NEW ZEALAND DATA SHEET

OXYNORM® Capsules
OXYNORM® Oral Solution
Oxycodone hydrochloride

1 PRODUCT NAME
OXYNORM® 5mg Capsules
OXYNORM® 10mg Capsules
OXYNORM® 20mg Capsules
OXYNORM® 5mg/5mL Oral Solution

2 QUALITATIVE AND QUANTITATIVE COMPOSITION
OXYNORM capsules contain Oxycodone hydrochloride 5 mg, 10 mg or 20 mg.
OXYNORM oral solution contains Oxycodone hydrochloride 5 mg/5 mL

For the full list of excipients, see section 6.1

3 PHARMACEUTICAL FORM
OXYNORM capsules 5 mg (orange/beige)
OXYNORM capsules 10mg (white/beige)
OXYNORM capsules 20 mg (pink/beige)
OXYNORM liquid 5 mg/5 mL is a clear, colourless to straw-coloured solution

4 CLINICAL PARTICULARS
4.1 Therapeutic indications
The management of opioid-responsive moderate to severe pain.

4.2 Dose and method of administration

Adults, elderly and children over 18 Years
Prior to initiation and titration of doses, refer to the Section 4.4 for information on special risk groups such as females and the elderly.

OXYNORM capsules or liquid should be taken at 4-6 hourly intervals. The dosage is dependent on the severity of the pain, and the patient’s previous history of analgesic requirements.

Increasing severity of pain will require an increased dosage of OXYNORM capsules or liquid. The correct dosage for any individual patient is that which controls the pain and is well tolerated throughout the dosing period. Patients should be titrated to pain relief unless unmanageable adverse drug reactions prevent this.

OXYNORM capsules or liquid will generally be used in a short term trial (4-6 weeks) to determine if the pain is opioid responsive, before transferring to a longer acting oxycodone preparation such as OXYCONTIN® tablets, in accordance with the clinical guidelines on the use of opioid analgesics in such patients (e.g. those published by the Australian Pain Society in the Medical Journal of Australia.)

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1997; 167: 30-4). However, OXYNORM liquid may be used longer term in patients unable to take solid oral dosage forms, or when more precise dose titration is necessary.

The usual starting dose for opioid-naïve patients or patients presenting with severe pain uncontrolled by weaker opioids is 5mg, 4-6 hourly. The dose should then be carefully titrated, as frequently as once a day if necessary, to achieve pain relief. The majority of patients will not require a daily dose greater than 400 mg. However, a few patients may require higher doses.

Patients receiving oral morphine before oxycodone therapy should have their daily dose based on the following ratio: 10 mg of oral oxycodone is equivalent to 20 mg of oral morphine. It must be emphasized that this is a guide to the dose of OXYNORM capsules or liquid required only. Interpatient variability requires that each patient be carefully titrated to the appropriate dose.

Controlled pharmacokinetic studies in elderly patients (aged over 65 years) have shown that compared with younger adults, the clearance of oxycodone is only slightly reduced. No untoward adverse drug reactions were seen based on age, therefore, adult doses and dosage intervals are appropriate.

**Adults with mild to moderate renal impairment and mild hepatic impairment**
The plasma concentration in this patient population may be increased. Therefore, dose initiation should follow a conservative approach (refer Section 4.4).

**Children under 18 years**
OXYNORM capsules or liquid should not be used in patients under 18 years.

| Multiplication Factors for Converting the Daily Dose of Prior Opioids to the Daily Dose of Oral Oxycodone* (mg/day prior opioid x Factor = mg/day oral oxycodone) |
|-----------------|-----------------|
| Oral Prior Opioid | Parenteral Opioid |
| Oxycodone | 1 | - |
| Codeine | 0.15 | - |
| Hydromorphone | 4 | 20 |
| Pethidine (Meperidine) | 0.1 | 0.4 |
| Methadone | 1.5 | 3 |
| Morphine | 0.5 | 3 |

* To be used for conversion to oral oxycodone. For patients receiving high-dose parenteral opioids, a more conservative conversion is warranted. For example, for high-dose parenteral morphine, use 1.5 instead of 3 as a multiplication factor.
**Method of administration**

OXYNORM capsules should be swallowed whole and not opened, chewed or crushed.

Limited data suggest that food may significantly increase the amount of oxycodone absorbed from an oral solution – see ‘Absorption’ under Pharmacokinetics.

Alcoholic beverages should be avoided while the patient is being treated with OXYNORM capsules or liquid.

**Non-malignant pain**

In common with other strong opioids, the need for continued treatment should be assessed at regular intervals.

### 4.3 Contraindications

Hypersensitivity to opioids or to any of the constituents of OXYNORM capsules or liquid, acute respiratory depression, **cor pulmonale**, cardiac arrhythmias, acute asthma or other obstructive airways disease, paralytic ileus, suspected surgical abdomen, severe renal impairment (creatinine clearance < 10mL/min refer to Section 4.4), severe hepatic impairment, delayed gastric emptying, acute alcoholism, brain tumour, increased cerebrospinal or intracranial pressure, head injury (due to risk of raised intracranial pressure), severe CNS depression, convulsive disorders, **delirium tremens**, hypercarbia, concurrent administration of monoamine oxidase inhibitors or within two weeks of discontinuation of their use. Pregnancy.

Not recommended for pre-operative use.

### 4.4 Special warnings and precautions for use

**Respiratory depression and sedation**

The major risk of opioid excess is respiratory depression including subclinical respiratory depression. Profound sedation, respiratory depression, coma, and death may result from the concomitant use of OXYNORM with benzodiazepines or other CNS depressants (e.g., non-benzodiazepine sedatives/hypnotics, anxiolytics, tranquilizers, muscle relaxants, general anaesthetics, medicines with antihistamine-sedating actions such as antipsychotics, other opioids, alcohol). Because of these risks, reserve concomitant prescribing of these drugs for use in patients for whom alternative treatment options are inadequate.

Observational studies have demonstrated that concomitant use of opioid analgesics and benzodiazepines increases the risk of medicine-related mortality compared to use of opioid analgesics alone. Because of similar pharmacological properties, it is reasonable to expect similar risk with the concomitant use of other CNS depressant drugs with opioid analgesics (see Section 4.5 Interactions with other medicines and other forms of interaction).

If the decision is made to prescribe a benzodiazepine or other CNS depressant concomitantly with an opioid analgesic, prescribe the lowest effective dosages and minimum durations of concomitant use. In patients already receiving an opioid analgesic, prescribe a lower initial dose of the benzodiazepine or other CNS depressant than indicated in the absence of an opioid, and titrate based on clinical response. If an opioid analgesic is initiated in a patient already taking a benzodiazepine or other CNS
depressant, prescribe a lower initial dose of the opioid analgesic, and titrate based on clinical response. Follow patients closely for signs and symptoms of respiratory depression and sedation.

Advise both patients and caregivers about the risks of respiratory depression and sedation when OXYNORM is used with benzodiazepines or other CNS depressants (including alcohol and illicit drugs). Advise patients not to drive or operate heavy machinery until the effects of concomitant use of the benzodiazepine or other CNS depressant have been determined. Screen patients for risk of substance use disorders, including opioid abuse and misuse, and warn them of the risk for overdose and death associated with the use of additional CNS depressants including alcohol and illicit drugs (see Section 4.5 Interactions with other medicines and other forms of interaction).

**Effects on hypothalamic-pituitary-adrenal or gonadal axes**

Opioids, such as oxycodone hydrochloride, may influence the hypothalamic-pituitary-adrenal or gonadal axes. Some changes that can be seen include an increase in serum prolactin, and decreases in plasma cortisol and testosterone. Clinical symptoms may manifest from these hormonal changes. As with all opioids, a reduction in dosage may be advisable in hypothyroidism.

**General**

Use with caution in opioid-dependent patients and in patients with hypotension, hypovolaemia, diseases of the biliary tract, pancreatitis, inflammatory bowel disorders, prostatic hypertrophy, adrenocortical insufficiency, (Addison’s disease), toxic psychosis, chronic pulmonary, renal or hepatic disease, myxoedema, debilitated elderly or infirm patients, or patients taking benzodiazepines, other CNS depressants (including alcohol) or MAO inhibitors.

**Pre- and post-operative use**

As with all opioid preparations, patients who are to undergo cordotomy or other pain-relieving surgical procedures should not receive OXYNORM capsules or liquid for 6 hours before surgery. As with all opioid preparations, OXYNORM capsules or liquid should be used with caution following abdominal surgery as opioids are known to impair intestinal motility and should not be used until the physician is assured of normal bowel function. Should paralytic ileus be suspected or occur during use, OXYNORM capsules or liquid should be discontinued immediately.

**Hyperalgesia**

Hyperalgesia that will not respond to a further dose increase of oxycodone may very rarely occur in particular at high doses. An oxycodone dose reduction or change in opioid may be required.

**Drug Dependence**

As with other opioids, tolerance and physical dependence tend to develop upon repeated administration of oxycodone. There is potential for abuse of the medicine and for development of strong psychological dependence. OXYNORM capsules or liquid should therefore be prescribed and handled with a high degree of caution appropriate to the use of a medicine with strong abuse potential.

In the absence of a clear indication for a strong opioid analgesic, drug-seeking behaviour must be suspected and resisted, particularly in individuals with a history of, or propensity for, drug abuse. Withdrawal symptoms may occur following abrupt discontinuation of oxycodone therapy or upon...
administration of an opioid antagonist. Therefore, patients on prolonged therapy should be withdrawn gradually from the medicine if it is no longer required for pain control.

Oxycodone should be used with caution and under close supervision in patients with pain not due to malignancy who have a prior history of substance abuse. However, in such cases, prior psychological assessment is essential and the prescribing doctor should consider that the benefit of treatment outweighs the risk of abuse. OXYNORM capsules and oral liquids are intended for oral use only. Parenteral injection can be expected to result in severe adverse reactions which may be fatal.

Use in renal and hepatic impairment
In renal and hepatic impairment, the administration of OXYNORM capsules or liquid does not result in significant levels of active metabolites. However, the plasma concentration of oxycodone in this patient population may be increased compared with patients having normal renal or hepatic function. Therefore, initiation of dosing in patients with renal impairment (CLcr<60mL/min) or hepatic impairment should be reduced to ⅓ to ½ of the usual dose with cautious titration.

Use in the elderly
The plasma concentrations of oxycodone are only nominally affected by age, being approximately 15% greater in elderly as compared with young subjects. There were no differences in adverse event reporting between young and elderly subjects.

Use in the elderly, debilitated patients
As with other opioid initiation and titration, doses in elderly patients who are debilitated should be reduced to ⅓ to ½ of the usual doses.

Gender
Female subjects have, on average, plasma oxycodone concentrations up to 25% higher than males on a body weight adjusted basis. The reason for this difference is unknown. There were no significant male/female differences detected for efficacy or adverse events in clinical trials.

4.5 Interaction with other medicines and other forms of interaction

Anticholinergic agents
Concurrent use of oxycodone with anticholinergics or medications with anticholinergic activity (e.g. tricyclic antidepressants, antihistamines, antipsychotics, muscle relaxants and anti-Parkinson medications) may result in increased anticholinergic adverse effects, including an increased risk of severe constipation and/or urinary retention.

Antihypertensive agents
Hypotensive effects of these medications may be potentiated when used concurrently with oxycodone, leading to increased risk of orthostatic hypotension.
CNS depressants (including sedatives or hypnotics, benzodiazepines, general anaesthetics, phenothiazines, other tranquillisers, alcohol, other opioids, non-benzodiazepine sedatives, antidepressants, and neuroleptic agents, etc.)

Concurrent use with oxycodone may result in increased respiratory depression, hypotension, profound sedation or coma. Caution is recommended and the dosage of one or both agents should be reduced. Intake of alcoholic beverages while being treated with OXYNORM capsules or liquid should be avoided because this may lead to more frequent undesirable effects such as somnolence and respiratory depression. Oxycodone hydrochloride containing products should be avoided in patients with a history of or present alcohol, drug or medicines abuse.

<table>
<thead>
<tr>
<th>Clinical Impact</th>
<th>Due to additive pharmacologic effect, the concomitant use of benzodiazepines or other CNS depressants including alcohol, increases the risk of respiratory depression, profound sedation, coma, and death.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intervention</td>
<td>Reserve concomitant prescribing of these drugs for use in patients for whom alternative treatment options are inadequate. Limit dosages and durations to the minimum required. Follow patients closely for signs of respiratory depression and sedation (see Section 4.4 Warnings and Precautions).</td>
</tr>
<tr>
<td>Examples</td>
<td>Benzodiazepines and other sedatives/hypnotics, anxiolytics, tranquilizers, muscle relaxants, general anaesthetics, drugs with antihistamine-sedating actions such as antipsychotics, other opioids, alcohol.</td>
</tr>
</tbody>
</table>

Coumarin derivatives

Although there is little substantiating evidence, opiate agonists have been reported to potentiate the anticoagulant activity of coumarin derivatives.

CYP2D6 and CYP3A4 inhibitors and inducers

Oxycodone is metabolised in part via the CYP2D6 and CYP3A4 pathways. The activities of these metabolic pathways may be inhibited or induced by various co-administered drugs or dietary elements, which may alter plasma oxycodone concentrations. Oxycodone doses may need to be adjusted accordingly. Medicines that inhibit CYP2D6 activity such as paroxetine and quinidine, may cause decreased clearance of oxycodone which could lead to an increase in oxycodone plasma concentrations. Concurrent administration of quinidine does not alter the pharmacodynamic effects of oxycodone. CYP3A4 inhibitors such as macrolide antibiotics (e.g. clarithromycin),azole antifungal agents (e.g. ketoconazole), protease inhibitors (e.g. ritonavir) and grapefruit juice may cause decreased clearance of oxycodone which could lead to an increase in oxycodone plasma concentrations. Oxycodone metabolism may be blocked by a variety of medicines (e.g. cimetidine, certain cardiovascular drugs and antidepressants), although such blockade has not yet been shown to be of clinical significance with OXYNORM capsules or liquid.

CYP3A4 inducers, such as rifampin, carbamazepine, phenytoin and St John’s wort, may induce the metabolism of oxycodone and cause increased clearance of the drug, resulting in a decrease in oxycodone plasma concentrations.

Oxycodone did not inhibit the activity of P450 isoymes 2D6, 3A4, 1A2, 2A6, 2C19 or 2E1 in human liver microsomes in vitro. Non-clinical data in vitro and in vivo indicate that oxycodone can act as a P-glycoprotein substrate and can induce overexpression of P-glycoprotein in rats.
**Metoclopramide**
Concurrent use with oxycodone may antagonise the effects of metoclopramide on gastrointestinal motility.

**Monoamine Oxidase Inhibitors (MAOIs)**
Non-selective MAOIs intensify the effects of opioid agents which can cause anxiety, confusion and significant respiratory depression. Severe and sometimes fatal reactions have occurred in patients concurrently administered MAOIs and pethidine. Oxycodone should not be given to patients taking non-selective MAOIs or within 14 days of stopping such treatment. As it is unknown whether there is an interaction between selective MAOIs (e.g. selegiline) and oxycodone, caution is advised with this medicine combination.

**Neuromuscular blocking agents**
Oxycodone may enhance the effects of neuromuscular blocking agents resulting in increased respiratory depression.

**Opioid agonist analgesics (including morphine, pethidine)**
Additive CNS depressant, respiratory depressant and hypotensive effects may occur if two or more opioid agonist analgesics are used concurrently.

**Opioid agonist-antagonist analgesics (including pentazocine, butorphanol, buprenorphine)**
Mixed agonist/antagonist analgesics may reduce the analgesic effect of oxycodone and/or may precipitate withdrawal symptoms.

### 4.6 Fertility, pregnancy and lactation

**Pregnancy**
Australian Pregnancy Category C: Drugs which, owing to their pharmacological effects, have caused or may be suspected of causing, harmful effects on the human fetus or neonate without causing malformations. These effects may be reversible.

Oxycodone used during pregnancy or labour, may cause withdrawal symptoms and/or respiratory depression in the newborn infant. Oral administration of oxycodone during the period of organogenesis did not elicit teratogenicity or embryofoetal toxicity in rats or rabbits at doses up to 8 mg/kg/day in rats (equivalent to 17 mg/day in women, based on estimated plasma AUC values) or 125 mg/kg/day in rabbits.

Oral administration of oxycodone to rats from early gestation to weaning did not affect post-natal development parameters at doses up to 6 mg/kg/day (equivalent to 9 mg/day in women, based on estimated AUC values). In a study designed specifically to investigate the effect of pre-natal oxycodone on the hypothalamic-pituitary-adrenal axis in adolescent rats, intravenous administration of oxycodone 0.8 mg/kg/day (equivalent to 11 mg/day in pregnant women, based on estimated AUC values) had no effect on the corticosterone response, but delayed and enhanced the peak ACTH response to corticotrophin releasing hormone in males, but not females. The clinical significance of this observation is unknown.

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There are no adequate and well controlled studies with oxycodone in pregnant women. Because animal reproduction studies are not always predictive of human responses, oxycodone should not be used during pregnancy unless clearly needed. Prolonged use of oxycodone during pregnancy can result in neonatal opioid withdrawal syndrome. Oxycodone is not recommended for use in women during or immediately prior to labour. Infants born to mothers who have received opioids during pregnancy should be monitored for respiratory depression.

Breastfeeding
Oxycodone accumulates in human milk, with a median maternal milk:plasma ratio of 3:1 recorded in one study. Oxycodone (7.5 ng/mL) was detected in the plasma of one of forty-one infants 72 hours after Caesarean section. Opioids may cause respiratory depression in the newborn and withdrawal symptoms can occur in breastfeeding infants when maternal administration of an opioid analgesic is stopped. OXYNORM capsules or liquid should not be used in breastfeeding mothers unless the benefits outweigh the risks. Breastfed infants should be monitored for respiratory depression, sedation, poor attachment and gastrointestinal signs.

Fertility
In reproductive toxicology studies, no evidence of impaired fertility was seen in male or female rats at oral oxycodone doses of 8 mg/kg/day, with estimated exposure (plasma AUC) equivalent to 8 mg/day in men and 17 mg/day in women.

Despite these fertility studies in animals, prolonged use of opioids may result in impairment of reproductive function, including fertility and sexual dysfunction in both sexes, and irregular menses in women.

4.7 Effects on ability to drive and use machines
Oxycodone may modify patients’ reactions to a varying extent depending on the dosage and individual susceptibility. If affected, patients should not drive or operate machinery.

4.8 Undesirable effects
Immediate release formulations such as OXYNORM capsules or liquid may have a higher incidence of some adverse reactions than controlled-release formulations such as OXYCONTIN tablets. Adverse drug reactions are typical of full opioid agonists, and tend to reduce with time, with the exception of constipation. Anticipation of adverse drug reactions and appropriate patient management can improve acceptability.

Tabulated summary of adverse reactions

<table>
<thead>
<tr>
<th>Adverse Reaction</th>
<th>Very Common (≥1/10)</th>
<th>Common (1/100 to &lt;1/10)</th>
<th>Uncommon (1/1,000 to &lt;1/100)</th>
<th>Not known</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immune system disorders</td>
<td></td>
<td></td>
<td>allergic reaction, anaphylactic reaction, anaphylactoid reaction, hypersensitivity</td>
<td></td>
</tr>
<tr>
<td>Metabolic and nutritional disorders</td>
<td>decreased appetite</td>
<td></td>
<td>increased appetite, dehydration, hyponatraemia</td>
<td></td>
</tr>
<tr>
<td>Psychiatric disorders</td>
<td>abnormal dreams, anxiety, confusional state, insomnia,</td>
<td></td>
<td>affect lability, agitation, disorientation, drug dependence, dysphoria, euphoric mood,</td>
<td></td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>System</th>
<th>Very Common (≥1/10)</th>
<th>Common (1/100 to &lt;1/10)</th>
<th>Uncommon (1/1000 to &lt;1/100)</th>
<th>Not known</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nervous system disorders</td>
<td>dizziness, headache, somnolence</td>
<td>faintness, sedation, twitching, tremor, lethargy</td>
<td>abnormal gait, amnesia, drowsiness, hyperkinesia, hypertonia, hypoesthesia, hypothermia, muscle contractions involuntary, paraesthesia, raised intracranial pressure, seizures, speech disorder, stupor, syncope, dysgeusia (taste perversion), convulsion</td>
<td>hyperalgesia</td>
</tr>
<tr>
<td>Eye disorders</td>
<td>miosis, visual impairment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ear and labyrinth disorders</td>
<td>vertigo</td>
<td></td>
<td></td>
<td>tinnitus</td>
</tr>
<tr>
<td>Cardiac disorders</td>
<td></td>
<td></td>
<td>bradycardia, chest pain, ST depression, palpitations (as part of withdrawal syndrome), supraventricular tachycardia</td>
<td></td>
</tr>
<tr>
<td>Vascular disorders</td>
<td>Orthostatic hypotension</td>
<td></td>
<td>hypotension, migraine, vasodilation</td>
<td></td>
</tr>
<tr>
<td>Respiratory, thoracic and mediastinal disorders</td>
<td>bronchospasm, dyspnoea, pharyngitis, voice alteration</td>
<td></td>
<td>respiratory depression</td>
<td></td>
</tr>
<tr>
<td>Gastrointestinal disorders</td>
<td>nausea, vomiting, constipation</td>
<td>abdominal pain, diarrhoea, dry mouth, dyspepsia, gastritis, hiccups</td>
<td>colic, dental caries, dysphagia, eructation, flatulence, gastrointestinal disorder, ileus, stomatitis</td>
<td></td>
</tr>
<tr>
<td>Hepatobiliary disorders</td>
<td>pruritus</td>
<td>hyperhidrosis, rash</td>
<td>biliary spasm, cholestasis, hepatic enzymes increased</td>
<td></td>
</tr>
<tr>
<td>Skin and subcutaneous tissue disorders</td>
<td></td>
<td>angioedema, dry skin, exfoliative dermatitis, urticaria and other skin rashes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Renal and urinary disorders</td>
<td>pruritus</td>
<td>hyperhidrosis, rash</td>
<td>urteric spasm, urinary abnormalities, urinary infection, urinary retention</td>
<td></td>
</tr>
<tr>
<td>Reproductive system and breast disorders</td>
<td></td>
<td></td>
<td>amenorrhea, erectile dysfunction, hypogonadism</td>
<td></td>
</tr>
<tr>
<td>General disorders and administration site conditions</td>
<td>asthenia, fatigue, chills, fever</td>
<td>accidental injury, drug tolerance, drug withdrawal syndrome (with or without seizures), oedema, peripheral oedema, malaise, facial flushing, lymphadenopathy, muscular rigidity, neck pain, pain, thirst</td>
<td>drug withdrawal syndrome neonatal</td>
<td></td>
</tr>
</tbody>
</table>

If nausea and vomiting are troublesome oxycodone may be combined with an antiemetic. Constipation must be treated with appropriate laxatives. Overdose may produce respiratory depression. Compared with other opioids oxycodone is associated with low histamine release although urticaria and pruritus may occur.

Reporting suspected adverse reactions after authorisation of the medicine is important. It allows continued monitoring of the benefit/risk balance of the medicine. Healthcare professionals are asked to report any suspected adverse reactions https://nzphvc.otago.ac.nz/reporting/
4.9 Overdose

Acute overdosage with oxycodone can be manifested by respiratory depression (reduced respiratory rate and/or tidal volume, Cheyne-Stokes respiration, cyanosis), extreme somnolence progressing to stupor or coma, hypotonia, skeletal muscle flaccidity, cold and/or clammy skin, miosis (dilated if hypoxia is severe), and sometimes bradycardia, hypotension, and death. Severe overdose may result in apnoea, pulmonary oedema, circulatory collapse and death.

Primary attention should be given to immediate supportive therapy with the establishment of adequate respiratory exchange through the provision of a patent airway and institution of assisted or controlled ventilation. Adequate body temperature and fluid balance should be maintained. Oxygen, intravenous fluids, vasopressors and other supportive measures should be used as indicated to manage the circulatory shock accompanying an overdose. The opioid antagonist naloxone hydrochloride is a specific antidote for respiratory depression due to overdosage or as a result of unusual sensitivity.

For advice on the management of overdose please contact the National Poisons Centre on 0800 POISON (0800 764766).

5 PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

Pharmacotherapeutic group: Natural opium alkaloids
ATC code: N02A A05

Non-proprietary name: Oxycodone hydrochloride
Chemical name: 4,5α-epoxy-14-hydroxy-3-methoxy-17-methylmorphinan-6-one hydrochloride
CAS No.: 124-90-3
Molecular formula: C_{18}H_{21}NO_{4}
Molecular weight: 351.83

The structural formula for oxycodone hydrochloride is:

Oxycodone hydrochloride is a white, crystalline, odourless powder readily soluble in water, sparingly soluble in ethanol and nearly insoluble in ether.
**Mechanism of Action**
Oxycodone is a full opioid agonist with no antagonist properties whose principal therapeutic action is analgesia. It has affinity for kappa, mu and delta opiate receptors in the brain and spinal cord. Oxycodone is similar to morphine in its action.

**Pharmacodynamic effects**
Other pharmacological actions of oxycodone are in the central nervous system (CNS: respiratory depression, antitussive, anxiolytic, sedative and miosis), smooth muscle (constipation, reduction in gastric, biliary and pancreatic secretions, spasm of sphincter of Oddi and transient elevations in serum amylase) and cardiovascular system (release of histamine and/or peripheral vasodilatation, possibly causing pruritus, flushing, red eyes, sweating and/or orthostatic hypotension). Endocrine System – See section 4.4.

5.2 **Pharmacokinetic properties**

**Absorption**
Compared with morphine, which has an absolute bioavailability of approximately 30%, oxycodone undergoes relatively low “first-pass” metabolism and has a high absolute bioavailability of up to 87% following oral administration. Peak plasma concentrations of oxycodone are reached approximately one hour after administration of OXYNORM capsules, and less than one hour (approximately 45 minutes) after administration of OXYNORM liquid.

No data are available on the effect of food on the absorption of OXYNORM capsules. Limited data indicate that the absorption of oxycodone from an oral solution may be significantly affected by food. An increase in mean AUC of approximately 20%, and decrease of $C_{max}$ of approximately 20% has been reported.

**Biotransformation and Elimination**
Oxycodone has an elimination half-life of approximately three hours and is metabolised in the liver to form noroxycodone, oxymorphone, noroxymorphone, $6\alpha$ and $\beta$ oxycodol and conjugated glucuronides. CYP3A4 and CYP2D6 are involved in the formation of noroxycodone and oxymorphone, respectively (see Interactions with other medicines). The contribution of these metabolites to the analgesic effect is insignificant.

5.3 **Preclinical safety data**

**Carcinogenicity**
Studies of oxycodone in animals to evaluate its carcinogenic potential have not been conducted.

**Genotoxicity**
Oxycodone was not genotoxic in bacterial gene mutation assays but was positive in the mouse lymphoma assay. In assays of chromosomal damage, genotoxic effects occurred in the human lymphocyte chromosomal aberration assay in vitro, but not in the in vivo bone marrow micronucleus assay in mice.
6 PHARMACEUTICAL PARTICULARS

6.1 List of excipients

**OXYNORM liquid:**
saccharin sodium
sodium benzoate
citric acid monohydrate
sodium citrate
hypromellose.

**OXYNORM capsules:**
microcrystalline cellulose
magnesium stearate

The capsule shells and printing ink contain the following materials:

<table>
<thead>
<tr>
<th>Material</th>
<th>5 mg capsule</th>
<th>10 mg capsule</th>
<th>20 mg capsule</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indigo carmine Cl 73015 (E132)</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Iron oxide red Cl 77491 (E172)</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Iron oxide yellow Cl 77492 (E172)</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Sunset yellow FCF Cl 15985 (E110)</td>
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<tr>
<td>Titanium dioxide (E171)</td>
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<td>●</td>
<td>●</td>
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<tr>
<td>Empty Hard Gelatin Capsules 4722-1</td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Empty Hard Gelatin Capsules 4723-1</td>
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<td>●</td>
<td></td>
</tr>
<tr>
<td>Empty Hard Gelatin Capsules 4724-1</td>
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<td></td>
<td>●</td>
</tr>
<tr>
<td>OPACODE monogramming ink S-1-277002 BLACK</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>

6.2 Incompatibilities
Not applicable

6.3 Shelf life
**OXYNORM capsules and oral solution:** 4 years

6.4 Special precautions for storage
Store below 30°C
6.5 Nature and contents of container
OXYNORM capsules in blister packs of 20 capsules
- 5 mg (orange/beige)
- 10mg (white/beige)
- 20 mg (pink/beige)

OXYNORM liquid 5 mg/5 mL is a clear, colourless to straw-coloured solution in bottles of 250 mL.

6.6 Special precautions for disposal
Any unused medicine or waster material should be disposed of in accordance with local requirements.

7 MEDICINE SCHEDULE
Controlled Drug B3

8 SPONSOR
Distributed on behalf of Mundipharma New Zealand Limited by:
Pharmaco (N.Z.) Ltd
4 Fisher Crescent
Mt Wellington
Auckland 1060
Ph: (09) 377-3336
Toll Free [Medical Enquiries]: 0800 773 310

9 DATE OF FIRST APPROVAL
OxyNorm Capsules 5mg, 10mg & 20mg 8 Feb 2001
OxyNorm Oral Solution 5mg/5mL 23 May 2006

10 DATE OF REVISION OF THE TEXT
29 June 2017

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(CCDS v13, Feb 2017. Orbis NZR-0048)

SUMMARY TABLE OF CHANGES

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<thead>
<tr>
<th>Section changed</th>
<th>Summary of new information</th>
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<tr>
<td>All</td>
<td>Reformatted to new SPC format</td>
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<tr>
<td>Section changed</td>
<td>Summary of new information</td>
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<tr>
<td>Section 4.4</td>
<td>Reformatting to SPC format. Addition of wording on endocrine effects from Section 5.1. Additional information about risks of concomitant use with benzodiazepines and other CNS depressants as per MARC review</td>
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<tr>
<td>Section 4.5</td>
<td>Addition of interaction with benzodiazepines and other CNS depressants as per MARC review</td>
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<tr>
<td>Section 4.9</td>
<td>Removed specific dosage recommendations</td>
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<tr>
<td>Section 5.1</td>
<td>Deletion of endocrine wording and reference to Section 4.4</td>
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