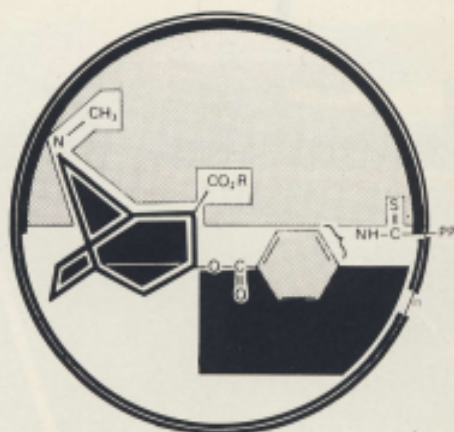


# Some p's & q's of pain relief



This article reviews some of the analgesics available in S. Africa where some R30m a year is spent on more than 130 different pain relievers

South Africa spends some R30 m a year, at retail level, on analgesics. Pain relief, it would seem, is big business and the fact that over 130 analgesics are available via pharmacies in the Republic tends to support this argument.

Within two broad categories of narcotic and non-narcotic, analgesics are further subdivided as follows:

1. Combination analgesics
2. Single-entity analgesics
3. Narcotic analgesics

## Combination Analgesics

**1. Combination analgesics** — by far the largest sector of the private analgesic market in South Africa, the various brands accounting for upwards of 70% of total annual sales.

Generally containing paracetamol, smallish doses of codeine, caffeine and a sedative/antihistamine type ingredient, e.g. meprobamate, diphanhydramine, doxylamine succinate, the combinations enjoy significant popularity among prescribing practitioners.

One brand in particular accounts for (approximately) 40% of all analgesic prescriptions and is presently the most prescribed drug in the country.

Not all combination analgesics, however,

are four-ingredient products. Some combine aspirin or paracetamol with codeine alone, others employ propoxyphene, aspirin and caffeine and in the muscle-relaxant category one finds combinations of paracetamol and chlorzoxazone or chlorzoxazone.

Extracts from package inserts of various combination analgesics are listed below:

### Dolorol Forte

Dolorol Forte is a combination analgesic produced by Lennon Laboratories, and is indicated for moderate to severe pain such as headache, rheumatism, dysmenorrhoea, colds and other painful or feverish conditions.

Dolorol contains paracetamol, codeine phosphate and is preserved with nipastat. The analgesic and antipyretic properties of paracetamol are similar to those of aspirin, but it has no anti-inflammatory or anti-rheumatic effects. It is quickly and completely absorbed from the intestinal tract, and its concentration in the plasma is at its peak after 30 minutes to one hour.

Codeine phosphate is well absorbed after oral administration, and provides additional analgesic effects.

Dolorol Forte is contra-indicated in patients who are sensitive to paracetamol or

codeine, or those with liver or kidney complications. The dosage in renal function impairment must be reduced. As little as 10 mg paracetamol can lead to fatal liver necrosis in an adult, especially if malnourished.

In recommended therapeutic dosage, paracetamol is usually well tolerated. Allergic reactions may occur, occasionally, in the form of erythematous or urticarial skin rashes.

The commonest side-effects of therapeutic doses of codeine phosphate are constipation, nausea, vomiting, dizziness and drowsiness.

For further information circle No 202

### Stilpane

Also produced by Lennon Laboratories is Stilpane, which contains caffeine and meprobamate in addition to codeine and paracetamol.

It is indicated in pain-tension states, but is contra-indicated in patients with acute intermittent porphyria, or those with a history of hypersensitivity to meprobamate or similar agents.

Side-effects of caffeine include nausea, headache and insomnia.

Drowsiness is the most frequent side-effect of meprobamate, but other effects in-

clude nausea, vomiting diarrhoea and headaches. Symptoms of porphyria may be exacerbated.

#### Lenadol

Lenadol, also available from Lennon Laboratories, contains diphenhydramine HCl in addition to paracetamol, caffeine and codeine and is indicated in pain-tension states and pain-tension states accompanied by fever.

The most common side-effect of diphenhydramine HCl is sedation varying from slight drowsiness to deep sleep including inability to concentrate, lassitude and inco-ordination.

For further information circle No 203

#### Myoflex

Myoflex, again available from Lennon, contains chlormezanone in addition to paracetamol, and is indicated for general pain associated with tension.

It must be given with care to patients with liver or kidney complications, and must not be given concomitantly with other tranquilizers or antidepressant drugs.

For further information circle No 204

#### Paracodol

Paracodol is produced by Fisons Laboratories, and combines the analgesic and antipyretic action of paracetamol with the stronger analgesic action of codeine phosphate. The onset of action is rapid due to the preparation being taken already dissolved in water, and the two active ingredients have a synergistic effect.

It is indicated for the relief of pain, especially headache, muscular and rheumatic pains, period pains and for colds and influenza.

Paracodol is not recommended for use in children under four.

For further information circle No 205

#### Stopayne

Stopayne, produced by Rio Ethicals, combines the strong analgesic action of paracetamol and codeine phosphate with the tranquilising and skeletal-muscle relaxing properties of meprobamate.

It also contains caffeine, which is a xanthine derivative which acts on the cortex of the brain to produce increased mental alertness and counteract the sedative effect of meprobamate.

It is indicated for the relief of headaches, pain and stiffness in muscles and joints, dysmenorrhoea, premenstrual tension, and post-operative pain (e.g. tonsillectomy, dental surgery).

Stopayne is contra-indicated in patients with a sensitivity to meprobamate as in rare instances allergic reactions appear, but these respond to withdrawal of the drug, and if necessary to antihistamine therapy.

For further information circle No 206

#### Pynstop

Also produced by Rio Ethicals are Pynstop syrup and tablets. These combine the analgesic action of codeine with the analgesic and antipyretic action of paracetamol. They also contain doxylamine succinate which has anti-histamine properties.

Because there is no aspirin or phenacetin in the formulae, Pynstop can be given to

aspirin-sensitive people, and patients with peptic ulcer. The harmful side effects of phenacetin are also avoided.

Pynstop is indicated for the relief of tension headache, low backpain and pain associated with stiffness in muscles and joints, dysmenorrhoea, premenstrual tension and dental pain.

The use of this medicine leads to drowsiness which is aggravated by the simultaneous intake of alcohol.

For further information circle No 207

#### Lentogesic

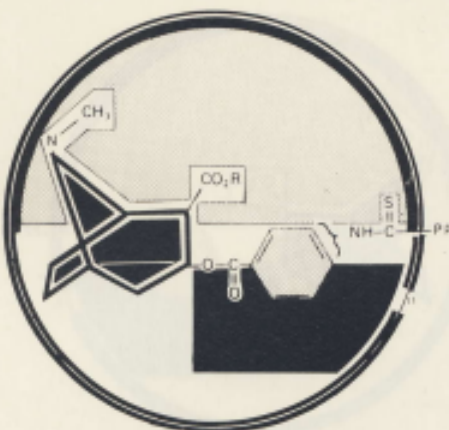
Lentogesic combines paracetamol, propoxyphene HCl, pemoline and L-Glutamine, and is produced by Intal Ethicals.

Propoxyphene HCl is an analgesic providing analgesia similar to that of codeine but exhibiting none of the constipating or antitussive properties of codeine.

Pemoline is a stimulant of the central nervous system and is reported to have an action intermediate between that of amphetamine and caffeine (Martindale).

L-Glutamine is a brain-cell food.

Lentogesic is indicated for all conditions of moderate to severe pain, but is contra-indicated during pregnancy. Alcohol and



central nervous depressants should not be taken with dextropropoxyphene.

Care should be taken when prescribing this product to persons susceptible to drug dependence.

For further information circle No 208

#### Dolorin

Dolorin is produced by Pharmador, and combines paracetamol, caffeine, codeine and dextropropoxyphene. It reduces fever and relieves pain associated with a variety of conditions such as headache, muscular pain, earache, toothache, neuralgia, arthritis, rheumatism and injuries.

Dolorin is contra-indicated in respiratory depression especially in the presence of cyanosis and excessive bronchial secretion and after operations on the biliary tract.

Care should also be taken in prescribing this product to patients susceptible to drug dependence.

For further information circle No 209

#### Doloxene

Doloxene Compound-65 is a combination of propoxyphene napsylate, aspirin and caffeine and is produced by Lilly Laboratories. It is indicated for the relief of mild to moderate pain.

Again, care should be taken in prescribing this product to persons susceptible to drug dependence as propoxyphene can produce drug dependence characterized by psychic dependence and less frequently, physical dependence and tolerance.

For further information circle No 210

#### Meprogesic

Meprogesic contains meprobamate, paracetamol and codeine and is produced by Alex Lipworth. It is indicated for those pains of muscular or psychosomatic origin, e.g. fibrositis, dysmenorrhoea, lumbago, sciatica, tension headaches and nervous painful coughs.

Care should be taken by person operating machinery or driving cars, and the danger is increased if alcohol is taken at the same time.

For further information circle No 211

#### Equagesic

Equagesic combines meprobamate, ethoheptazine citrate and acetylsalicylic acid and is produced by Wyeth Laboratories. It is indicated for the relief of tension headache, painful musculo-skeletal disorders complicated by mental tension and muscle spasm, and painful conditions complicated by apprehension, e.g. dysmenorrhoea.

Equagesic is contra-indicated in patients with a history of sensitivity or severe intolerance to acetylsalicylic acid, meprobamate or ethoheptazine citrate.

For further information circle No 212

#### Cafergot

Sandoz Products produce Cafergot which contains ergotamine tartrate and anhydrous caffeine. It is designed to meet the need for a rapid and effective oral treatment of the migraine attack and related types of vascular headache.

Ergotamine exerts a specific vaso-tonic effect on the branches of the external carotid which, during the migraine attack, lose their normal tone and become greatly distended. The addition of caffeine enhances this effect. Cafergot by mouth is very nearly as effective as ergotamine given alone by injection, the migraine attack being aborted in over 80% of cases.

Cafergot suppositories contain ergotamine and caffeine, and in addition Belladonna alkaloids and a small amount of barbiturate.

This form of Cafergot has been specially developed for the treatment of patients who have nausea and vomiting early in the attack and cannot retain or absorb anything taken orally.

Contra-indications include peripheral vascular disease, impaired renal or hepatic function, septic conditions and coronary heart disease. For Cafergot PB suppositories, additional contra-indications include glaucoma and prostatic hypertrophy.

For further information circle No 213

#### Syndol

Syndol is produced by Mer National and contains paracetamol, codeine phosphate, doxylamine succinate and caffeine. It is indicated for the symptomatic relief of tension headache and other somatic pain/tension states such as neuralgia, primary dysmenorrhoea and following trauma and surgery.

Syndol calms and soothes the patient and helps allay the anxiety than can prolong or aggravate pain. Syndol should not be administered to patients known to have a hypersensitivity to any of the ingredients.

For further information circle No 214

### Veganin

Warner Laboratories produce Veganin which contains paracetamol, aspirin and codeine. It is indicated for the symptomatic relief of headache, neuralgia, toothache, pain of rheumatism, period pains, sprains and reduces fever and discomfort in colds and influenza.

Veganin should not be given to patients suffering from chronic gastritis or gastric or peptic ulcer.

For further information circle No 215

### Medigesic

Produced by Nattermann Laboratories, Medigesic contains paracetamol, salicyclamide and codeine. It is indicated for the relief of mild to moderate pain, fever and inflammation.

Sensitivity reactions resulting in reversible skin rash or blood disorders may occur but these are rare.

For further information circle No 216

## Single-entity analgesics

2. Single entity analgesics — a segment of the market still dominated by the 'old faithfuls', aspirin and paracetamol, presently the single entity analgesic sector is subject to noticeable research and development activity.

From the not too distant past floctafenine and tilidine and presently the prostaglandin synthetase inhibitors, notably zomepirac and diflunasil.

As yet the newcomers do not enjoy usage similar to the combinations but certainly will be a growing force in the moderate pain market of the future.

Extracts from package inserts are listed below.

### Zomax

Zomax (zomepirac sodium) is produced by Ethnor Laboratories and is indicated for the relief of mild to severe pain, e.g. postsurgical, orthopaedic, headache, postpartum, episiotomy, malignancy oral surgery and arthritic pain.

Zomepirac sodium is an analgesic. Its mechanism of action is uncertain, although clearly different from the opiates. Classical pharmacological studies demonstrated that zomepirac sodium has no potential for addiction.

It exhibits a rapid onset of action with clinically significant analgesia apparent within half an hour and maximum analgesia apparent within 1 - 2 hours following oral administration. The duration of analgesia is at least 4 hours and may extend to 6 hours or longer.

Zomax is most useful in the family practice in treating moderate pain.

For further information circle No 217

### Ponstan

Ponstan (mefenamic acid) is produced by Parke-Davis Laboratories and is an analgesic with anti-inflammatory properties. It has shown anti-pyretic action against a wide variety of febrile conditions in

children and adults.

Analgesic activity in the relief of pain with such conditions as toothache, earache, pain associated with colds and common respiratory infections and minor injuries has been shown.

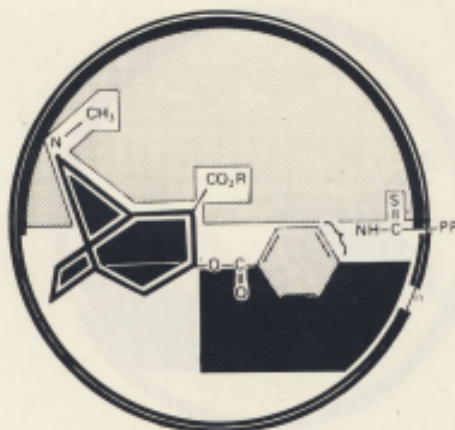
Side effects are few and mild at the recommended dosage for analgesic use and are readily detected and easily controlled when encountered with high dosage and long-term use.

For further information circle No 218

### Acupan

Riker are pleased to announce the introduction of Acupan (nefopam hydrochloride) tablets, a unique strong analgesic which is not a salicylate derivative like diflunasil or a narcotic derivative like dextropropoxyphene or pentazocine.<sup>1</sup>

But, being different is not enough by itself with Acupan 'an important step towards an analgesic with selective action has been realised'.<sup>2</sup> Acupan rapidly produces significant pain relief, and has been proven effective in pain resulting from a wide range of conditions, such as post-operative pain<sup>3</sup>, musculo-skeletal pain<sup>1</sup>,



cancer pain<sup>4</sup>, and arthritic pain<sup>5</sup>.

Reported side-effects during therapeutic doses include nausea, light-headedness, dry mouth and drowsiness.

Acupan is not recommended in children under twelve.

### REFERENCES:

1. Gassal M M et al, J Clin, Pharm. (1976) 16:34
2. Neiderer W, data on file, Carnegie Medical.
3. Phillips G, Vickers MDA, Brit. J. Anaesth. (1976) 51:001
4. De Thiabault De Boesinghe L. Cur. Ther. Res. (1978) 6:546
5. Bates BJ, Clin. Pharm. (1977) 17:120.

For further information circle No 219

### Valoron

Warner Laboratories produce Valoron (tilidine hydrochloride) which is a potent analgesic indicated for severe pain, e.g. postoperative pain, pain associated with injuries, acid burns and burns, pain in the abdominal region - such as colic of the biliary tract and urinary tract, spasms of the gastro-intestinal tract - chronic pain in malignant tumours, neuralgia and pain due to neuritis.

Tilidine is very well and rapidly absorbed

from the gastro-intestinal tract and is equally active after oral and parenteral administration. It causes virtually no respiratory depression when used in recommended dosage, and has no antitussive activity. The effect of tilidine on blood-pressure is not influenced by treatment with anti-histaminics.

Valoron should not be administered to patients with a previous history of reaction to this drug.

For further information circle No 220

### Idarac

Idarac (floctafenine) is produced by Roussel Laboratories and is indicated for chronic pain, post-operative pain, acute traumatic pain and in patients with a history of intolerance to salicylates where analgesics are indicated.

Floctafenine is a non-narcotic analgesic without central activity. It is contra-indicated in patients with a known allergy to any of the constituents or to glafenine. It is recommended that Valoron is not administered during the first trimester of pregnancy.

Reported side-effects include occasional dizziness and nausea.

For further information circle No 221

### Sandomigran

Sandomigran (pizotifen) is available from Sandoz Products and is indicated in the prophylactic treatment of recurring headaches of vascular origin, such as classical migraine, common migraine and Horton's syndrome. It has no effect on the acute migraine attack.

Pizotifen is characterised by its polyvalent inhibitory effect on biogenic amines particularly serotonin. It is not related to the ergot alkaloids.

Sandomigran is contra-indicated in patients suffering from glaucoma or prostatic hypertrophy.

For further information circle No 222

### Dolorol

Dolorol is paracetamol and is produced by Lennon Laboratories. Like the salicylates paracetamol relieves pain and fever of moderate intensity such as usually occurs in headaches and in many muscle, joint and peripheral nerve disorders.

The usual side effects and contra-indications of paracetamol apply.

For further information circle No 223

## Narcotic Analgesics

Generally scheduled 6 or 7, narcotic analgesics tend to be reserved for severe pain and are the 'big guns' of pain relief.

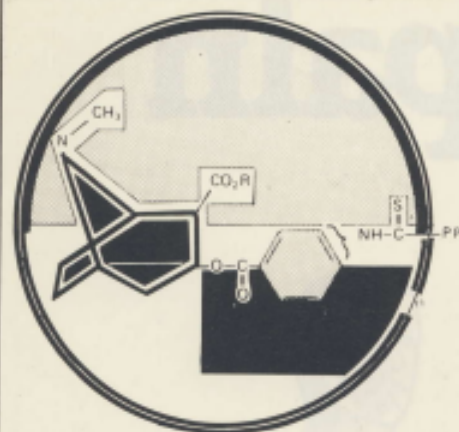
Addiction or dependency are normally associated with narcotic analgesics but their value in certain pain conditions, chronic or acute, cannot be discounted.

Extracts from package inserts are listed below:

### Pethidine

Available from Roche Products, Pethidine is an effective narcotic analgesic which can be used for the relief of most types of pain. It is indicated for obstetrics, post-operative pain, pre-operative medication and analgesia for minor surgical procedures.

Like most narcotic analgesics, Pethidine (pethidine hydrochloride), exerts its chief pharmacological action on the CNS. After intramuscular injection an analgesic effect



may be produced within 10 minutes which usually lasts for 2 - 5 hours. In therapeutic doses Pethidine has no significant untoward effects on the cardiovascular system, particularly in recumbent patients; myocardial contractility is not depressed and the ECG is unaltered.

It is contra-indicated in patients suffering from liver disease, biliary colic, obstructive pulmonary disease and those with increased intracranial pressure.

Reported side effects include mild euphoria, nausea and vomiting, constipation and hypotension.

For further information circle No 224

#### Pethilorfan

Also produced by Roche Products, Pethilorfan is a combination of pethidine with the narcotic antagonist 'Lorfan'

(levallorphan tartrate). It is a safe and effective drug for the relief of pain in obstetrics and minor surgical procedures and can be used in anaesthesia.

It has been shown that 'Lorfan' prevents or reduces respiratory depression caused by pethidine.

Contra-indications are the same as those of pethidine, excluding obstructive pulmonary disease.

For further information circle No 225

#### Omnopon

Finally, Roche Products also produce Omnopon which contains both the phenanthrene and isoquinolone groups of opium alkaloids. The former includes codeine and morphine which exert a marked narcotic action on the CNS. The second group is represented by papaverine which acts as an anti-spasmodic in vitro. Its effects in vivo are limited.

Indications include pre- and post-operative medication, severe or intractable pain, cardiac asthma, pulmonary oedema, coronary occlusion and pulmonary embolism.

Omnopon is an addicting drug with an addiction liability equal to morphine. It should not be administered in the presence of bronchial asthma, narcotic idiosyncrasies, head injuries or to patients on monoamine oxidase inhibitors or within 10 days of discontinuing such treatment.

The commonest side effects that may occur with Omnopon, as with other narcotics, are nausea, anorexia, constipation, confusion, sweating and occasionally

vomiting.

For further information circle No 226

Further details of the products mentioned in this feature are available from:

Lennon Limited, 7 Fairclough Road, Port Elizabeth.

Rio Ethicals, 50 Commando Road, Industria West, Johannesburg.

Intal Ethical Promotions, Goldbree, 334, Bree Street, Johannesburg 2001.

Pharmador (Pty) Ltd, Manchester Road, Chiselhurst, East London.

Lilley Laboratories (SA) (Pty) Ltd, Short Street, Isando, Transvaal.

Alex Lipworth (Pty) Ltd, Cor. Isando Road and Purlin Street, Isando 1600.

Wyeth Laboratories, Electron Ave, Isando 1600.

Sandoz Products Ltd, P O Box 371, Randburg 2125.

Mer-National Laboratories Division, 25, Newton Street, Spartan, Kempton Park. Warner Laboratories, 6-10 Searle Street, Cape Town 7925.

Nattermann SA (Pty) Ltd, P O Box 41298, Craighall 2024.

Ethnor (Pty) Ltd, New Road, Halfway House, Transvaal.

Parke-Davis Laboratories (Pty) Ltd, 6-10 Searle Street, Cape Town 7925.

Roussel Laboratories (Pty) Ltd, Fifth Street, Marlboro, Sandton.

Roche Products (Pty) Ltd, 4, Brewery Street, Isando, Transvaal.

Riker Laboratories, P O Box 456, Bergvlei 2012.

## Practice Briefs Erratum

In the January issue of Family Practice, the feature was on the Central Nervous System. Unfortunately, due to a printing error, it was said that Lentolith (from Intal Ethicals), was indicated for 'manic states involving mild levels of hyperacidity and excitation'. This should have read 'hyperactivity', and the editor apologises for any confusion or misunderstanding that might have arisen.

## New strength long-acting nitrate

Long-acting nitrates have long been the mainstay of treatment for angina pectoris and now Keatings Pharmaceuticals has announced the launch of their new strength 6,5 mg long-acting tablet.

This introduction is a breakthrough in the treatment of angina pectoris as there is recent clinical evidence (Jonathan Brams, 'Nitroglycerin and Long-Acting Nitrates',

New England Journal of Medicine, May 29 1980) that higher strength nitroglycerin overcomes nitrate reductase breakdown in the liver making available more nitroglycerin for efficient and potent coronary vasodilation.

Nitrong, 6,5 mg, working prophylactically to prevent angina attacks, can be co-prescribed with beta-blockers with which it has a synergistic effect. Nitrong therapy effectively reduces the number of anginal attacks and therefore the need for sublingual nitroglycerin but, in the case of an acute attack, sublingual nitroglycerin may be co-prescribed.

The dosage regimen is one Nitrong 6,5 mg tablet at breakfast, one in the late afternoon and one before retiring. However, due to the long duration of action, in some cases one Nitrong 6,5 mg tablet only twice daily is sufficient to provide the anginal patient with sustained relief and freedom from the fear of the next attack.

Nitrong 2,6 mg will still be available to provide the doctor with a convenient means of adjusting the dosage for individual patients.

For further information contact Keatings Pharmaceuticals, Private Bag 1, Industria 2042.

For further information circle No 227

**Use the reader reply card**



The South African Academy of Family Practice needs an imposing emblem. The one currently in use was borrowed from the last GP Congress in Cape Town.

What we really need is an emblem which represents the fields of Family Medicine and Primary Care. We would like the emblem to be representative and imaginative, and so if any of you have ideas as to what should be the new emblem, please send your suggestions or brief sketches to Ruth Edwards, Editor SA Journal of Family Practice, PO Box 8308, Johannesburg 2000.

Entries should be submitted before 31 May 1981 and there will be a prize for the winning entry.