**Headache**

Headache is a common symptom. The most common types of headache that the community pharmacist is likely to encounter are tension headache and migraine.

**Significance of questions and answers**

 **Age** The pharmacist would be well advised to refer any child with a headache to the GPsurgery if there is an associated history of injury or trauma Children with severe pain across the back of the head and neck rigidity should be referred immediately. Elderly patients sometimes suffer a headache a few days after a fall involving a bang to the head. Such cases may be the result of a slow bleed into the brain, causing a subdural haematoma, and require immediate referral. It is unusual for patients to present with their first migraine episode over the age of 40 years,and these patients should be referred.

 **Duration** Any headache that does not respond to over-the-counter (OTC) analgesics within a day requires referral.

**Nature and site of pain**:The pain is often described as being around the base of the skull and the upper part of the neck and is the same on both sides. It is not associated with any neck stiffness. The pain is usually of a dull nature rather than the pounding or throbbing sensation associated with migraines. However, the nature of the pain alone is not sufficient evidence on which to decide whether the headache is likely to be from a minor or more serious cause. Asteady, dull pain that is deep seated, severe and aggravated by lying down requires referral, since it may be due to raised intracranial pressure from a brain tumour, infection or other cause.

**Frequency and timing of symptoms** Pharmacists should regard a headache that is worse in the morning and improves during the day as potentially serious, since this may be a sign of raised intracranial pressure. Another type of headache, cluster headaches, typically happen daily (at roughly the same time of day or night) for 2–3 months and each episode of pain can last up to 3 h

**Previous history** :new or different headaches (especially in people over 45 years) may be a warning sign of a more serious condition.

**Associated symptoms** Children and adults with unsteadiness and clumsiness associated with a headache should be referred immediately.

**Types of headache**

**1-Migraine**

**Migraine without aura** (common migraine) Headache attacks lasting 4–72 h (untreated or unsuccessfully treated) Headache has at least two of the following four characteristics:

1. Unilateral location **2.** Pulsating quality **3.** Moderate or severe pain intensity **4.** Aggravation by, or causing avoidance of, routine physical activity (e.g. walking or climbing stairs)

During headache at least one of the following symptoms:

1. Nausea and/or vomiting 2. Photophobia (aversion to light) and phonophobia (aversion to noise)

**Migraine with aura (classic migraine)** One or more of the following fully reversible aura symptoms: 1. Visual 2. Sensory 3. Speech and/or language 4. Motor 5. Brainstem 6. Retinal

At least two of the following four characteristics: 1. At least one aura symptom spreads gradually over≥5 min, and/or two or more symptoms occur in succession. 2. Each individual aura symptom lasts 5–60 min. 3. At least one aura symptom is unilateral. 4. The aura is accompanied, or followed within 60 min, by headache.

**2-Tension-type headache**

The most common type of headache is most often related to upset or stress. They are characterised by recurrent episodes of headache that are usually bilateral and have apressing ortightening quality (non-pulsating) that is mild to moderate in intensity.The pain is often felt to arise from the neck and is sometimes associated with musculoskeletal neck problems. Important features that help in differentiation from more serious problems are that the headache is not aggravated by routine physical activity such as walking or climbing stairs and is not associated with nausea or vomiting or photophobia or phonophobia (but stressed people may find incessant noise or flashing lights stresses them further).

**3- Chronic tension-type headache and chronic daily headache**

The term chronic tension-type headache is used if the headache occurs on 15 days or more per month, on average, and lasts for more than 3 months at a time. Any frequent headache needs referral to the GP surgery for assessment.

**4-Medication overuse headache**

Medication overuse headache is a chronic headache (occurring on more than 15 days each month) that develops or worsens with frequent use of any drug treatment for pain in people who have tension-type headache or migraine.It has also been identified in people taking analgesics for other painful conditions. It is most commonly seen when triptans, opioids, ergots or combination analgesia have been taken for 10 days per month or more and is sometimes seen if paracetamol, aspirin or a non-steroidal anti-inflammatory drug (NSAID), either alone or in any combination, are taken on 15 days per month or more.

**5-Cluster headaches** (previously called migrainous neuralgia)

A typical pattern would be daily episodes of pain over 2–3 months, after which there is a remission for anything up to 2 years. The pain can be excruciating and often comes on very quickly. In typical cases the headache commonly wakes the person from sleep within 2 hr of going to sleep but mayalso occur at other times.Each episode of pain can last from 15 min to 3h,and the pain is usually experienced on one side of the head,in the eye,cheek or temple. A cluster headache is often accompanied by a painful, watering eye and a watering or blocked nostril on the same side as the pain. Any recurrent, persistent or severe headache of this type needs referral to the GP surgery for a diagnosis.

**6-Sinusitis**

Sinusitis may complicate a respiratory viral infection (e.g. cold) or allergy (e.g. hay fever), which causes inflammation and swelling of the mucosal lining of the sinuses (see Chapter 1 Respiratory Problems: Symptoms: Facial pain/Frontal headache). The increased mucus produced within the sinus cannot drain, and pressure builds up, causing pain.

**7-Temporal arteritis**

 Temporal arteritis (also known as giant cell arteritis) usually occurs in people over the age of 60 when the arteries that run through the temples become inflamed. The arteries may appear red and are painful and thickened to the touch. However only about a half of patients have scalp tenderness, and these signs are not always present.should be referred immediately as damage to the retinal blood supply can cause blindness.Temporal arteritis is a curable disease and it is important to avoid delay in diagnosis and treatment. Treatment usually involves high-dose oral corticosteroids and is highly effective, provided the diagnosis is made sufficiently early.

**Precipitating factors**

stress, pressure at work .Certain foods have been reported to precipitate migraine,for example, chocolate and chees, associated with the menstrual cycle or with combined hormonal contraception .Recent trauma or injury. Recent eye test Headaches associated with periods of reading,writing or other close work may be due to deteriorating eyesight and a sight test may be worth recommending to see whether spectacles are needed. Medication ,for example, nitrates used in the treatment of angina.

Any woman taking the combined hormonal contraception (pill, patch or ring) and reporting severe prolonged headache or migraine headaches, either for the first time or as an exacerbation of existing migraine, should be referred to the GP surgery or sexual health/ family planning clinic urgently since this may be an early warning of cerebrovascular abnormality with risk of stroke. Occasionally, a headache is caused by hypertension only when the blood pressure is extremely high.

**When to refer** ■ Headache associated with injury/trauma ■ Headache associated with high temperature (>38◦C) ■ Severe headache of more than 4 h duration ■ Suspected adverse drug reaction ■ Headache in children under 12 years ■ Severe occipital headache (across the back of the head) ■ Headache that is worse in the morning and then improves ■ Associated drowsiness, unsteadiness, visual disturbances or vomiting ■ Neck stiffness ■ Frequent migraines suggesting need for prophylactic treatment ■ Frequent and persistent headaches Treatment timescale If the headache does not respond to OTC analgesics within a day, referral is advisable.

**Management**

 The pharmacist’s choice of oral analgesic comprises three main agents: paracetamol, ibuprofen or aspirin. Aspirin is now rarely used for analgesia and should not be used at all in children under the age of 16 years. These medications may be combined with other constituents such as codeine, dihydrocodeine, doxylamine and caffeine. The peak blood levels of analgesics are achieved 30 min after taking dispersible dosage forms; after traditional aspirin tablets, it may take up to 2 h for peak levels to be reached.

**Paracetamol**

 Paracetamol has analgesic and antipyretic effects but little or no antiinflammatory action. The exact way in which paracetamol exerts its analgesic effect remains unclear, despite extensive research. It is less irritating to the stomach than is aspirin and can therefore be recommended for those patients who are unable to take aspirin. Paracetamol can be given to children from 2 to 3monthsold. can cause liver toxicity at high doses and damage may not be apparent until a few days later. All overdoses of paracetamol should be taken seriously and the patient referred to a hospital accident and emergency department.

 **Ibuprofen**

Ibuprofen has analgesic, anti-inflammatory and antipyretic activities and causes less irritation and damage to the stomach than does aspirin. The dose required for analgesic activity is 200–400 mg and that for anti-inflammatory action 300–600 mg (total daily dose of 1600–2400 mg). The maximum daily dose allowable for OTC use is 1200 mg and ibuprofen tablets or capsules should not be given to children under 12 years. Ibuprofen suspension 100 mg in 5 ml is available OTC. Differences in product licences mean that some ibuprofen suspensions can be used in children aged 3 months and over. it is still not advised for patients taking anticoagulant medication (as bleeding risk is high) for whom paracetamol would beabetter choice. Hypersensitivity Cross-sensitivity between aspirin and NSAIDs occurs.Since asthmatic patients are more likely to have such a reaction, the use of NSAIDs in asthmatic patients should be with caution.

**Aspirin**

Aspirin is analgesic, antipyretic and also anti-inflammatory if given in doses of 600-900 mg three to four times daily in adults.Its use as an analgesic has diminished because it causes more gastric irritation than paracetamol or ibuprofen and also affects blood clotting. About half of migraine sufferers show significant improvement in their headache 2 h after taking aspirin. It should not be given to children under 16 years old because of its suspected link with Reye’s syndrome. It should not be used for gout or where there is history of gout. local use of aspirin, for example, dissolving a soluble tablet near an aching tooth,is best avoided,since ulceration of the gums may result.Aspirin can cause GI bleeding and should not be recommended for any patient who either currently has or has a history of peptic ulcer.

**Codeine**

 Codeineis anarcotic analgesic; a systematic review of evidence from clinical trials showed that a dose of at least 15 mg is required for analgesic effect.Codeine is commonlyfoundincombination products with aspirin,paracetamol or both. Constipation is a well recognised side effect and is more likely in older people and others prone to constipation. Codeine can also cause drowsiness and respiratory depression, and in some people causes nausea and vomiting, although this may be unlikely at OTC doses. Codeine-containing medicines should only be used in children over 12 years old to treat acute moderate pain, and only if it cannot be relieved by paracetamol or ibuprofen. Codeine should also not be used by breastfeeding mothers because it can pass to the baby through breast milk and potentially cause harm.

 **Dihydrocodeine**

 Dihydrocodeine is related to codeine and has similar analgesic efficacy. A combination product containing paracetamol and dihydrocodeine is available with a dose per tablet of 7.46 mg dihydrocodeine. The product is restricted to use in adults and children over 12 years old.Side effects include constipation, drowsiness,nausea and vomiting.Like codeine,the drug maycauserespiratory depression at high doses.

 **Caffeine**

Caffeine is included in some combination analgesic products to produce wakefulness and increased mental activity.It is probable that doses of at least 100 mg are needed to produce such an effect; OTC analgesics contain 30–50 mg per tablet.

**Doxylamine succinate**

Doxylamine is an antihistamine whose sedative and relaxing effects are probably responsible for its usefulness in treating tension headaches. It is an ingredient in some OTC combination products. Like other older antihistamines, doxylamine can cause drowsiness, and patients should be warned about this. Doxylamine containing products should not be recommended for children under 12 years old.

 **Buclizine**

Buclizine is an antihistamine and is included in an OTC compound analgesic for migraine because of its antiemetic action.

**Sumatriptan**

Sumatriptan 50 mg tablets can be used OTC for acute relief of migraine with or without aura and where there is a ‘clear diagnosis of migraine’. It can be used by people aged between 18 and 65 years. A 50 mg tablet is taken as soon as possible after the migraine headache starts. A second dose can be taken at least 2 h after the first if symptoms come back. A second dose should be taken only if the headache responded to the first dose.

The following patients should be referred for medical assessment:

■ Those aged under 18 years or over 65 years.

■ Those aged 50 years or over and experiencing migraine attacks for the first time. If a doctor confirms a diagnosis of migraine, they can be considered for OTC sumatriptan.

■ Patients who had their first ever migraine attack within the previous 12 months.

■ Patients who have had fewer than five migraine attacks in the past. Patients whoexperiencefourormoreattackspermonth.Thepatientispotentially suitable for OTC sumatriptan but should be referred to a doctor for further evaluation and management.

 ■ If migraine headache lasts for longer than 24 h, the patient is potentially suitable for OTC sumatriptan but should be referred to a doctor for further evaluation and management.

 ■ Patients who do not respond to treatment.

■ Patients who have a headache (of any type) on 10 or more days per month.

 ■ Womenwith migraine who take the combined hormonal contraception have an increased risk of stroke, so should be referred if the onset of migraine is within the previous 3 months, or if migraine attacks are worsening, or if they have a migraine with aura.

 ■ Patients who do not recover fully between attacks.

 ■ Pregnant or breastfeeding migraine sufferers.

 ■ Patients with three or more cardiovascular risk factors. Contraindications OTC sumatriptan must not be used prophylactically and not in people with known hypertension, previous myocardial infarction, ischaemic heart disease, peripheral vascular disease, coronary vasospasm/Prinzmetal’s angina, cardiac arrhythmias (including Wolff–Parkinson–White syndrome), hepatic or renal impairment,epilepsy,a history of seizures and cerebrovascular accident or transient ischaemic attack. Adverseeffects.Commonadverseeffectsincludenauseaandvomiting,disturbances of sensation (including tingling), dizziness, drowsiness, flushing, warm sensation, feeling of weakness and fatigue and feelings of heaviness, pain or pressure in any part of the body. Interactions These include monoamine oxidase inhibitors (either current or within the last 2 weeks), ergot and St John’s wort (may increase serotonin levels).

**Insomnia**

Difficulty sleeping Insomnia is common; temporary insomnia can often be managed by the pharmacist. The key to restoring appropriate sleep patterns is advice on sleep hygiene (bedtime routines).

**Significance of questions and answers**

**Age**: In older people, the total duration of sleep is shorter and there is less deep (stage 4) sleep.Many babies, toddlers and infants have poor sleep patterns, which understandably can cause anxiety to parents.In these situations,referral to the health visitor or doctor can be helpful. **Symptoms** It is important to distinguish between these different components of sleep problems: Difficulty in falling asleep (possibly a symptom of anxiety) Early morning waking (possibly a symptom of depression) Waking during the night and poor sleep quality (further questioning needed to understand why). Sleep may be disturbed by snoring, sleep apnoea or restless legs. All of these can be associated with increased cardiovascular risk. Referral to the general practitioner (GP) is necessary. Sleep may also be disturbed by underlying physical conditions: heart disease; chronic obstructive pulmonary disease (COPD) or asthma; neurological disease (Alzheimer’s, Parkinson’s); overactive thyroid; joint or muscle pains; or urinary symptoms or chronic pain. to sleep but waking in the early hours and not being able to get back to sleep.

 **Duration** Sleep disorders are classified as follows: Transient (days). Short term (up to 4 weeks). Chronic (longer than 4 weeks). All chronic cases should be referred to the doctor.

**Previous history** ask wether this is the first time problems in sleeping have occurred or whether there is a previous history. Where there is a previous history, it is helpful to know what treatments have been tried. It is also useful to be aware of a history of depression or anxiety or other mental health problems. Contributory factors 1. Shift work with changing shifts is a classic cause of sleep problems. 2. Alcohol –While one or two drinks can help by decreasing sleep latency (the length of time taken to fall asleep). 3. Life changes can cause disrupted sleep, for example, change or loss of job, moving house, bereavement, loss or separation or the change of life (i.e. menopause). 4. Other stressful life events might include examinations, job interviews, celebrations (e.g. Christmas) and relationship difficulties. 5. Obesity can be associated with sleep apnoea and snoring, both of which can interrupt sleeping.6.medication: Some drugs can cause or contribute to insomnia, including decongestants, selective serotonin reuptake inhibitors (SSRIs) and serotonin/noradrenaline reuptake inhibitors (SNRIs), monoamine oxidase inhibitors, methylphenidate, corticosteroids, appetite suppressants and phenytoin and theophylline.

**When torefer** Suspected depression Chronic problem (longer than 4 weeks’ duration)Children under 16 years Snoring, apnoea, restless legs Associated physical conditions Suspected alcohol problems dependency Recreational drug dependence .Treatment timescale There should be an improvement within days: refer after 1 week if the problem is not resolved.

**Management**

**Antihistamines** (diphenhydramine and promethazine) Antihistamines reduce sleep latency and also reduce nocturnal waking. They should be taken 20–30 min before bedtime and can be recommended for adults and children over 16 years. Tolerance to their effects can develop, and they should not be used for longer than 7–10 consecutive nights. Diphenhydramine has a shorter half-life than promethazine (5–8 h compared with 8–12 h). These antihistamines have anticholinergic side effects, including dry mouth and throat, constipation, blurred vision and tinnitus.

**Benzodiazepines** recommending that these drugs are for short-term use only and should not be used for longer than 2–4 weeks, pharmacists are well aware that some patients continue to be on them for long periods of time. In some areas the rate of repeat prescribing to older people (>65 years) can be as high as 30%. In older people taking benzodiazepines, such as nitrazepam and temazepam, long-term use can cause considerable harm. There is no evidence that they continue to help with sleep beyond a few weeks, but they are addictive, and many people get discontinuation symptoms if they stop them abruptly.Long-term use can aggravate anxiety and depression.

**Complementary therapies** :Some patients prefer alternative treatments for insomnia, perceiving them as more natural. Herbal remedies have been traditionally used for insomnia, with valerian and hops being the most commonly used ingredients.

**Aromatherapy** Lavender oil has been shown to induce a sense of relaxation, as has camomile. One or two drops of the essential oil sprinkled on a pillow or three or four drops in a warm (not hot) bath can be recommended.

**Melatonin** is produced by the body’s pineal gland during darkness and is thought to regulate sleep. Studies have shown that melatonin levels are lower in the elderly. Supplementation with melatonin can raise levels. Melatonin has a short half-life (2–3 h) and is subject to first-pass metabolism.

**St John’s wort (Hypericum)** a herbal remedy, is commonly used in the self-treatment of depression, and pharmacists will encounter people who come into the pharmacy tobuyitandthosewhoseekthepharmacist’s opinion about whether to take it or not.

**Nasal plasters** for snoring These adhesive nasal strips work by opening the nostrils wider and enabling the body to become accustomed to breathing through the nose rather than through the mouth.Aplaster is applied each night for up to 1 week to retain the breathing process. The strips have been suggested for use in night-time nasal congestion during pregnancy.

**Practical points Sleep hygiene Key points are as follows:** ■ Establish fixed times for going to bed and waking up (and avoid sleeping in after a poor night’s sleep).

 ■ Not watching TV or using phones,tablets or computers shortly before going to bed.

■ Tryto create a relaxation period before going to bed.Try taking a warm bath or listening to calming music.

 ■ Maintain a comfortable sleeping environment: not too hot, cold, noisy or bright. 9 Insomnia

■ Using thick curtains or blinds, an eye mask and earplugs to stop you being woken up by light and noise.

■ Avoid napping during the day.

■ Avoid caffeine, nicotine, and alcohol within 6 h of going to bed.

■ Avoid exercise within 4 h of bedtime (although exercise earlier in the day is beneficial).

■ Avoid eating a heavy meal late at night.

■ Avoid watching or checking the clock through the night; this increases anxiety.

■ Only use the bedroom for sleep and sexual activity.

 ■ Writing a list of worries,and any ideas about how to solve them,before going to bed, can help in forgetting about them until the morning.

**Nausea and vomiting**

 Nausea and vomiting are symptoms that have many possible causes. From the pharmacist’s point of view, while there are treatments available to prevent nausea and vomiting, there is no effective OTC treatment once vomiting is established.

**Significance of questions and answers**

**Age** The very young and the elderly are most at risk of dehydration as a result of vomiting. Vomiting of milk in infants less than 1 year old may be due to infection or feeding problems or, rarely, an obstruction such as pyloric stenosis. The pharmacist must distinguish, by questioning between vomiting (the forced expulsion of gastric contents through the mouth) and regurgitation (where food is effortlessly brought up from the throat and stomach).Whenregurgitation occurs in adults,it is associated with oesophageal disease with difficulty in swallowing and requires referral

**Pregnancy** Nausea and vomiting are very common in pregnancy, usually beginning after the first missed period and occurring early in the morning.Pregnancy should be considered as a possible cause of nausea and vomiting in any woman of childbearing age whopresents at the pharmacycomplainingofnauseaandvomiting. Nausea and vomiting are more common in the first pregnancy than in subsequent ones

**Duration** Generally, adults should be referred to the GP surgery if vomiting has been present for longer than 2 days.Children under 2 years should be referred,whatever the duration, because of the risks from dehydration. Anyone presenting with chronic vomiting should be referred to the doctor since such symptoms may indicate the presence of a peptic ulcer or gastric cancer.

**Associated symptoms** An acute infection (gastroenteritis) is often responsible for vomiting.careful questioning about food intake during the previous 2 days may give clue as to the cause. Vomiting without other symptoms, in the very young, can be caused by serious infection such as meningitis and is an indication for immediate referral. The vomiting of blood may indicate serious disease and is an indication for urgent referral, since it may be caused by haemorrhage from a peptic ulcer or gastric cancer. Vomit with a faecal smell means that the GI tract may be obstructed and requires urgent referral. Nausea and vomiting may be associated with a migraine. Any history of dizziness or vertigo should be noted as it may point to inner ear disease, for example, labyrinthitis or Meniere’s disease as a cause of the nausea.

**Medication** Aspirin and NSAIDs are common causes. Some antibiotics may cause nausea and vomiting, for example, erythromycin (which stimulates stomach contraction). Oestrogens, corticosteroids and opioid analgesics may also produce these symptoms. Symptoms can sometimes be improved by taking the medication with food, but if they continue, the patient should see the doctor. Digoxin toxicity may show itself by producing nausea and vomiting, and such symptoms in a patient who is taking digoxin, especially an older person, should prompt immediate referral

**Previous history** Any history that suggests chronic nausea and vomiting would indicate referral.

**Management** Patients who are vomiting should be referred to the doctor, who will be able to prescribe an anti-emetic if needed. The pharmacist can initiate rehydration therapy in the meantime.

**Motion sickness**

Motion sickness is thought to be caused by a conflict of messages to the brain, where the vomiting centre receives information from the eyes, the GI tract and the vestibular system in the ear. Symptoms of motion sickness include nausea andsometimesvomiting,pallor and cold sweats. Any form of travel can produce symptoms, including air, sea and road.

**Significance of questions and answers**

**Age** Motion sickness is common in young children. Babies and very young children up to 2 years seem to only rarely suffer from the problem and therefore do not usually require treatment. The incidence of motion sickness seems to greatly reduce with age, although some adults still experience symptoms, and seasickness remains a problem for many.

**Previous history** The pharmacist should ascertain which members of the family have previously experienced motion sickness and for whom treatment will be needed.

 **Mode of travel/length of journey**

Details of the journey to be undertaken are useful.The estimated length of time to be spent travelling will help the pharmacist in the selection of prophylactic treatment, since the length of action of available drugs varies. Once vomiting starts, there is little that can be done, so any medicine recommended by the pharmacist must be taken in good time before the journey if it is to be effective. The fact that it is important that the symptoms are prevented before they can gain a hold should be emphasised to the parents. If it is a long journey, it may be necessary to repeat the dose while travelling, and the recommended dosage interval should be stressed.

 The pharmacist can also offer useful general advice about reducing motion sickness according to the method of transport to be used.For example,keeping still, if possible by choosing a cabin or seat in the middle of a boat or plane,and using a pillow or headrest to help keep the head as still as possible. Children are less likely to feel or be sick if they can see out of the car, so appropriate seats can be used to elevate the seating position of small children. This seems to be effective in practice and is thought to be because it allows the child to see relatively still objects outside the car. This ability to focus on such objects may help to settle the brain’s receipt of conflicting messages. For any method of travel, children are less likely to experience symptoms if they are kept calm and relaxed as much as possible. They can be kept occupied by listening to music or playing games as they are therefore concentrating on something else.

**Medication** In addition to checking any prescription or OTC medicines currently being taken, the pharmacist should also enquire about any treatments used in the past for motion sickness and their level of success or failure.

**Management**

**1.Antihistamines** :Antihistamines include cinnarizine, meclozine and promethazine. Anticholinergic effects are thought to be responsible for the effectiveness of antihistamines in the prophylaxis of motion sickness. All have the potential to cause drowsiness, and promethazine appears to be the most sedative.Meclozine and promethazine theoclate have long durations of action and are useful for long journeys since they need to be taken only once daily. Cinnarizine and promethazine theoclate are not recommended for children younger than 5 years, whereas meclozine can be given to those over 2 years. The manufacturers of products containing these drugs advise that they are best avoided during pregnancy.

**2.Anticholinergic agents** The only anticholinergic used widely in the prevention of motion sickness is hyoscine hydrobromide, which can be given to children over 3 years.

Pharmacists should remember that side effects from anticholinergic agents are additive and may be increased in patients already taking drugs with anticholinergic effects, such as **oxybutynin** and other drugs used for urinary symptoms, **tricyclic antidepressants** (e.g. amitriptyline), **butyrophenones** (e.g. haloperidol) and **phenothiazines** (e.g.chlorpromazine).It is therefore important for the pharmacist to determine the identity of any medicines currently being taken by the patient. Table 2.2 summarises recommended doses and length of action for the treatments discussed.



**Alternative approaches to motion sickness**

**Ginger** No mechanism of action has been identified, but it has been suggested that ginger acts on the GI tract itself rather than on the vomiting centre in the brain or on the vestibular system.No official dosage level has been suggested, but several proprietary products containing ginger are available. since it does not cause drowsiness and might be worth considering for use in pregnant women.

**Acupressure** wristbands Elasticated wristbands that apply pressure to a defined point on the inside of the wrists are available. Evidence of effectiveness is equivocal, but it is unlikely they would cause harm. Such wristbands might be worth trying for drivers or pregnant women.