

## Nicotine Replacement Therapy (NRT) – managing inpatient nicotine dependence

The smoking status of patients should be assessed on admission. Although this may be secondary to the presenting complaint, a smoker's dependence on nicotine needs to be managed during their hospital stay. This may be crucial in patients admitted with a cardio-respiratory illness and those needing oxygen treatment, and may help those unable to leave the ward to smoke. It is important to be supportive and non-judgemental.

### Guide for the management of nicotine-dependent inpatients (Refer to guidelines in the Blue Book 2007 - to be updated shortly)

- 1) **Identify smokers** on admission and use smoking status stickers in clinical notes/care plans. Inform the patient of the 'CDHB Smokefree Policy' and state the health risks of leaving the hospital to smoke.
- 2) **Discuss** with the patient, options for management of nicotine dependence while in hospital e.g. abstinence with or without NRT (unless contraindicated – see below); smoking offsite.
- 3) **Assess level of nicotine dependence** and prescribe appropriate NRT on medication chart (see dosage table).
- 4) **Monitor patient for withdrawal or overdose symptoms.** This may require a change to the NRT prescription (dose and/or product). The patient may benefit from combination therapy (e.g. patch + gum/lozenge). Patches offer a sustained amount of nicotine during the day, with the gum/lozenge being used "when necessary" to treat cravings. Gum and lozenges release nicotine quicker than patches.
- 5) **Discharge:** Encourage **ALL** smokers to stop smoking. Patients who wish to stop can be referred to one of several subsidised smoking cessation programmes that include:
  - Christchurch PEGS programme (inpatient referral form C120047) – GP led, partially subsidised NRT
  - Quitline (0800 778 778) – partially subsidised NRT with a Quitcard and additional cessation support
  - Aukati Kaipapa (03 364 1771) – fully subsidised NRT for Maori women and their whanau

### NRT dosage recommendations

Cigarette consumption	Recommended NRT dose
>10/day	Nicotine patch 21mg/24 hours + nicotine gum OR lozenge for PRN use Dose depends on time to first cigarette: <ul style="list-style-type: none"> <li>- if &lt;30 minutes after waking use 4mg gum OR 2mg lozenges</li> <li>- if &gt;30 minutes after waking use 2mg gum OR 1mg lozenges</li> </ul>
<10/day	Nicotine gum OR lozenge for PRN use Dose depends on time to first cigarette: <ul style="list-style-type: none"> <li>- if &lt;30 minutes after waking use 4mg gum OR 2mg lozenges</li> <li>- if &gt;30 minutes after waking use 2mg gum OR 1mg lozenges</li> </ul> If nil by mouth or does not tolerate gum or lozenges use a nicotine patch 14mg/day and if necessary titrate up to 21mg/day

**Overdose symptoms of NRT:** usually reflect the common effects of nicotine. Symptoms include nausea/vomiting, diarrhoea, abdominal pain, dizziness, headache, confusion, changes in hearing/vision, flushing, tachycardia and hiccups.

**Withdrawal symptoms:** may reflect under-dosing of NRT and include craving, anxiety, impaired concentration, irritability, depression, sleep disturbance, hunger and bradycardia.

**Contraindications** are generally relative and include: nicotine hypersensitivity, recent myocardial infarction or stroke (within 3 months), unstable angina, Prinzmetal's variant angina, certain cardiac arrhythmias.

**NB:** Smoking cessation may increase or induce clearance of some medications such as clozapine and theophylline. If a patient elects to stop smoking, talk to your ward pharmacist or to Drug Information (ext 80900) to check whether clearance of their medications may be affected.

### NRT PRODUCTS AVAILABLE WITHIN CDHB

Product	Dosage (should be individualised for each patient)	Use (Adverse effects usually similar to effects of nicotine as above)
<b>Patches</b> 7,14,21mg /24h	Apply 1 patch daily. Patches are left on for 16 or 24h depending on formulation  Time to peak concentrations: 6-12h. (initial onset ~1-2h)	Apply to clean, non-hairy, unbroken skin. Apply new patches to fresh skin site daily. Do not use old site for 3 days. Rash may occur at site of placement. (NB: Subsidised in community via Quitline, Aukati or PEGS)
<b>Lozenges</b> 1,2mg	Suck 1 lozenge every 1-2 hours. Usual dose 8-12/day. Maximum of 25 (1mg) and 15 (2mg) lozenges/day.  Time to peak concentrations: ~30-40min	When the urge to smoke is felt suck the lozenge until the taste is strong and then tucked between the cheek and gum, repeat once the taste dissipates (each lozenge should last about 30 minutes). (NB: Subsidised in community via Quitline, Aukati or PEGS)
<b>Gum</b> 2,4mg	Chew 1 piece slowly for 30min. Usual dose 8-12/day. Maximum of 25 (2 mg) or 15 (4mg) pieces/day.  Time to peak concentrations: ~20-30min	When urge to smoke is felt, chew 1 piece of gum until taste becomes strong; rest gum between gum and cheek, chew again when taste fades; continue for 30 min. Mild adverse effects include hiccups, upset stomach. (NB: Subsidised in community via Quitline, Aukati or PEGS)
<b>Inhaler</b> 10mg	Dose usually 6-12 inhaler cartridges daily.  Time to peak concentrations: ~15min Use In combination with nicotine patch: use 14mg/24h patch with 4-5 inhaler cartridges daily (max. 12/day)	Use whenever there is an urge to smoke. Use approx 6 cartridges for smokers of <24 cigarettes/day and up to 12 cartridges for >40 cigarettes/day. Adverse effects include mouth/throat irritation & cough which usually resolve with continued use. (NB: Not funded in community)