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Lay Summary

On 31st January 2008, the MHRA granted Crookes Healthcare Limited Marketing Authorisations (licences) for the medicinal products Nurofen 200mg and 400mg Liquicaps (PL 00327/0197 and 199), and Ibuprofen 200mg and 400mg Liquicaps (PL 00327/0202 and 200). These general sales licence medicines (GSL) are used for relief of headaches, migraine, backache, period pain, dental pain, neuralgia, muscular pain, rheumatic pain, cold and flu symptoms, feverishness and pain of non-serious arthritis.

Nurofen/Ibuprofen 200mg and 400mg Liquicaps contain ibuprofen, which belongs to a group of medicines called non-steroidal anti-inflammatory drugs (NSAIDs). NSAIDs provide relief by changing the body’s response to pain, swelling and high temperature.

No new or unexpected safety concerns arose from these applications and it was, therefore, judged that the benefits of taking Nurofen/Ibuprofen 200mg and 400mg Liquicaps outweigh the risks, hence marketing authorisations have been granted.
SCIENTIFIC DISCUSSION

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INTRODUCTION

Based on the review of the data on quality, safety and efficacy, the UK granted marketing authorisations for the medicinal products Nurofen 200mg and 400mg Liquicaps (PL 00327/0197 and 199), and Ibuprofen 200mg and 400mg Liquicaps (PL 00327/0202 and 200) to Crookes Healthcare Limited on 31st January 2008. These products have a general-sales licence (GSL).

These applications were submitted according to Article 8.3(i) of Directive 2001/83/EC, complete applications for a known active substance.

Nurofen 200mg and 400mg Liquicaps (PL 00327/0197 and 199), and Ibuprofen 200mg and 400mg Liquicaps (PL 00327/0202 and 200) contain ibuprofen.

Ibuprofen is a non-steroidal anti-inflammatory agent that possesses analgesic and antipyretic activities. It has been in clinical use for well over three decades worldwide for arthritis and various other conditions characterised by inflammation. Its mode of action, like that of other non-steroidal anti-inflammatory agents, is not completely understood, but appears to be related to prostaglandin synthetase inhibition.
PHARMACEUTICAL ASSESSMENT

DRUG SUBSTANCE
Ibuprofen
Chemical name: (2RS)-2-[4-(2-Methylpropyl)phenyl]propanoic acid

Structure:

![Structure of Ibuprofen](image)

Description: White odourless crystalline powder or colourless crystals

Molecular formula: $\text{C}_{13}\text{H}_{18}\text{O}_2$

RMS: 206.3

Chirality: Racemic

There are two active substance manufacturers supplying ibuprofen. All aspects of the manufacture, in-process controls, validation and active substance specification are covered by a certificate of suitability for both active substance manufacturers.

Active ibuprofen is packaged in polyethylene bags with pilfer-proof tags, contained in fibre drums that are sealed with metallic rings. Suitable specifications have been provided for all packaging and the primary packaging has been shown to be suitable for contact with food.

Suitable stability data have been provided from both active substance manufacturers to support retest periods of 3 years and 5 years.

DRUG PRODUCT
Description and Composition of the Drug Product
The products are clear red soft gelatin capsules printed on one side with white ink, containing a clear colourless liquid solution of ibuprofen.

Other ingredients consist of pharmaceutical excipients, namely macrogol 600, potassium hydroxide 50% solution, gelatin, sorbitol liquid (partially dehydrated), purified water, ponceau 4R, lecithin, medium chain triglycerides, ethanol and white printing ink. All excipients used comply with their respective European Pharmacopoeia monograph, with the exception of potassium hydroxide, sorbitol liquid, ponceau 4R, lecithin, white printing ink and ethanol (which all comply with suitable in-house specifications). Satisfactory certificates of analysis have been provided for all excipients.

With the exception of gelatin, none of the excipients used contain materials of animal or human origin. The suppliers of gelatin have provided certificates to show compliance with current regulations concerning the minimising of transmission of BSE/TSE in their products.
**Product development**
The objective of the product development was to produce a formulation based on an existing licence for Nurofen Liquid Capsules, albeit with smaller size capsules. The applicant has provided a suitable product development section.

**Manufacture**
A description and flow-chart of the manufacturing method has been provided.

In-process controls are satisfactory based on process validation data and controls on the finished product. Process validation has been carried out on batches of each strength of product. The results appear satisfactory.

**Finished product specification**
The finished product specifications are satisfactory. Test methods have been described and have been adequately validated as appropriate. Batch data have been provided and comply with the release specification. Certificate of analysis have been provided for all working standards used.

**Container Closure System**
The finished product is packaged in either opaque duplex polyvinylchloride/polyvinylidene chloride/aluminium blisters or opaque triplex polyvinylchloride/polyvinylidene chloride/polyethylene aluminium blisters. Pack sizes for all strengths are 10, 12 and 16 tablets, with additional pack sizes of 18, 20, 24, 28, 30, 32, 36, 48 and 96 tablets for the 400mg strength.

The marketing authorisation holder has stated that not all proposed pack sizes are intended for marketing and has committed to submitting mock-ups before marketing any strengths of finished product.

Specifications and Certificates of Analysis for all packaging have been provided. These are satisfactory. The primary packaging has been shown to comply with relevant regulations regarding the contact of materials with food.

**Stability**
Finished product stability studies have been conducted in accordance with current guidelines. Based on the results, a shelf-life of 24 months has been set for all strengths, with the storage instructions “Store below 25 degrees”.

The applicant has provided suitable post approval stability commitments to follow-up the current batches on stability and to add the first three commercial batches as they become available.

**ADMINISTRATIVE**

**Expert Report**
A pharmaceutical expert report has been written by a suitably qualified person and is satisfactory.

**Summaries of Product Characteristics (SPC)**
These are pharmaceutically satisfactory.
Labelling
These are pharmaceutically satisfactory.

Patient Information Leaflets
These are consistent with the SPC and are satisfactory. The marketing authorisation holder has provided a commitment to update the marketing authorisation no later than 1st July 2008 with a package leaflet in compliance with Article 59 of Council Directive 2001/83/EC and that the leaflet shall reflect the results of consultation with target patient groups.

MAA Forms
These are satisfactory.

Conclusion
It is recommended that Marketing Authorisations are granted for these applications.
PRECLINICAL ASSESSMENT

No new preclinical data have been submitted for these applications and none are required as the active and excipients are well-known and are currently used in many granted pharmaceutical products.
**CLINICAL ASSESSMENT**

**CLINICAL PHARMACOLOGY**

The applicant performed one randomised, single-dose, open-label, crossover, two-period, bioequivalence study comparing standard Nurofen 2 x 200mg Tablets (reference) versus Ibuprofen 1 x 400mg Liquicaps (test) in healthy males.

Pharmacokinetic parameters were measured from blood samples taken pre- and up to 12 hours post dose, followed by a 48-hour washout period.

The main pharmacokinetic results are presented below:

\[
\begin{array}{|c|c|c|c|}
\hline
\text{Parameter} & \text{Test} & \text{Reference} & \text{Ratio (T/R)} \\
\hline
\text{C}_{\text{max}} (\mu g/mL) & 39.51 \pm 8.91 & 30.07 \pm 5.90 & 1.31 \\
& (24.16-52.48) & (20.23-45.14) & \\
\text{T}_{\text{max}} (h) & 0.82 \pm 0.64 & 1.53 \pm 0.95 & 0.54 \\
\text{AUC}_{(0-\alpha)} (\mu g\cdot h/mL) & 101.66 \pm 19.98 & 101.29 \pm 19.29 & 1.00 \\
& (68.17-136.56) & (78.62-143.31) & \\
\text{AUC}_{(0-t)} (\mu g\cdot h/mL) & 104.53 \pm 20.40 & 104.40 \pm 19.38 & 1.00 \\
& (70.73-142.77) & (81.08-148.67) & \\
\text{t}_{1/2} (h) & 1.91 \pm 0.36 & 1.88 \pm 0.33 & 1.02 \\
\hline
\end{array}
\]

**Geometric mean**

\[
\begin{array}{|c|c|c|c|c|}
\hline
\text{Parameter} & \text{Test} & \text{Reference} & \text{Ratio (T/R)} & \text{95% CI (%)} \\
\hline
\text{C}_{\text{max}} (\mu g/mL) & 38.44 & 29.56 & 1.30 & 115.27 – 146.74 \\
\text{T}_{\text{max}} (h) & 0.67 & 1.28 & 0.52 & \\
\text{AUC}_{(0-\alpha)} (\mu g\cdot h/mL) & 99.76 & 99.62 & 1.00 & 95.89 – 104.59 \\
\text{AUC}_{(0-t)} (\mu g\cdot h/mL) & 102.61 & 102.77 & 0.998 & 95.78 – 104.08 \\
\text{t}_{1/2} (h) & 1.88 & 1.85 & 1.02 & \\
\hline
\end{array}
\]

As anticipated by virtue of its formulation, the \( C_{\text{max}} \) is higher and earlier following administration of the test product. However, in terms of exposure the test product is bioequivalent to the reference product.

As these products meet all the criteria as specified in the Note for Guidance on the investigation of bioavailability and bioequivalence (CPMP/EWP/QWP/1401/98), the results and conclusions of the bioequivalence study on the 400mg strength can be extrapolated to the 200mg strength product.

**Efficacy**

No new data have been provided.

**Safety**

No new data have been provided.

**Expert Reports**

A clinical expert report has been written by a suitably qualified physician and is satisfactory.

**Summary of Product Characteristics (SPC)**

These are consistent with those for other similar products that have already been marketed and are satisfactory.
PATIENT INFORMATION LEAFLET (PIL)
These are consistent with the SPC and are satisfactory.

LABELLING
These are satisfactory

APPLICATION FORMS (MAA)
These are satisfactory.

DISCUSSION
Bioequivalence has been satisfactorily demonstrated for the 400mg product in accordance with CPMP criteria. As the products meet the criteria specified in the Note for Guidance on the investigation of bioavailability and bioequivalence (CPMP/EWP/QWP/1401/98), the results and conclusions of the bioequivalence study on the 400mg strength can be extrapolated to the 200mg strength product.

MEDICAL CONCLUSION
Marketing authorisations are recommended for these applications.
OVERALL CONCLUSION AND RISK BENEFIT ASSESSMENT

QUALITY
The important quality characteristics of Nurofen 200mg and 400mg Liquicaps (PL 00327/0197 and 199), and Ibuprofen 200mg and 400mg Liquicaps (PL 00327/0202 and 200) are well-defined and controlled. The specifications and batch analytical results indicate consistency from batch to batch. There are no outstanding quality issues that would have a negative impact on the benefit/risk balance.

PRECLINICAL
No new preclinical data have been submitted for these applications and none are required as the active and excipients are well-known and are currently used in many granted pharmaceutical products.

EFFICACY
Bioequivalence has been demonstrated between Nurofen 2 x 200mg Tablets and Ibuprofen 1 x 400mg Liquicaps.

No new or unexpected safety concerns arise from these applications.

The SPC, PIL and labelling are satisfactory and consistent with those for similar granted products.

RISK BENEFIT ASSESSMENT
The quality of the products is acceptable and no new preclinical or clinical safety concerns have been identified. The risk benefit is, therefore, considered to be positive.
## STEPS TAKEN FOR ASSESSMENT

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<td>1</td>
<td>The MHRA received the marketing authorisation application on 28&lt;sup&gt;th&lt;/sup&gt; September 2004</td>
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<td>Following standard checks and communication with the applicant the MHRA considered the application valid on 6&lt;sup&gt;th&lt;/sup&gt; October 2004</td>
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<td>3</td>
<td>Following assessment of the application the MHRA requested further information relating to the quality dossiers on 3&lt;sup&gt;rd&lt;/sup&gt; March 2005, 8&lt;sup&gt;th&lt;/sup&gt; December 2005 and 31&lt;sup&gt;st&lt;/sup&gt; January 2006, and further information relating to the clinical dossier on 24&lt;sup&gt;th&lt;/sup&gt; June 2005, 28&lt;sup&gt;th&lt;/sup&gt; June 2005</td>
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<td>The applicant responded to the MHRA’s request, providing further information for the quality section on 22&lt;sup&gt;nd&lt;/sup&gt; November 2005, 24&lt;sup&gt;th&lt;/sup&gt; January 2006 and 23&lt;sup&gt;rd&lt;/sup&gt; October 2007, and further information relating to the clinical dossier on 22&lt;sup&gt;nd&lt;/sup&gt; November 2005</td>
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<td>The application was determined on 25&lt;sup&gt;th&lt;/sup&gt; January 2008</td>
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SUMMARY OF PRODUCT CHARACTERISTICS

1 NAME OF THE MEDICINAL PRODUCT
Nurofen 200mg Liquicaps
Ibuprofen 200mg Liquicaps

2 QUALITATIVE AND QUANTITATIVE COMPOSITION
Each capsule, soft contains Ibuprofen 200 mg.

Excipients:
Potassium hydroxide
Sorbitol

For a full list of excipients see 6.1.

3 PHARMACEUTICAL FORM
Capsule, soft.

A clear red oval soft gelatin capsule printed with an identifying logo in white.

4 CLINICAL PARTICULARS

4.1 Therapeutic indications
Adults and children over 12 years:
Nurofen 200mg Liquicaps are indicated for the symptomatic relief of rheumatic or muscular pain, backache, neuralgia, migraine, headache, dental pain, dysmenorrhoea, feverishness, colds and influenza symptoms.

4.2 Posology and method of administration
For oral administration and short-term use only.

During short-term use, if symptoms persist or worsen the patient should be advised to consult a doctor.

Adults and children over 12 years: Initial dose two capsules taken with water, then if necessary, one capsule every four hours. Do not exceed six capsules in any 24 hours. Not for use by children under 12 years of age without medical advice.

Elderly: No special dosage modifications are required. (See Section 4.4)

The minimum effective dose should be used for the shortest time necessary to relieve symptoms. If the product is required for more than 10 days, or if the symptoms worsen the patient should consult a doctor.

4.3 Contraindications
Patients with a known hypersensitivity to ibuprofen or any other constituent of the medicinal product.

Patients with a history of bronchospasm, asthma, rhinitis, or urticaria associated with aspirin or other non-steroidal anti-inflammatory drugs (NSAIDs).

Patients with a history of, or existing gastrointestinal ulceration/perforation or bleeding, including that associated with NSAIDs. (See Section 4.4)

Patients with severe hepatic failure, severe renal failure or severe heart failure. See also Section 4.4

Use with concomitant NSAIDs, including cyclo-oxygenase-2 specific inhibitors – increased risk of adverse reactions (see section 4.5)
During the last trimester of pregnancy as there is a risk of premature closure of the fetal ductus arteriosus with possible persistent pulmonary hypertension. The onset of labour may be delayed and the duration increased with an increased bleeding tendency in both mother and child (see Section 4.6).

Severe heart failure.

4.4 Special warnings and precautions for use
Caution is required in patients with certain conditions, which may be made worse:

- systemic lupus erythematosus as well as those with mixed connective tissue disease (see Section 4.8, Unwanted effects)
- gastrointestinal disorders and chronic inflammatory intestinal disease (ulcerative colitis, Crohn’s disease) (see Section 4.8, Unwanted effects)
- hypertension and/or cardiac impairment (see Section 4.5, Interactions)
- renal impairment (see Sections 4.3, Contraindications and 4.8, Unwanted effects)
- hepatic dysfunction (see Sections 4.3, Contraindications and 4.8, Unwanted effects)

Bronchospasm may be precipitated in patients suffering from, or with a history of, bronchial asthma or allergic disease.

The elderly are at increased risk of the consequence of adverse reactions.

Undesirable effects may be minimised by using the lowest effective dose for the shortest duration necessary to control symptoms (see GI and cardiovascular risks below).

GI bleeding, ulceration or perforation, which can be fatal has been reported with all NSAIDs at anytime during treatment, with or without warning symptoms or a previous history of GI events.

Patients with a history of GI toxicity, particularly the elderly, should report any unusual abdominal symptoms (especially GI bleeding) particularly in the initial stages of treatment.

Caution should be advised in patients receiving concomitant medications which could increase the risk of gastrotoxicity or bleeding, such as corticosteroids, or anticoagulants such as warfarin or anti-platelet agents such as aspirin (see Section 4.5).

When GI bleeding or ulceration occurs in patients receiving ibuprofen, the treatment should be withdrawn.

There is some evidence that drugs which inhibit cyclo-oxygenase/prostaglandin synthesis may cause impairment of female fertility by an effect on ovulation. This is reversible on withdrawal of treatment.

The label will include:
Read the enclosed leaflet before taking this product
Do not take if you:
- have or have ever had a stomach ulcer, perforation or bleeding
- are allergic to ibuprofen, to any of the ingredients, or to aspirin or other painkillers
- are taking other NSAID pain killers or aspirin with a daily dose above 75mg
- are in the last 3 months of pregnancy
- or the patient is under 12 years of age.

This medicine contains 14 mg of potassium per dose. To be taken into consideration by patients on a controlled potassium diet.

Patients with rare hereditary problems of fructose intolerance should not take this medicine.

Contains 50.5 mg of sorbitol per dose, a source of 12.6 mg of fructose per dose.

Speak to your doctor or pharmacist before use if you
- Have asthma, heart, liver, kidney or bowel problems,
- are in the first 6 months of pregnancy.

If symptoms persist or worsen, or if new symptoms occur, consult your doctor or pharmacist.
4.5 Interaction with other medicinal products and other forms of interaction

Ibuprofen (like other NSAIDs) should not be used in combination with:

- Aspirin unless low-dose aspirin (not above 75mg daily) has been advised by a doctor as this may increase the risk of adverse reactions (see Section 4.3).
- Other NSAIDs as these may increase the risk of adverse effects (see Section 4.3)
- Ibuprofen should be used with caution in combination with:
- Corticosteroids as these may increase the risk of adverse reactions, especially of the gastrointestinal tract. (see Section 4.3)
- Antihypertensives and diuretics since NSAIDs may diminish the effects of these drugs.
- Anticoagulants. NSAIDs may enhance the effects of anti-coagulants, such as warfarin (See section 4.4).
- Lithium. There is evidence for potential increase in plasma levels of lithium.
- Methotrexate. There is evidence for the potential increase in plasma levels of methotrexate.
- Zidovudine. There is evidence of an increased risk of haemarthroses and haematoma in HIV (+) haemophiliacs receiving concurrent treatment with zidovudine and ibuprofen.

4.6 Pregnancy and lactation

Whilst no teratogenic effects have been demonstrated in animal experiments, the use of Nurofen 200 mg Liquicaps should, if possible, be avoided during the first 6 months of pregnancy.

During the 3rd trimester, ibuprofen is contraindicated as there is a risk of premature closure of the foetal ductus arteriosus with possible persistent pulmonary hypertension. The onset of labour may be delayed and the duration increased with an increased bleeding tendency in both mother and child. (See section 4.3 Contraindications).

In limited studies, ibuprofen appears in the breast milk in very low concentration and is unlikely to affect the breast-fed infant adversely.

See section 4.4 regarding female fertility.

4.7 Effects on ability to drive and use machines

None expected at recommended dose and duration of therapy.

4.8 Undesirable effects

Hypersensitivity reactions have been reported and these may consist of

a. non-specific allergic reactions and anaphylaxis
b. respiratory tract reactivity e.g. asthma, aggravated asthma, bronchospasm, dyspnoea
c. various skin reactions e.g. pruritus, urticaria, angioedema and more rarely exfoliative and bullous dermatoses (including epidermal necrolysis and erythema multiforme)
The list of the following adverse effects relates to those experienced with ibuprofen at OTC doses, for short-term use. In the treatment of chronic conditions, under long-term treatment, additional adverse effects may occur.

**Gastrointestinal Disorders**
- **Uncommon:** abdominal pain, dyspepsia and nausea.
- **Rare:** diarrhoea, flatulence, constipation and vomiting
- **Very rare:** Peptic ulcer, perforation or gastrointestinal haemorrhage, sometimes fatal, particularly in the elderly (see section 4.4) Exacerbation of ulcerative colitis and Chrohn’s disease (See section 4.4)

**Nervous System**
- **Uncommon:** Headache
- **Very rare:** Aseptic meningitis – single cases have been reported very rarely

**Kidney**
- **Very rare:** Decrease of urea excretion and oedema can occur. Also, acute renal failure. Papillary necrosis, especially in long-term use, and increased serum urea concentrations have been reported.

**Liver**
- **Very rare:** liver disorders, especially in long-term treatment.

**Blood**
- **Very rare:** haematopoietic disorders (anaemia, leucopenia, thrombocytopenia, pancytopenia, agranulocytosis). First signs are: fever, sore throat, superficial mouth ulcers, flu-like symptoms, severe exhaustion, nose and skin bleeding.

**Skin**
- **Very rare:** severe forms of skin reactions such as erythema multiforme and epidermal necrolysis can occur.

**Immune System**
- **Very rare:** In patients with existing auto-immune disorders (such as systemic lupus erythematosus, mixed connective tissue disease) during treatment with ibuprofen, single cases of symptoms of aseptic meningitis, such as stiff neck, headache, nausea, vomiting, fever or disorientation have been observed

**Hypersensitivity Reactions**
- **Uncommon:** Hypersensitivity reactions with urticaria and pruritus.
- **Very rare:** severe hypersensitivity reactions. Symptoms could be: facial, tongue and larynx swelling, dyspnoea, tachycardia, hypotension, (anaphylaxis, angioedema or severe shock). Exacerbation of asthma and bronchospasm.
Oedema, hypertension, and cardiac failure, have been reported in association with NSAID treatment.

Clinical trial and epidemiological data suggest that use of ibuprofen (particularly at high doses 2400mg daily) and in long-term treatment may be associated with a small increased risk of arterial thrombotic events (for example myocardial infarction or stroke) (see section 4.4).

4.9 Overdose

In children ingestion of more than 400 mg/kg may cause symptoms. In adults the dose response effect is less clear cut. The half-life in overdose is 1.5-3 hours.

Symptoms – Most patients who have ingested clinically important amounts of NSAIDs will develop no more than nausea, vomiting, epigastric pain, or more rarely diarrhoea. Tinnitus, headache and gastrointestinal bleeding are also possible. In more serious poisoning, toxicity is seen in the central nervous system, manifesting as drowsiness, occasionally excitation and disorientation or coma. Occasionally patients develop convulsions. In serious poisoning metabolic acidosis may occur and the prothrombin time/ INR may be prolonged, probably due to interference with the actions of circulating clotting factors. Acute renal failure and liver damage may occur. Exacerbation of asthma is possible in asthmatics.

Management –

Management should be symptomatic and supportive and include the maintenance of a clear airway and monitoring of cardiac and vital signs until stable. Consider oral administration of activated charcoal if the patient presents within 1 hour of ingestion of a potentially toxic amount. If frequent or prolonged, convulsions should be treated with intravenous diazepam or lorazepam. Give bronchodilators for asthma.

5 PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

Ibuprofen is a propionic acid derivative NSAID that has demonstrated its efficacy by inhibition of prostaglandin synthesis. In humans, ibuprofen reduces inflammatory pain, swellings and fever. Furthermore, ibuprofen reversibly inhibits platelet aggregation.

ATC Code: M01A E01 Propionic acid derivative

5.2 Pharmacokinetic properties

Ibuprofen is well absorbed from the gastrointestinal tract. Ibuprofen is extensively bound to plasma proteins.

Nurofen 200 mg Liquicaps consist of ibuprofen 200 mg dissolved in a hydrophilic solvent inside a gelatin shell. On ingestion, the gelatin shell disintegrates in the gastric juice releasing the solubilised ibuprofen immediately for absorption. The median peak plasma concentration is achieved approximately 30 minutes after administration.

The median peak plasma concentration for Nurofen tablets is achieved approximately 1-2 hours after administration.

Ibuprofen is metabolised in the liver to two major metabolites with primary excretion via the kidneys, either as such or as major conjugates, together with a negligible amount of unchanged ibuprofen. Excretion by the kidney is both rapid and complete.

Elimination half-life is approximately 2 hours.

No significant differences in pharmacokinetic profile are observed in the elderly.

5.3 Preclinical safety data

No relevant information, additional to that contained elsewhere in the SPC.
6 PHARMACEUTICAL PARTICULARS

6.1 List of excipients
Capsule fill
- Macrogol 600
- Potassium hydroxide 50% solution (E525)
Capsule shell
- Gelatin
- Sorbitol Liquid, Partially Dehydrated (420)
- Purified Water
- Ponceau 4R (E124)
- Lecithin (E322)
- Triglycerides, medium chain
Capsule printing
- Ethanol
- White ink *

The ink contains the following residual materials after application: Titanium Dioxide (E171), Polyvinyl Acetate Phthalate, Macrogol 400, ammonium hydroxide (E527), Propylene Glycol.

6.2 Incompatibilities
Not applicable.

6.3 Shelf life
24 months.

6.4 Special precautions for storage
Store below 25°C

6.5 Nature and contents of container
Blisters formed from Opaque Duplex PVC/PVdC 250µm/60gsm heat sealed to 20µm aluminium foil

or

opaque Tristar (Triplex) PVC/PE/PVdC 250µm/25µm/90gsm heat sealed to 20µm aluminium foil packed into cartons

Each carton may contain 10, 12, 16 in blister strips

Not all packs will be marketed.

6.6 Special precautions for disposal
Not applicable.

7 MARKETING AUTHORISATION HOLDER
Crookes Healthcare Limited
1 Thane Road West
Nottingham
NG90 2DB

8 MARKETING AUTHORISATION NUMBER(S)
PL 00327/0197
PL 00327/0202

9 DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION
25/01/2008

10 DATE OF REVISION OF THE TEXT
25/01/2008
11  DOSIMETRY (IF APPLICABLE)

12  INSTRUCTIONS FOR PREPARATION OF RADIOPHARMACEUTICALS (IF APPLICABLE)
1 NAME OF THE MEDICINAL PRODUCT
Nurofen 400mg Liquicaps
Ibuprofen 400mg Liquicaps

2 QUALITATIVE AND QUANTITATIVE COMPOSITION
Each capsule, soft contains Ibuprofen 400 mg.

Excipients:
Potassium hydroxide
Sorbitol

For a full list of excipients see 6.1.

3 PHARMACEUTICAL FORM
Capsule, soft.
A clear red oval soft gelatin capsule printed with an identifying logo in white.

4 CLINICAL PARTICULARS
4.1 Therapeutic indications
Adults and children over 12 years:
Nurofen 400mg Liquicaps are indicated for the symptomatic relief of non-serious arthritic conditions, rheumatic or muscular pain, backache, neuralgia, migraine, headache, dental pain, dysmenorrhoea, feverishness colds and influenza symptoms.

4.2 Posology and method of administration
For oral administration and short-term use only.

During short-term use, if symptoms persist or worsen the patient should be advised to consult a doctor.

Adults and children over 12 years: Initial dose one capsules taken with water, then if necessary, one capsule every four hours. Do not exceed three capsules in any 24 hours. Not for use by children under 12 years of age without medical advice.

Elderly: No special dosage modifications are required. (See Section 4.4)

The minimum effective dose should be used for the shortest time necessary to relieve symptoms. If the product is required for more than 10 days, or if the symptoms worsen the patient should consult a doctor.

4.3 Contraindications
Patients with a known hypersensitivity to ibuprofen or any other constituent of the medicinal product.

Patients with a history of bronchospasm, asthma, rhinitis, or urticaria associated with aspirin or other non-steroidal anti-inflammatory drugs (NSAIDs).

Patients with a history of, or existing gastrointestinal ulceration/perforation or bleeding, including that associated with NSAIDs. (See Section 4.4)

Patients with severe hepatic failure, severe renal failure or severe heart failure. See also Section 4.4

Use with concomitant NSAIDs, including cyclo-oxygenase-2 specific inhibitors – increased risk of adverse reactions (see section 4.5)

During the last trimester of pregnancy as there is a risk of premature closure of the fetal ductus arteriosus with possible persistent pulmonary hypertension. The onset of labour may be
delayed and the duration increased with an increased bleeding tendency in both mother and child (see Section 4.6).

Severe heart failure.

4.4 Special warnings and precautions for use
Caution is required in patients with certain conditions, which may be made worse:
- systemic lupus erythematosus as well as those with mixed connective tissue disease (see Section 4.8, Unwanted effects)
- gastrointestinal disorders and chronic inflammatory intestinal disease (ulcerative colitis, Crohn’s disease) (see Section 4.8, Unwanted effects)
- hypertension and/or cardiac impairment (see Section 4.5, Interactions)
- renal impairment (see Sections 4.3, Contraindications and 4.8, Unwanted effects)
- hepatic dysfunction (see Sections 4.3, Contraindications and 4.8, Unwanted effects)

Bronchospasm may be precipitated in patients suffering from, or with a history of, bronchial asthma or allergic disease.

The elderly are at increased risk of the consequence of adverse reactions.

Undesirable effects may be minimised by using the lowest effective dose for the shortest duration necessary to control symptoms (see GI and cardiovascular risks below).

GI bleeding, ulceration or perforation, which can be fatal has been reported with all NSAIDs at anytime during treatment, with or without warning symptoms or a previous history of GI events.

Patients with a history of GI toxicity, particularly the elderly, should report any unusual abdominal symptoms (especially GI bleeding) particularly in the initial stages of treatment.

Caution should be advised in patients receiving concomitant medications which could increase the risk of gastrotoxicity or bleeding, such as corticosteroids, or anticoagulants such as warfarin or anti-platelet agents such as aspirin (see Section 4.5).

When GI bleeding or ulceration occurs in patients receiving ibuprofen, the treatment should be withdrawn.

There is some evidence that drugs which inhibit cyclo-oxygenase/prostaglandin synthesis may cause impairment of female fertility by an effect on ovulation. This is reversible on withdrawal of treatment.

Caution (discussion with doctor or pharmacist) is required prior to starting treatment in patients with a history of hypertension and/or heart failure as fluid retention, hypertension and oedema have been reported in association with NSAID therapy.

Cardiovascular and cerebrovascular effects
Clinical trial and epidemiological data suggest that use of ibuprofen, particularly at high doses (2400mg daily) and in long-term treatment may be associated with a small increased risk of arterial thrombotic events (for example myocardial infarction or stroke). Overall, epidemiological studies do not suggest that low dose ibuprofen (e.g. ≤ 1200mg daily) is associated with an increased risk of myocardial infarction.

The label will include:
Read the enclosed leaflet before taking this product
Do not take if you:
- have or have ever had a stomach ulcer, perforation or bleeding
- are allergic to ibuprofen, to any of the ingredients, or to aspirin or other painkillers
- are taking other NSAID pain killers or aspirin with a daily dose above 75mg
- are in the last 3 months of pregnancy
- or the patient is under 12 years of age.
This medicine contains 28 mg of potassium per dose. To be taken into consideration by patients on a controlled potassium diet.

Patients with rare hereditary problems of fructose intolerance should not take this medicine.

Contains 79.8 mg of sorbitol per dose, a source of 19.9 mg of fructose per dose.

Speak to your doctor or pharmacist before use if you
- Have asthma, heart, liver, kidney or bowel problems,
- are in the first 6 months of pregnancy.

If symptoms persist or worsen, or if new symptoms occur, consult your doctor or pharmacist.

4.5 Interaction with other medicinal products and other forms of interaction

Ibuprofen (like other NSAIDs) should not be used in combination with:
- Aspirin unless low-dose aspirin (not above 75mg daily) has been advised by a doctor as this may increase the risk of adverse reactions (see Section 4.3).
- Other NSAIDs as these may increase the risk of adverse effects (see Section 4.3)
- Ibuprofen should be used with caution in combination with:
- Corticosteroids as these may increase the risk of adverse reactions, especially of the gastrointestinal tract. (see Section 4.3)
- Antihypertensives and diuretics since NSAIDs may diminish the effects of these drugs.
- Anticoagulants. NSAIDs may enhance the effects of anti-coagulants, such as warfarin (See section 4.4).
- Lithium. There is evidence for potential increase in plasma levels of lithium.
- Methotrexate. There is evidence for the potential increase in plasma levels of methotrexate.
- Zidovudine. There is evidence of an increased risk of haemarthroses and haematoma in HIV (+) haemophiliacs receiving concurrent treatment with zidovudine and ibuprofen.

4.6 Pregnancy and lactation

Whilst no teratogenic effects have been demonstrated in animal experiments, the use of Nurofen 400 mg Liquicaps should, if possible, be avoided during the first 6 months of pregnancy.

During the 3rd trimester, ibuprofen is contraindicated as there is a risk of premature closure of the foetal ductus arteriosus with possible persistent pulmonary hypertension. The onset of labour may be delayed and the duration increased with an increased bleeding tendency in both mother and child. (See section 4.3 Contraindications). It should not be used for the last trimester of pregnancy. The onset of labour may be delayed and duration of labour increased. (See Section 4.3)

In limited studies, ibuprofen appears in the breast milk in very low concentration and is unlikely to affect the breast-fed infant adversely.

See section 4.4 regarding female fertility.

4.7 Effects on ability to drive and use machines

None expected at recommended dose and duration of therapy.

4.8 Undesirable effects

Hypersensitivity reactions have been reported and these may consist of
- non-specific allergic reactions and anaphylaxis
- respiratory tract reactivity e.g. asthma, aggravated asthma, bronchospasm, dyspnoea
- various skin reactions e.g. pruritus, urticaria, angioedema and more rarely exfoliative and bullous dermatoses (including epidermal necrolysis and erythema multiforme)
The list of the following adverse effects relates to those experienced with ibuprofen at OTC doses, for short-term use. In the treatment of chronic conditions, under long-term treatment, additional adverse effects may occur.

<table>
<thead>
<tr>
<th>Category</th>
<th>Frequency</th>
<th>Adverse Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gastrointestinal Disorders</td>
<td>Uncommon:</td>
<td>abdominal pain, dyspepsia and nausea.</td>
</tr>
<tr>
<td></td>
<td>Rare:</td>
<td>diarrhoea, flatulence, constipation and vomiting</td>
</tr>
<tr>
<td></td>
<td>Very rare:</td>
<td>Peptic ulcer, perforation or gastrointestinal haemorrhage, sometimes fatal, particularly in the elderly (see section 4.4) Exacerbation of ulcerative colitis and Chrohn’s disease (See section 4.4)</td>
</tr>
<tr>
<td>Nervous System</td>
<td>Uncommon:</td>
<td>Headache</td>
</tr>
<tr>
<td></td>
<td>Very rare:</td>
<td>Aseptic meningitis – single cases have been reported very rarely</td>
</tr>
<tr>
<td>Kidney</td>
<td>Very rare:</td>
<td>Decrease of urea excretion and oedema can occur. Also, acute renal failure. Papillary necrosis, especially in long-term use, and increased serum urea concentrations have been reported.</td>
</tr>
<tr>
<td>Liver</td>
<td>Very rare:</td>
<td>liver disorders, especially in long-term treatment.</td>
</tr>
<tr>
<td>Blood</td>
<td>Very rare:</td>
<td>haematopoietic disorders (anaemia, leucopenia, thrombocytopenia, pancytopenia, agranulocytosis). First signs are: fever, sore throat, superficial mouth ulcers, flu-like symptoms, severe exhaustion, nose and skin bleeding.</td>
</tr>
<tr>
<td>Skin</td>
<td>Very rare:</td>
<td>severe forms of skin reactions such as erythema multiforme and epidermal necrolysis can occur.</td>
</tr>
<tr>
<td>Immune System</td>
<td>Very rare:</td>
<td>In patients with existing auto-immune disorders (such as systemic lupus erythematosus, mixed connective tissue disease) during treatment with ibuprofen, single cases of symptoms of aseptic meningitis, such as stiff neck, headache, nausea, vomiting, fever or disorientation have been observed</td>
</tr>
<tr>
<td>Hypersensitivity Reactions</td>
<td>Uncommon:</td>
<td>Hypersensitivity reactions with urticaria and pruritus.</td>
</tr>
<tr>
<td></td>
<td>Very rare:</td>
<td>severe hypersensitivity reactions. Symptoms could be: facial, tongue and larynx swelling, dyspnoea, tachycardia, hypotension, (anaphylaxis, angioedema or severe shock). Exacerbation of asthma and bronchospasm.</td>
</tr>
</tbody>
</table>
Oedema, hypertension, and cardiac failure, have been reported in association with NSAID treatment.

Clinical trial and epidemiological data suggest that use of ibuprofen (particularly at high doses 2400mg daily) and in long-term treatment may be associated with a small increased risk of arterial thrombotic events (for example myocardial infarction or stroke) (see section 4.4).

4.9 Overdose

In children ingestion of more than 400 mg/kg may cause symptoms. In adults the dose response effect is less clear cut. The half-life in overdose is 1.5-3 hours.

Symptoms – Most patients who have ingested clinically important amounts of NSAIDs will develop no more than nausea, vomiting, epigastric pain, or more rarely diarrhoea. Tinnitus, headache and gastrointestinal bleeding are also possible. In more serious poisoning, toxicity is seen in the central nervous system, manifesting as drowsiness, occasionally excitation and disorientation or coma. Occasionally patients develop convulsions. In serious poisoning metabolic acidosis may occur and the prothrombin time/ INR may be prolonged, probably due to interference with the actions of circulating clotting factors. Acute renal failure and liver damage may occur. Exacerbation of asthma is possible in asthmatics.

Management – Management should be symptomatic and supportive and include the maintenance of a clear airway and monitoring of cardiac and vital signs until stable. Consider oral administration of activated charcoal if the patient presents within 1 hour of ingestion of a potentially toxic amount. If frequent or prolonged, convulsions should be treated with intravenous diazepam or lorazepam. Give bronchodilators for asthma.

5 PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

Ibuprofen is a propionic acid derivative NSAID that has demonstrated its efficacy by inhibition of prostaglandin synthesis. In humans, ibuprofen reduces inflammatory pain, swellings and fever. Furthermore, ibuprofen reversibly inhibits platelet aggregation.

ATC Code: M01A E01 Propionic acid derivative

5.2 Pharmacokinetic properties

Ibuprofen is well absorbed from the gastrointestinal tract. Ibuprofen is extensively bound to plasma proteins.

Nurofen 400 mg Liquicaps consist of ibuprofen 400 mg dissolved in a hydrophilic solvent inside a gelatin shell. On ingestion, the gelatin shell disintegrates in the gastric juice releasing the solubilised ibuprofen immediately for absorption. The median peak plasma concentration is achieved in approximately 30 minutes after administration.

The median peak plasma concentration for Nurofen tablets is achieved approximately 1-2 hours after administration. A direct comparison of the 400 mg ibuprofen capsule with 2x200 mg Nurofen tablets showed that the median peak plasma concentration was achieved more than twice as fast for the liquid capsule (32.5 min) compared to the tablets (90 min). When taken with food, peak plasma levels may be delayed.

Ibuprofen is metabolised in the liver to two major metabolites with primary excretion via the kidneys, either as such or as major conjugates, together with a negligible amount of unchanged ibuprofen. Excretion by the kidney is both rapid and complete.

Elimination half-life is approximately 2 hours.

No significant differences in pharmacokinetic profile are observed in the elderly.

5.3 Preclinical safety data

No relevant information, additional to that contained elsewhere in the SPC.
6 PHARMACEUTICAL PARTICULARS
6.1 List of excipients
Capsule fill
Macrogol 600
Potassium hydroxide 50% solution (E525)
Capsule shell
Gelatin
Sorbitol Liquid, Partially Dehydrated (420)
Purified Water
Ponceau 4R (E124)
Lecithin (E322)
Triglycerides, medium chain
Capsule printing
Ethanol
White ink *

The ink contains the following residual materials after application: Titanium Dioxide (E171), Polyvinyl Acetate Phthalate, Macrogol 400, ammonium hydroxide (E527), Propylene Glycol.

6.2 Incompatibilities
Not applicable.

6.3 Shelf life
24 months.

6.4 Special precautions for storage
Store below 25°C

6.5 Nature and contents of container
Blisters formed from Opaque Duplex PVC/PVdC 250µm/60gsm heat sealed to 20µm aluminium foil

or

opaque Tristar (Triplex) PVC/PE/PVdC 250µm/25µm/90gsm heat sealed to 20µm aluminium foil packed into cartons

Each carton may contain 10, 12, 16, 18, 20, 24, 28, 30, 32, 36, 48, 96 in blister strips

Not all packs will be marketed.

6.6 Special precautions for disposal
Not applicable.

7 MARKETING AUTHORISATION HOLDER
Crookes Healthcare Limited
1 Thane Road West
Nottingham
NG90 2DB

8 MARKETING AUTHORISATION NUMBER(S)
PL 00327/0199
PL 00327/0200

9 DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION
25/01/2008

10 DATE OF REVISION OF THE TEXT
25/01/2008
DOSIMETRY (IF APPLICABLE)

INSTRUCTIONS FOR PREPARATION OF RADIOPHARMACEUTICALS (IF APPLICABLE)
Please note that the leaflets and labelling for the Nurofen Liquicaps only are presented below. The leaflets and labelling for the Ibuprofen Liquicaps are consistent with those presented below.

**NUROFEN®**

**200mg Liquicaps**

Contains Ibuprofen

**PLEASE READ THIS LEAFLET CAREFULLY BEFORE YOU START TO TAKE YOUR MEDICINE.**

Keep this leaflet. You may want to read it again.

**NUROFEN 200mg LIQUICAPS**

**WHAT IS IN NUROFEN 200mg LIQUICAPS ?**

Each Nurofen 200mg Liquicaps contains the active ingredient ibuprofen 200mg.

Also contains: Macrogol 6000, Potassium Hydroxide Solution, Sorbitol Liquid, partially dehydrated, Gelatin, Ponceau 4R (E124), Lechthin, Medium Chain Triglycerides, Titanium Dioxide (E171), Propylene Glycol, Polyvinyl Acetate Phthalate, Ammonium Hydroxide (E527), Macrogol 400, Purified Water.

Nurofen 200mg Liquicaps are available in packs of 10 capsules.

Licence Holder & Manufacturer: Crookes Healthcare Ltd, Nottingham, NG2 3AA PL 00327/0197

**HOW DO NUROFEN 200mg LIQUICAPS WORK ?**

Nurofen 200mg Liquicaps contain ibuprofen which belongs to a group of medicines known as non-steroidal anti-inflammatory drugs (NSAIDs).

NSAIDs provide relief by changing the body’s response to pain, swelling and high temperature.

Nurofen 200mg Liquicaps are designed to provide effective relief from pain.

Nurofen 200mg Liquicaps break down easily in the body and the liquid, which is released from the capsule, is easily absorbed into the body to get to the site of pain quickly.

Nurofen 200mg Liquicaps are for the relief of headaches, migraine, backache, period pain, dental pain, neuralgia, muscular pain, rheumatic pain, cold and flu symptoms, feverishness and pain of non-serious arthritis.

**BEFORE YOU TAKE NUROFEN 200mg LIQUICAPS:**

Do Not take Nurofen 200mg Liquicaps if you:

- have rare hereditary problems of fructose intolerance. Contains 50.5 mg of sorbitol per capsule, a source of 12.6 mg of fructose per capsule.
- have or have ever had a stomach ulcer, perforation or bleeding
- are allergic to ibuprofen, to any of the ingredients, or to aspirin or other painkillers
- are taking other NSAIDs painkillers or aspirin with a daily dose above 75mg
- are in the last 3 months of pregnancy
- are under 12 years of age.
- this medicine contains 14mg of potassium per dose. To be taken into consideration if you have reduced kidney function or are on a controlled potassium diet.

Ask your doctor before taking Nurofen 200mg Liquicaps if:

- you have asthma or have suffered from asthma
- you have kidney, heart, or liver or bowel problems
- you have Systemic Lupus Erythematosus (SLE) - a condition of the immune system affecting connective tissue resulting in joint pains, skin changes and disorder of other organs
- you are taking any regular medication, especially:
  - aspirin at low dose (ie below 7.5 mg daily)
  - medicines for high blood pressure and water tablets (diuretics)
  - medicines for thinning the blood (anti-coagulants)
  - corticosteroids
  - Methotrexate [an anti-cancer agent]
UKPAR Nurofen and Ibuprofen 200mg and 400mg Liquicaps
PL 00327/0197, 199, 200 & 202

- Lithium (used to treat depression)
- Zidovudine (an anti-viral drug)
- you are in the first 6 months of pregnancy or breastfeeding.
- Nurofen belongs to a group of medicines which may impair fertility in women. This is reversible on stopping the medicine. It is unlikely that Nurofen, used occasionally, will affect your chances of becoming pregnant. However, tell your doctor before taking this medicine if you have problems becoming pregnant.
- Medicines such as Nurofen 200mg Liquicaps may be associated with a small increased risk of heart attack ("myocardial infarction") or stroke. Any risk is more likely with high doses and prolonged treatment. Do not exceed the recommended dose or duration of treatment (10 days).
- If you have heart problems, previous stroke or think that you might be at risk of these conditions (for example if you have high blood pressure, diabetes or high cholesterol or are a smoker) you should discuss your treatment with your doctor or pharmacist.

HOW TO TAKE NUROFEN 200mg LIQUICAPS:
Adults and children of 12 years and older:
Initial dose: Take 2 Nurofen 200mg Liquicaps with water, then if necessary 1 or 2 Capsules every 4 hours. Do not chew the Capsules.
Do not exceed 6 Capsules in 24 hours.
Not suitable for children under 12 years.
WARNING: DO NOT EXCEED THE STATED DOSE
This product is intended for short-term use only. You should take the lowest dose for the shortest time necessary to relieve your symptoms. You should not take Nurofen 200mg Liquicaps for longer than 10 days. If symptoms persist or if the pain or fever worsen, or if new symptoms occur, talk to your doctor or pharmacist.

WHILST TAKING NUROFEN 200mg LIQUICAPS:
If you take too many capsules by mistake, talk to your doctor or pharmacist as soon as possible.
Side Effects
Nurofen 200mg Liquicaps are generally well tolerated by the majority of people, however, elderly patients are at increased risk of developing problems associated with side effects.
Disorders of the stomach & intestines including abdominal discomfort or pain, nausea, stomach ulcer, vomiting containing either blood or brown grit (like coffee grounds), black tarry stools, worsening of existing bowel diseases (ulcerative colitis or Crohn’s disease). Blood disorders resulting in unexplained or unusual bruising or bleeding, fever, sore throat, mouth ulcers, extreme pallor or weakness. Allergic reactions including worsening of asthma, unexplained wheezing or shortness of breath, swelling of the face and tongue, collapse. In addition, there may be skin reactions (including hives and itching), these can sometimes be severe with blistering and peeling of skin. If you develop any of the symptoms above, stop the capsules and contact your doctor immediately.
Liver disorders that may be indicated by yellowing of the skin and eyes and/or pale stools and dark urine.
Kidney disorders that may be indicated by passing less or more urine than normal, cloudy urine, blood in the urine, pain in the back and/or swelling (particularly of the legs). Nervous system disorders indicated by severe headache, neck stiffness, disorientation, and tight hurting the eyes. Medicines such as Nurofen 200mg Liquicaps may be associated with a small increased risk of heart attack ("myocardial infarction") or stroke.
If you experience any of these, or have any other unusual symptoms or concerns, stop taking the product and see your doctor.

HOW SHOULD THIS PRODUCT BE STORED?
'Use by' date: Do not use after the expiry date given on the carton or the blister packaging.
Store below 25°C.
Remember: Keep all medicines out of the reach and sight of children.
Date of revision: September 2007.

Cooke Healthcare Ltd., Nottingham NG2 3AA
NUROFEN®
400mg Liquicaps

PLEASE READ THIS LEAFLET CAREFULLY BEFORE YOU START TO TAKE YOUR MEDICINE.
Keep this leaflet. You may want to read it again.

NUROFEN 400mg LIQUICAPS

WHAT IS NUROFEN 400mg LIQUICAPS?
Each Nurofen 400mg Liquicaps contains the active ingredient ibuprofen 400mg.
Also contains: Macrogol 600, Potassium Hydroxide Solution, Sorbitol Liquid, partially
dehydrated, Gelatin, Ponceau 4R (E124), Lecithin, Medium Chain Triglycerides, Titanium
Dioxide (E171), Propylene Glycol, Polyvinyl Acetate Phthalate, Ammonium Hydroxide (E527),
Macrogol 400, Purified Water.

Nurofen 400mg Liquicaps are available in packs of 10 capsules.
Licence Holder & Manufacturer: Crookes Healthcare Ltd, Nottingham, NG2 3AA
PL 00327/0199

HOW DO NUROFEN 400mg LIQUICAPS WORK?
Nurofen 400mg Liquicaps contain ibuprofen which belongs to a group of medicines known
as non-steroidal anti-inflammatory drugs (NSAIDs).
NSAIDs provide relief by changing the body’s response to pain, swelling and high temperature.
Nurofen 400mg Liquicaps are designed to provide effective relief from pain.
Nurofen 400mg Liquicaps break down easily in the body and the liquid, which is released
from the capsule, is easily absorbed into the body to get to the site of pain quickly.
Nurofen 400mg Liquicaps are for the relief of headaches, migraine, backache,
period pain, dental pain, neuralgia, muscular pain, rheumatic pain, cold and
flu symptoms, feverishness and pain of non-serious arthritis.

BEFORE YOU TAKE NUROFEN 400mg LIQUICAPS:
Do Not take Nurofen 400mg Liquicaps if you:
• have rare hereditary problems of fructose intolerance. Contains 79.8 mg of sorbitol per
dose, a source of 19.9 mg of fructose per dose.
• have or have ever had a stomach ulcer, perforation or bleeding
• are allergic to ibuprofen, to any of the ingredients, or to aspirin or other painkillers
• are taking other NSAIDs painkillers or aspirin with a daily dose above 75mg
• are in the last 3 months of pregnancy
• are under 12 years of age.
• this medicine contains 28mg of potassium per dose. To be taken into consideration if you
have reduced kidney function or are on a controlled potassium diet.

Ask your doctor before taking Nurofen 400mg Liquicaps if:
• you have asthma or have suffered from asthma
• you have kidney, heart, or liver or bowel problems
• have Systemic Lupus Erythematosus (SLE) - a condition of the immune system affecting
connective tissue resulting in joint pains, skin changes and disorder of other organs
• you are taking any regular medication, especially:
  - aspirin at low dose (ie below 75 mg daily)
  - medicines for high blood pressure and water tablets (diuretics)
  - medicines for thinning the blood (anti-coagulants)
  - corticosteroids
  - Methotrexate (an anti-cancer agent)
- Lithium (used to treat depression)
- Zidovudine (an anti-viral drug)

- you are in the first 6 months of pregnancy or breastfeeding.
- Nurofen belongs to a group of medicines which may impair fertility in women. This is reversible on stopping the medicine. It is unlikely that Nurofen, used occasionally, will affect your chances of becoming pregnant. However, tell your doctor before taking this medicine if you have problems becoming pregnant.
- Medicines such as Nurofen 400mg Liquicaps may be associated with a small increased risk of heart attack ("myocardial infarction") or stroke. Any risk is more likely with high doses and prolonged treatment. Do not exceed the recommended dose or duration of treatment (10 days).
- If you have heart problems, previous stroke or think that you might be at risk of these conditions (for example if you have high blood pressure, diabetes or high cholesterol or are a smoker) you should discuss your treatment with your doctor or pharmacist.

HOW TO TAKE NUROFEN 400mg LIQUICAPS:
Adults and children of 12 years and older:
Initial dose: Take 1 Nurofen 400mg Liquicaps with water, then if necessary 1 Capsule every 4 hours. Do not chew the Capsules. For oral use.
Do not exceed 3 Capsules in 24 hours.
Not suitable for children under 12 years.

WARNING: DO NOT EXCEED THE STATED DOSE
This product is intended for short-term use only. You should take the lowest dose for the shortest time necessary to relieve your symptoms. You should not take Nurofen 400mg Liquicaps for longer than 10 days. If symptoms persist or if the pain or fever worsen, or if new symptoms occur, talk to your doctor or pharmacist.

WHilst TAKING NUROFEN 400mg LIQUICAPS:
If you take too many capsules by mistake, talk to your doctor or pharmacist as soon as possible.

Side Effects:
Nurofen 400mg Liquicaps are generally well tolerated by the majority of people, however, elderly patients are at increased risk of developing problems associated with side effects.
Disorders of the stomach & intestines including abdominal discomfort or pain, nausea, stomach ulcer, vomiting containing either blood or brown grit (like coffee grounds), black tarry stools, worsening of existing bowel diseases (ulcerative colitis or Crohn’s disease).
Blood disorders resulting in unexplained or unusual bruising or bleeding, fever, sore throat, mouth ulcers, extreme pallor or weakness.
Allergic reactions including worsening of asthma, unexplained wheezing or shortness of breath, swelling of the face and tongue, collapse. In addition, there may be skin reaction (including hives and itching); these can sometimes be severe with blistering and peeling of skin.

If you develop any of the symptoms above, stop the capsules and contact your doctor immediately.

Liver disorders that may be indicated by yellowing of the skin and eyes and/or pale stools and dark urine.
Kidney disorders that may be indicated by passing less or more urine than normal, cloudy urine, blood in the urine, pain in the back and/or swelling (particularly of the legs). Nervous system disorders indicated by severe headache, neck stiffness, disorientation, and light hurting the eyes.

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Store below 25°C.

RememBer: Keep all medicines out of the reach and sight of children.
Date of revision: September 2007.

Crookes Healthcare Ltd., Nottingham NG2 3AA
UKPAR Nurofen and Ibuprofen 200mg and 400mg Liquicaps

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