of combination therapy.

Nonetheless combination NRT appears to have the potential to provide effective treatment of tobacco dependence in people whose dependence is refractory to monotherapy with NRT.<sup>39</sup>

There is currently insufficient evidence to recommend the use of NRT with bupropion or nortriptyline in combination.<sup>38</sup>

### Recommended dose

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.

# Medicines' interactions with smoking

Prescribers should be familiar with the effects of smoking on drug metabolism.<sup>40</sup> In addition to nicotine, tobacco products contain many hydrocarbons or tar-like products. These agents cause induction (up-regulation) of several drug-metabolising enzymes in the liver, particularly cytochrome P450 CYP1A2. This can result in reduced concentrations of medicines that are metabolised by this pathway, and therefore reduced clinical effect.<sup>40</sup> These are pharmacokinetic drug interactions.

In addition to altering the way drugs are metabolised, nicotine can also cause pharmacodynamic effects. In particular, nicotine increases heart rate and blood pressure, causes a decrease in peripheral blood flow (vasoconstriction), increases platelet adhesiveness, and causes CNS stimulation. Therefore, these actions can work against many medicines, particularly those reducing blood pressure, anxiety/insomnia, and blood coagulation.<sup>40</sup>

## Smoking cessation pharmacokinetic interactions

When the hydrocarbons are no longer inhaled, the liver enzymes down-regulate and return to “normal” over about a one month period. This means that the inactivation (clearance) of medicines metabolised via these enzymes will reduce, causing increased concentrations and potentially toxicity (see list below). Where possible, either an effect (eg, blood pressure, sedation) or concentration (eg, theophylline, blood glucose) will need to be monitored when stopping smoking. Dosage reduction may often be required.<sup>40</sup>

Important medicines are caffeine, chlorpromazine, clozapine, flecainide, haloperidol, imipramine, mexiletine, olanzapine, propranolol, theophylline, warfarin. Be aware also of insulin, whose interaction is not cytochrome P450 mediated but is due to enhanced peripheral blood flow rather than altered metabolism by cytochrome P450. This may cause an increase in subcutaneous absorption of insulin.<sup>40</sup>

## Smoking cessation pharmacodynamic interactions

Particular note should be made when persons who are taking cardiovascular and/or psychoactive medications stop smoking. Take extra special care in those who have brittle conditions such as heart failure, diabetes, hypertension, and mental illness.<sup>40</sup>

## Considerations for special high-risk populations

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| <p><b>Parents/<br/>caregivers<br/>of children</b></p>  | <ul style="list-style-type: none"> <li>• Ask about exposure to second-hand smoke at Well Child visits, and give parents smoking cessation advice.</li> <li>• Discuss the relationship of second-hand smoke to illness at potentially related acute care visits, such as asthma, otitis media and bronchiolitis.</li> <li>• Children educated about the health effects of smoking can play an important role in convincing their parents to quit.</li> <li>• Consider the <i>Quit for our Kids</i> programme (see page 30).</li> </ul>  |
| <p><b>Pre-adolescents and adolescents</b></p>  | <ul style="list-style-type: none"> <li>• 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.</li> <li>• No cessation programme for teen smokers has been shown to work, so prevention is the key (eg, repeated positive reinforcement of abstinence).</li> <li>• 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.<sup>4</sup></li> </ul>  |
| <p><b>Pregnant and breastfeeding women</b></p>   | <ul style="list-style-type: none"> <li>• Encourage pregnant women who smoke to quit, and those who have quit to remain non-smokers after delivery.</li> <li>• 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.<sup>4</sup></li> <li>• Give the free <b>QUITLINE number 0800 778 778</b>, contact details of free services for pregnant women, <b>Aukati Kai Paipa</b> Smoking Cessation Services and <b>NRT Exchange Card Providers</b> in their locality.</li> <li>• Self-help manuals have been shown to be helpful in this group.</li> <li>• Most pregnant women who quit smoking while pregnant begin again after delivery – intervene with new parents often. Discuss nicotine delivery through breast milk.</li> <li>• 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 <b>and</b> 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.</li> </ul> |
| <p><b>People with smoking-related organ damage, and those who have relapsed repeatedly</b></p> | <ul style="list-style-type: none"> <li>• 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.</li> </ul>   |
| <p><b>Hospitalised smokers</b></p>   | <ul style="list-style-type: none"> <li>• 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.</li> <li>• Consider prescribing NRT during hospital stay.</li> </ul>  |

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| <p><b>Māori</b></p>  | <ul style="list-style-type: none"> <li>• Māori 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 socio-economic groups.</li> <li>• There are a number of kaupapa Māori cessation services that provide Māori with excellent support eg, <b>Aukati Kai Paipa</b> and <b>Noho Marae</b>.</li> <li>• Consider referral to culturally appropriate providers where possible. The <b>QUITLINE (0800 778 778)</b> provides Māori advisors. Also consider providing contact details of <b>Aukati Kai Paipa</b> and other Māori smoking cessation services and <b>NRT Exchange Card Providers</b> in their area.</li> </ul>   |
| <p><b>People with concurrent mental health problems or other chemical dependencies</b></p> | <ul style="list-style-type: none"> <li>• There is some evidence that smokers are at increased risk of depression and anxiety symptoms (when controlling for stressors and socioeconomic characteristics).<sup>41</sup></li> <li>• Many people with mental health disorders, such as depression, anxiety and schizophrenia, and other chemical dependencies, also smoke.</li> <li>• Nicotine is not an effective treatment for depression, anxiety and schizophrenia.</li> <li>• 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.</li> <li>• Smokers with mental health problems should be provided with effective smoking cessation treatments.</li> <li>• 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.</li> <li>• 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 <a href="http://www.health.vic.gov.au/mentalhealth/">http://www.health.vic.gov.au/mentalhealth/</a>.</li> </ul> |
| <p><b>People with heart conditions</b></p>   | <ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.<sup>42</sup></li> <li>• Bupropion is a suitable treatment (if appropriate) for people with cardiovascular disease.</li> </ul>   |

## Information for patients

The following pages contain information on NRT products, which can be copied and given to people trying to quit. These pages are also available electronically on the New Zealand Guidelines Group website (<http://www.nzgg.org.nz>), so that they can be printed off and given to patients.

## INFORMATION ON THE USE OF NICOTINE PATCHES

Nicotine patches are a form of nicotine replacement therapy (NRT). Nicotine skin patches allow nicotine to be absorbed continually through the skin. The patch provides a continual level of nicotine throughout the day. The level is less than from your cigarettes, but usually enough to reduce craving and nicotine withdrawal.

Nicotine patches replace nicotine previously taken in by smoking. This helps some people reduce the withdrawal or 'craving' for nicotine while they quit the smoking habit. We believe the patches work best when used with a programme that teaches you how to change certain habits to allow you to live without nicotine. The free **QUITLINE (0800 778 778)** can help you learn these skills. QUITLINE's trained advisors can also help you plan and prepare for quitting smoking and support you during the quit process. **NRT Exchange Card Providers** can provide access to subsidised nicotine patches following an assessment for eligibility and provide up to three support contacts during a recommended eight-week programme.

**Aukati Kai Paipa** and other Māori smoking cessation services provide a free service for Māori by Māori trained staff who will offer advice and education or access readiness to quit. Those eligible are being offered an intensive eight-week programme using free or subsidised nicotine patches and gum plus support which includes weekly contact followed by three, six and 12-monthly progress follow-ups.

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### Your health professional has advised you to receive nicotine skin patches:

Your starting dose is a \_\_\_\_\_ mg patch/day for \_\_\_\_\_ weeks.

You will then reduce to a \_\_\_\_\_ mg patch/day for \_\_\_\_\_ weeks.

You will then reduce to a \_\_\_\_\_ mg patch/day for \_\_\_\_\_ weeks.

**Important: You must quit smoking when you start using the patch and must not smoke during patch use.**

### How to use nicotine patches

- Apply daily at the same time each day, usually at the beginning of the day.
- Choose a **non-hair, clean, dry** area above the waist (front or back) or upper part of arm. Press the patch on firmly with the palm of your hand and hold for 10 seconds.
- Do not put on skin that is burned, broken, cut or irritated in any way.
- You may experience some mild itching, burning, or tingling initially, but this is normal and usually goes away within an hour.
- Water will not harm the patch so you may shower or bathe with the patch on; but avoid perfumed soaps or skin lotions – these make the skin oily and can cause the patch to fall off. The patch can be taped back on if it does fall off.
- Wash hands well after putting on or taking off the patch.
- Dispose of patch by folding it in half and placing it into the plastic holder. **Keep the patch out of reach of children and pets.**
- Sleep disturbances, vivid dreams or nightmares may occur with patches that are designed to be worn overnight. The patch can be removed overnight should this occur.

### Precautions

Tell your health professionals if you are pregnant or are trying to get pregnant. Special caution should be taken if you have any of the following conditions.

Be sure to tell your healthcare team if you have experienced any of the problems listed below.

- Recent heart attack (myocardial infarction), skin diseases, irregular heart beat (arrhythmia), very high blood pressure severe or worsening angina (tightness/heaviness in the central chest), stomach ulcers, overactive thyroid, diabetes requiring insulin, kidney or liver disease, rashes from adhesive tape or bandages, allergies to drugs.

### Important side-effects of nicotine patches

Common side-effects include:

- skin irritation
- itching
- abnormal dreams or difficulty sleeping
- diarrhoea, indigestion.

These often reduce over time. It is normal for the patch to cause some tingling or mild burning when first applied. This should go away in an hour. The skin under the patch may be red for a day after removal. If this persists or becomes swollen, contact your doctor or nurse as it may be an allergic reaction.

You may need your dose adjusted if you are experiencing side-effects. These should be reported to your healthcare team.

### Undesirable effects

Headache, gastro-intestinal discomfort, nausea, vomiting, erythema, itching, palpitations, urticaria, reversible atrial fibrillation.

| Recommended dose                   |                                      |
|------------------------------------|--------------------------------------|
| Smoking more than one pack per day | 21 mg (or 15mg if <i>Nicorette</i> ) |
| half to one packet per day         | 14 mg (or 10mg if <i>Nicorette</i> ) |
| less than half packet per day      | none                                 |

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**Skin reactions:** up to 50 percent of people using the patch will have local skin reactions. Fewer than five percent will need to discontinue treatment.

### Cost

**Nicotine patches are only subsidised on presentation of a Quitline Exchange Card.**

The cost of subsidised nicotine patches (*Nicotrol*):

- 5 mg patches will cost **\$5.00** for a **four-week supply**
- 10 mg patches will cost **\$5.00** for a **four-week supply**
- 15 mg patches will cost **\$5.00** for a **four-week supply**.

The cost of non-subsidised patches (*Nicotrol*):

- 5 mg patches will cost approximately **\$70.60** for a **four-week supply**
- 10 mg patches will cost approximately **\$71.20** for a **four-week supply**
- 15 mg patches will cost approximately **\$72.00** for a **four-week supply**.

## INFORMATION ON THE USE OF NICOTINE GUM

Nicotine gum is a form of nicotine replacement therapy (NRT). Nicotine gum replaces nicotine previously taken in by smoking. Nicotine gum helps certain people reduce the withdrawal or 'craving' for nicotine while they quit the smoking habit. We believe the gum works best when used with a programme that teaches you how to change certain habits to allow you to live without nicotine. The free **QUITLINE (0800 778 778)** can help you learn these skills. QUITLINE's trained advisors can also help you plan and prepare for quitting smoking and support you during the quit process. **NRT Exchange Card Providers** can provide access to subsidised nicotine gum following an assessment for eligibility and provide up to three support contacts during a recommended eight-week programme.

**Aukati Kai Paipa** and other Māori smoking cessation services provide a free service for Māori by Māori trained staff who will offer advice and education or access readiness to quit. Those eligible are being offered an intensive eight week programme using free or subsidised nicotine patches and gum plus support which includes weekly contact followed by three, six and 12-monthly progress follow-ups.

### Once you are ready to quit, begin using your nicotine gum.

- From your quit date, you must give up smoking completely.
- Anticipate, don't wait. Figure out when you usually smoke and use gum 20 minutes prior to your usual smoking time. Establish a nicotine chewing gum schedule (eg, one piece of gum per hour or half-hour).
- Soften and 'park'. **This medicine should not be chewed like regular chewing gum.** Place the gum in your mouth, moisten and bite down once or twice to release a peppery taste. Then 'park' the gum, placing it between your cheek and your upper or lower gum.
- Massage or roll to reactivate. Massage the gum (or bite into it) every few minutes to expose a new surface and 'park' again in the same area of your mouth.
- After about 30 minutes of massaging and gentle chewing, the nicotine is used up. Throw the gum away and use a fresh piece at your scheduled time.
- Symptoms such as indigestion or stomach upset probably indicate that you are swallowing too much nicotine with your saliva. This should not happen if you 'park' the gum as above.
- Do not drink acidic liquids such as coffee, orange juice or Coke before or during use of gum. These kinds of liquids will interfere with the effectiveness of the medication.
- Do not eat or drink while you have the gum in your mouth.
- Do not chew more than 15 pieces a day. Most people find 12 pieces of gum a day will control the urge to smoke.

### Undesirable effects

Irritation of the throat, increase salivation, hiccupping, indigestion, heartburn, nausea, faintness or headaches.

#### Recommended dose

Usually 8–12 pieces daily, up to a maximum of 15 pieces to be used with smoking cessation programmes. Begin cutting down on gum use after eight weeks. Do not use the gum for more than six months.

### Cost

#### Nicotine gum is only subsidised on presentation of a Quitline Exchange Card.

The cost of subsidised nicotine gum (*Nicorette*):

- Gum 2 mg will cost **\$5.00** for a **four-week supply**
- Gum 4 mg will cost **\$5.00** for a **four-week supply**.

The cost of non-subsidised gum (*Nicorette*):

- Gum 2 mg will cost approximately **\$102.00** for a **four-week supply**
- Gum 4 mg will cost approximately **\$136.80** for a **four-week supply**.

## INFORMATION ON THE USE OF NICOTINE NASAL SPRAY

Nicotine nasal spray is a form of nicotine replacement therapy (NRT). Nicotine nasal spray is designed to deliver nicotine more rapidly than patches, gum or inhaler, and utilises a device similar to nasal antihistamine sprays.<sup>33</sup>

The nicotine nasal spray is the use of a product containing nicotine to replace nicotine previously taken in by smoking. The nicotine spray helps certain people reduce the withdrawal or 'craving' for nicotine while they quit the smoking habit. We believe nicotine nasal spray works best when used with a programme that teaches you how to change certain habits to allow you to live without nicotine.

### Once you are ready to quit, begin using your nasal spray.

- From your quit date, you must give up smoking completely.
- The nasal spray is the fastest-acting form of NRT.
- The nasal spray is most effective when used correctly – directed at an angle into the nostril rather than held upright.
- Each spray releases 0.5 mg of nicotine solution and each dose consists of one spray into each nostril, a total of 1 mg of nicotine.
- You will probably experience some nasal irritation, sneezing, coughing or watering eyes when you first start using the nasal spray but these side-effects will usually disappear as you get used to the spray.
- You will normally need one to two doses of spray each hour when you start using it. You should not use more than three doses per hour.
- The spray should be used for eight weeks and then the dose reduced. After this you should stop using the spray completely.

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### Undesirable effects

Headache, gastrointestinal discomfort, nausea, vomiting, coughing, epistaxis, running nose, sneezing, watering eyes, palpitations or reversible atrial fibrillation.

#### Recommended dose

Usually 1–2 sprays/hour to both nostrils. Upper range 1–3 sprays/hour to both nostrils. After eight weeks reduce dose. Maximum length of course is 6 months.

### Cost

As the cost of nicotine nasal spray is **not subsidised**, it costs the same for everybody. The cost of nicotine nasal spray (*Nicorette*) is approximately \$43.71 – 0.5mg/spray (10mg/ml) 100 sprays. This supply will last approximately one to two weeks.

## INFORMATION ON THE USE OF NICOTINE INHALER

Nicotine inhaler is a form of nicotine replacement therapy (NRT). The nicotine inhaler is the use of a product containing nicotine to replace nicotine previously taken in by smoking. The inhaler helps some people reduce the withdrawal or 'craving' for nicotine while they quit the smoking habit. We believe the nicotine inhaler works best when used with a programme that teaches you how to change certain habits to allow you to live without nicotine.

### Once you are ready to quit, begin using your nicotine inhaler.

- From your quit date, you should give up smoking completely.
- NRT using a nicotine inhaler helps you control cravings and keeps your hand occupied with the familiar hand-to-mouth ritual.
- The inhaler consists of a mouthpiece and a nicotine-impregnated cartridge flavoured with menthol.
- It is designed for you to 'puff' on in the same way you would a cigarette. The device not only delivers nicotine to your blood to relieve your cravings but also, because it is held in your hand like a cigarette, offers regular hand-to-mouth activity so you are less likely to miss the action of smoking.
- You can inhale from the inhaler as and when you need, using either shallow or deep draws. Both provide a similar amount of nicotine to the mouth and back of the throat.
- The recommended dose is six to 12 cartridges a day.
- You should use the inhaler for an initial period of eight weeks then gradually reduce the dose until you no longer need NRT.

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### Undesirable effects

Headache, gastrointestinal discomfort, hiccups, nausea, vomiting, irritation in mouth and throat, nasal congestion, coughing, palpitations or reversible atrial fibrillation.

About 40 percent of users experienced mild local reactions such as cough and irritation in the mouth and throat. Most of the undesirable effects reported by the patient occur during the first weeks after start of the treatment.

#### Recommended dose

Usually not less than six units/day. Upper range 12 units/day. The recommended treatment period is eight weeks. Dose should be gradually reduced after initial period. Do not use for more than six months.

### Cost

As the cost of nicotine inhaler is **not subsidised**, it costs the same for everybody. The cost of nicotine inhaler (*Nicorette*) is **\$15.42** – starter pack, 10mg/unit, 6 units included and **\$27.95** – refills 10mg/ml 18 units. The starter pack will last approximately one day and the refill pack will last between one to three days.

# Resources/Services

There is now a range of smoking cessation interventions provided throughout New Zealand by different providers.

- The Quit Group provides a Quitline and associated mass media campaign promoting quitting and use of the Quitline.
- Locally approved IPAs, GPs, Smoking Cessation Practitioners, pharmacists and Māori health providers have been trained in brief intervention smoking cessation and registered to provide direct access to NRT exchange cards.
- Training in smoking cessation is provided by The National Heart Foundation, Te Hotu Manawa Māori and the Tobacco, Alcohol and Other Drugs Early Intervention Training Programme (TADS). The latter is based in the Goodfellow Unit at the University of Auckland.
- Aukati Kai Paipa and other Māori cessation programmes provide more in-depth smoking cessation support and is accessible from a range of Māori health providers throughout the country. Te Hotu Manawa Māori co-ordinates and trains the network of Aukati Kai Paipa services.
- The Quit Group oversees the registration of NRT exchange card providers and has subcontracted nine hospital-based Quit For Our Kids programmes.
- Services for pregnant women are available locally. These services are often associated with maternity hospitals, and can be accessed through GPs and Lead Maternity Carers (LMCs). Smoking cessation training for health professionals working with pregnant women is available through Education for Change.

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## QUITLINE 0800 778 778 (toll-free)

The QUITLINE is a free, confidential service that provides cessation advice and support via a 24-hour/7 days per week telephone help line. The QUITLINE offers free quit packs and support from trained quit advisors, encouraging smokers to plan smoking cessation and, when ready, set a date for quitting. Callers can be assessed to see if **subsidised nicotine patches or gum** is an appropriate option for them. If suitable they are given an exchange card, which can be swapped for a four-week supply of gum or patches at community pharmacies. QUITLINE advisors assist with strategies for success and offer follow-up telephone support. Printed materials and other support resources are sent to callers.

### Subsidised nicotine patches and gum

#### Who is eligible?

- The nicotine patches and gum programme is primarily for heavier smokers (those who daily smoke 10–15 cigarettes) and who are ready to quit.
- Pregnant or breastfeeding smokers and those with heart disease will be asked to talk to their GP about their suitability for nicotine patches and gum.

## Health provider exchange card programme

The Health Provider Exchange Card Programme allows health providers who have an interest in smoking cessation to directly distribute exchange cards for subsidised nicotine patches or gum. The programme was established by the Ministry of Health and is managed by The Quit Group. Health providers registered with the programme include doctors, nurses, Māori health providers, community health organisations and pharmacists with an interest in smoking cessation. Training in the provision of brief smoking cessation advice is a prerequisite to registration.

## Smoking cessation training for health professionals

Smoking cessation training is available for healthcare professionals who wish to work with patients in brief or more intensive interventions. Smoking cessation training may include some or all of the following components: guidelines background, overview and review; current issues; nicotine addiction; secondhand smoke; cessation resources; cessation courses, strategies, aids, medications and treatments available in New Zealand, their cost and how they work; motivational interviewing; use and efficacy of pharmacotherapy; planning and carrying out brief interventions; techniques and strategies; intensive interventions; programme design; nature of counselling and behavioural therapies applicable; group facilitation skills; telephone counselling; follow-up and assessment; referral to specialist services.

### Providers of training in the use of these *Guidelines for Smoking Cessation*:

|                               |                                |  |
|-------------------------------|--------------------------------|--|
| The National Heart Foundation | (09) 486 4791<br>(03) 366 2112 | <a href="mailto:denise.kb@clear.net.nz">denise.kb@clear.net.nz</a> and<br><a href="mailto:jennya@nhf.org.nz">jennya@nhf.org.nz</a> |
| Te Hotu Manawa Māori          | (09) 571 9018<br>(04) 801 7192 | <a href="mailto:tehotu@ihug.co.nz">tehotu@ihug.co.nz</a>   |
| TADS                          | (09) 3737599 ext 6233          | <a href="mailto:b.docherty@auckland.ac.nz">b.docherty@auckland.ac.nz</a>   |
| Education for Change          | (03) 351 6775                  | <a href="mailto:info@efc.co.nz">info@efc.co.nz</a>   |

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## Aukati Kai Paipa

Aukati Kai Paipa is a free smoking cessation service offering an intensive eight-week intervention programme using free or subsidised NRT plus support, advice and or alternative programmes. All Māori are eligible for referral. Those referred are assessed for their readiness to quit and whether they should proceed.

The programme is “by Māori for Māori” and was first established as a pilot programme in 1999.

There are now 34 providers nationally providing similar programmes with the majority of these providers providing free services and subsidised NRT through the Exchange Card Programme.

Service providers cover urban and rural areas in: Kaitaia, Kawakawa, Auckland, South Auckland, Ngaruawahia, Hamilton, Thames, Taumarunui, Te Kuiti, Tauranga, Opotiki, Te Puke, Murupara, Rotorua, Te Puia Springs, Gisborne, Whanganui, Palmerston North, Masterton, Wellington, Blenheim, Nelson, Motueka, Christchurch and Dunedin. Regional Ministry of Health offices or Te Hotu Manawa Māori can be contacted for further information on Aukati Kai Paipa services in the above areas.

## Quit for our Kids

Quit for our Kids is a smoking cessation programme managed by the Quit Group in nine hospitals around New Zealand. The programme provides smokers who are caregivers of children in hospital or who are hospital patients themselves with advice and support to assist them quitting smoking. The programme is a brief intervention with support provided and provision of eight weeks’ free nicotine patches or gum where applicable.

The nine hospitals which currently run Quit for our Kids programmes are: Northland Health, Health Waikato, Mid Central Health, Healthcare Hawkes Bay, Taranaki Health, Capital Coast Health, Coast Health Care, Healthcare Otago, and Southern Health.

## Other sources of smoking cessation resources and programme information:

|  |  |
|--|--|
| <b>ASH – Action on Smoking and Health</b>  | Ph: (09) 520 4866 Fax: (09) 520 4891.<br><a href="mailto:ashnz@clear.net.nz">ashnz@clear.net.nz</a>  |
| <b>Affiliated Asthma Societies</b>   | See your local white pages   |
| <b>The Quit Group</b>  | P O Box 12605, Wellington. Ph: (04) 915 9899<br>Fax: (04) 470 7632. <a href="http://www.quit.org.nz">www.quit.org.nz</a>                                 |
| <b>National Heart Foundation</b>   | P O Box 17 160, Greenlane, Auckland. Ph: (09) 571 9191<br>Fax: (09) 571 9190. <a href="http://www.heartfoundation.org.nz">www.heartfoundation.org.nz</a> |
| <b>Regional Public Health Service</b>  | See your local white pages under ‘Public Health Service’ or ‘Public Health Promotion’  |
| <b>Te Hotu Manawa Māori (for information about Māori smoking cessation programmes)</b> | PO Box 17-160, Greenlane, Auckland.<br>Ph: (09) 529-2522 Fax: (09)524 5830.<br><a href="mailto:tehotu@ihug.co.nz">tehotu@ihug.co.nz</a>                  |
| <b>The Asthma and Respiratory Foundation of New Zealand</b>                            | PO Box 1459, Wellington Ph: (04) 499-4592.<br><a href="http://www.asthmanz.co.nz">www.asthmanz.co.nz</a>   |
| <b>The Cancer Society</b>  | See your local white pages. <a href="http://www.cancernz.org.nz">www.cancernz.org.nz</a>   |
| <b>Smokefree Coalition</b>   | PO Box 3082, Wellington. Phone (04) 472 0157.  |
| <b>Apaarangi Tautoko Auahi Kore (ATAK)</b>   | PO Box 12 084 Wellington. Ph: (04) 499 6494.<br><a href="mailto:atak@clear.net.nz">atak@clear.net.nz</a>   |

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## Further background information

- The Literature Review and Background Document to these guidelines is on the New Zealand Guidelines Group website (<http://www.nzgg.org.nz>). A hard copy can be obtained by phoning 04-496 2277, writing to: Ministry of Health Publications c/- Wickliffe Press PO Box 932, Dunedin or emailing [moh@wickliffe.co.nz](mailto:moh@wickliffe.co.nz)
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