

**Nurse Initiated Medicine Protocol
Nicotine Replacement Therapy (NRT)
(July 2008 / Version 1)**

Drug Formulations	Nicotine Replacement Therapy (NRT) <ul style="list-style-type: none"> - 21mg/24hr patch (QuitX®) - 4 mg lozenge (Nicabate®)
Areas where Protocol/Guideline applicable	All inpatient units
Areas where Protocol/Guideline not applicable	All units where midwives provide care to pregnant and/or breastfeeding patients
Authorised Prescribers	Nurse initiated for up to 24-hours, then medical officer to review and chart.
Indication for use	<p>Patients who smoke >10 cigarettes a day or usually smoke their first cigarette within 30 minutes of waking</p> <p>or</p> <p>Patients who are unable to remain abstinent prior to, and/or during their hospital admission.</p> <p>Nurses should not administer patches or lozenge to:</p> <ul style="list-style-type: none"> • <i>patients who are breastfeeding</i> • <i>pregnant women</i> • <i>patients who have contraindications to NRT (refer to medical officer)</i> <p>NRT should not be administered to:</p> <ul style="list-style-type: none"> • <i>Children under 12-years of age</i>
Clinical condition	<p>Patients who smoke >10 cigarettes a day or usually smoke their first cigarette within 30 minutes of waking</p> <p>or</p> <p>Patients who are unable to remain abstinent prior to, and/or during their hospital admission.</p>
Contra-indications	<p>Contraindications for patch include:</p> <ul style="list-style-type: none"> • Non tobacco users or occasional smokers • Patients with known allergy or hypersensitivity to nicotine or any component of the patch. • Those with generalised skin conditions or disorders that may complicate patch therapy. <p>Contraindications for lozenge include:</p> <ul style="list-style-type: none"> • Non tobacco users • Phenylketonuria or known hypersensitivity to nicotine or any component of the lozenge <p>The above contraindications apply to nurse initiated NRT only.</p> <p>If patients with these contraindications continue to smoke, prompt the medical officer to consider NRT.</p>

<p>Precautions</p>	<p>Any risks that may be associated with NRT are substantially outweighed by the well-established dangers of continued smoking. If patient has a precaution/s to NRT - provide NRT but indicate precaution/s to medical officer for review.</p> <p>Precautions for patch include:</p> <ul style="list-style-type: none"> • Renal or hepatic impairment Diabetes mellitus requiring insulin • Underlying cardiovascular disease (recent myocardial infarction, severe dysrhythmia or CVA) • Severe high blood pressure. • Chest pain or angina • Allergic reactions (susceptibility to angioedema or urticaria) • Atopic or eczematous dermatitis due to localized patch sensitivity • Pheochromocytoma and uncontrolled hyperthyroidism • Stomach ulcer • Tumour of the adrenal gland • Pregnancy & lactation <p>Precautions for lozenge include:</p> <ul style="list-style-type: none"> • Hepatic or severe renal insufficiency • Diabetes mellitus • Underlying cardiovascular disease (recent myocardial infarction, severe dysrhythmia or CVA) • Allergic reactions (susceptibility to angioedema and urticaria) • Pheochromocytoma and uncontrolled hyperthyroidism • Gastrointestinal disease • People on a low sodium diet • Pregnancy & lactation
<p>Proposed Place in Therapy</p> <p>State whether drug to be used as first, second or third line. Where not first line, describe therapies to be used first</p>	<p>First Line: 21mg/24hr Patch</p> <ul style="list-style-type: none"> • If patient has contraindications to patch: <p>Second line: 4mg lozenge</p> <ul style="list-style-type: none"> • If patient has contraindications to lozenge refer to MO for review.
<p>Dosage</p> <p>(Include dosage adjustment for specific patient groups)</p>	<p>Patch</p> <ul style="list-style-type: none"> • < 45 kg 14mg/24hr Nicotine Transdermal Patch • > 45 kg 21mg/24hr Nicotine Transdermal Patch • One patch to be applied to non-hairy site on chest or upper arm. Rotate patch to a new site each day • DO NOT place hot packs over patch as this may speed up the release of the drug from the patch • Remove at night only if patient experiences sleep disturbance and reapply new patch in the morning. <p>Lozenge</p> <ul style="list-style-type: none"> • 4mg Nicotine per lozenge • When used as single therapy maximum of 15 lozenges per day. • Frequency is every 30-60 minutes (self-titrate dose)

	<p>according to withdrawal symptoms),</p> <ul style="list-style-type: none"> • One lozenge placed in mouth and moved side to side in mouth until dissolved (for 20-30mins). • Do not chew or swallow whole. • Do not eat or drink while lozenge is in the mouth. <p>Combination therapy</p> <ul style="list-style-type: none"> • Refer to Medical Officer
<p>Duration of therapy</p>	<p>Patch One 21mg/24hr patch to be applied for one 24 hour period</p> <p>Lozenge When used as a single therapy, a maximum of 15 lozenges per 24 hour period.</p>
<p>Important Drug Interactions</p>	<p>No clinically relevant interactions between NRT and other drugs have been established - BUT the PI cautions that the dose of certain substances may need to be adjusted at cessation of smoking (with or without nicotine replacement therapy).</p> <p>Potential drug interactions should be assessed by a medical officer as soon as possible.</p> <ul style="list-style-type: none"> • Anticonvulsants may require special monitoring and/or dose adjustment • Drugs that may require adjustment in dose once smoking ceases: paracetamol, caffeine, theophylline, oxazepam, oestrogens, warfarin, lignocaine, imipramine, pentazocine, tacrine, clomipramine, fluvoxamine, Adrenergic agonists (e.g. isoprenaline and phenylephrine), Adrenergic antagonists (e.g. prazosin, labetalol) • Some medicines to treat depression • Antipsychotics e.g. Clozapine, Olanzapine • Insulin
<p>Administration instructions</p>	<p>When a nurse administers a dose of a nurse-initiated medication to a patient, the nurse must make a record in ink on the medication chart of the name of the medication, date, time, dose and any other relevant details and sign the entry. The record should be made in an appropriate section of the chart, such as an area dedicated to nurse-initiated medication or the 'stat' (once only) section.</p> <p>NRT should not be administered past a 24 hour period without a Medical Officer (MO) reviewing. If, on this review, the medication is to continue, it must be ordered on the medication chart by the MO.</p>
<p>Monitoring requirements Safety Effectiveness (state objective criteria)</p>	<p>Monitor:</p> <ul style="list-style-type: none"> • Exacerbated symptoms in persons suffering form active oesophagitis, oral or pharyngeal inflammation or gastritis. • Exacerbation of extrapyramidal side effects. • Diabetes Mellitus- monitor BSL closely. • Smoking withdrawal symptoms - use Nicotine Withdrawal Monitoring Tool. <p>Certain adverse symptoms reported may be related to withdrawal symptoms associated with smoking cessation.</p>

	<p>Nicotine Withdrawal Symptoms;</p> <ul style="list-style-type: none"> • Insomnia • Depression • Irritability • Anxiety • Difficulty concentrating • Restlessness • Cravings • Decreased heart rate • Increased appetite or weight gain • Frustration or anger • Sleeplessness <p>Possible adverse reactions related to patch:</p> <ul style="list-style-type: none"> • Sleep disturbances • Nausea, vomiting or other gastrointestinal disturbances • Dizziness or headache • Skin irritation • Allergic reaction, including redness, swelling, itching, burning sensation or blisters at the patch site <p>Possible adverse reactions to lozenge:</p> <ul style="list-style-type: none"> • Gastrointestinal upset (including nausea, hiccups and flatulence) and indigestion • Mouth irritation and throat burning • Insomnia • Dizziness, headache • Coughing, pharyngitis, sore throat <p>Signs of overdosing or poisoning of Nicotine: May occur in the following order: Nausea and/or vomiting; increased watering of mouth (severe); abdominal or stomach pain (severe); diarrhoea (severe); pale skin; cold sweat; headache (severe); dizziness (severe); disturbed hearing and vision; tremor; confusion; weakness (severe); extreme exhaustion; fainting; low blood pressure; difficulty in breathing (severe); fast, weak, or irregular heartbeat; convulsions (seizures). Other side effects may occur that usually do not need medical attention. These side effects may go away during treatment as the body adjusts to the medicine.</p> <p>Treatment of ingestion of Nicotine Transdermal patch: Due to the possibility of nicotine-induced seizures, activated charcoal should be administered. In unconscious patients with a secure airway, instil activated charcoal via a nasogastric tube. Repeated doses of activated charcoal should be administered as long as the system remains in the gastrointestinal tract since it will continue to release nicotine for many hours. A saline cathartic or sorbitol added to the first dose of activated charcoal may speed gastrointestinal passage of the system.</p>
<p>Management of complications</p>	<p>Smoking withdrawal symptoms: Ensure patient is using the recommended amount of NRT. Prompt medical officer to review care and consider combination therapy if patient does not have contraindications to patch (e.g. patch to be used in combination with 2mg lozenge).</p>

	<p>Skin irritation: Use a different area of the skin to apply the patch each day to reduce skin irritation.</p> <p>Allergic reaction: If the symptoms described above occur, remove the patch immediately, and refer to Medical Officer.</p>
<p>Basis of Protocol/Guideline (including sources of evidence, references)</p>	<ul style="list-style-type: none"> • Action on Smoking and Health (ASH).Guidance for health professionals on changes in the licensing arrangements for nicotine replacement therapy. London, December, 2005. • QuitX Consumer Information Leaflet • Nicabate Product Information • NSW Health's Guide for the Management of Nicotine Dependent Inpatients. • Cappelleri J, Bushmakin A, Baker C, MerikleE, Oufade A, Gilbert D Revealing the multidimensional framework of the Minnesota nicotine withdrawal scale, Current medical research and opinion. 21(5): 749-60 May 2005 • Medication Handling in NSW Public Hospitals PD2007_077
<p>Groups consulted in development of this guideline</p>	<p>Pharmacy, Nursing and Midwifery Services, Clinical Management.</p>