



## AC IBU 200mg TABLET (Ibuprofen 20mg Tablet)

### Summary of Product Characteristics

#### 1. Name of the medicinal product

### AC IBU 200mg TABLET

Ibuprofen 200mg Tablets BP

#### 2. Qualitative and quantitative composition

Each coated tablet contains Ibuprofen BP 200mg.

For excipients see section 6.1

#### 3. Pharmaceutical form

Coated Tablet

Orange coloured circular coated tablets

#### 4. Clinical particulars

##### 4.1 Therapeutic indications

For the relief of migraine-headaches, backache, dental pain, neuralgia and period pains as well as rheumatic or muscular pains, and pain of non-serious arthritic conditions.

Ibuprofen relieves pain and reduces inflammation and temperature as well as relieving headaches and other types of pain. It also relieves cold and flu symptoms.

##### 4.2 Posology and method of administration

For oral administration and short-term use only.

The lowest effective dose should be used for the shortest duration necessary to relieve symptoms (see section 4.4).

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

##### **Adults and children and adolescents between 12 and 18 years:**

If in children and adolescents this medicinal product is required for more than 3 days, or if symptoms worsen a doctor should be consulted.

If in adults the product is required for more than 10 days, or if the symptoms worsen the patient should consult a doctor.

##### **Children and Adolescents between 12 and 18 years:**

Take 1 or 2 tablets with water, up to three times a day as required.

##### **Adults:**

Take 1 or 2 tablets with water, up to three times a day as required. Leave at least four hours between doses.

Do not take more than 6 tablets in any 24 hour period.

Not for use by children under 12 years of age.

##### 4.3 Contraindications

Hypersensitivity to Ibuprofen or any of the excipients of the product.

Patients who have previously shown hypersensitivity reactions (e.g. asthma, rhinitis, angioedema or urticaria) in response to Aspirin or other non-steroidal anti-inflammatory drugs.



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Active or history of recurrent peptic ulcer/haemorrhage (two or more distinct episodes of proven ulceration or bleeding).

History of gastrointestinal bleeding or perforation, related to previous NSAIDs therapy.

Severe heart failure (NYHA Class IV), renal failure or hepatic failure (see section 4.4).

Last trimester of pregnancy.

### 4.4 Special warnings and precautions for use

Undesirable effects may be minimised by using the lowest effective dose for the shortest duration necessary to control symptoms (see section 4.2 and GI and cardiovascular risks below).

The elderly have an increased frequency of adverse reactions to NSAIDs especially gastrointestinal bleeding and perforation which may be fatal.

#### **Severe skin reactions:**

Serious skin reactions, some of them fatal, including exfoliative dermatitis, Stevens-Johnson syndrome, and toxic epidermal necrolysis have been reported rarely in association with the use of NSAIDs (see section 4.8). Patients appear to be at highest risk of these reactions early in the course of therapy, the onset of the reaction occurring in the majority of cases within the first month of treatment. Acute generalised exanthematous pustulosis (AGEP) has been reported in relation to ibuprofen-containing products. Ibuprofen should be discontinued at the first appearance of signs and symptoms of severe skin reactions, such as skin rash, mucosal lesions, or any other sign of hypersensitivity.

#### **Respiratory:**

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

#### **Other NSAIDs:**

The use of ibuprofen with concomitant NSAIDs including cyclooxygenase -2 selective inhibitors should be avoided. (see section 4.5)

#### **SLE and mixed connective tissue disease:**

Systemic lupus erythematosus as well as those with mixed connective tissue disease - increased risk of aseptic meningitis. (see section 4.8).

#### **Renal:**

Renal impairment as renal function may further deteriorate (see sections 4.3 and 4.8). There is a risk of renal impairment in dehydrated children and adolescents.

#### **Hepatic:**

Hepatic dysfunction (see sections 4.3 and 4.8)

#### **Cardiovascular and cerebrovascular effects:**

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.

Clinical studies suggest that use of ibuprofen, particularly at a high dose (2400 mg/day) 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.  $\leq 1200$  mg/day) is associated with an increased risk of arterial thrombotic events.

Patients with uncontrolled hypertension, congestive heart failure (NYHA II- III), established ischaemic heart disease, peripheral arterial disease, and/or cerebrovascular disease should only



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be treated with ibuprofen after careful consideration and high doses (2400 mg/day) should be avoided.

Careful consideration should also be exercised before initiating long-term treatment of patients with risk factors for cardiovascular events (e.g. hypertension, hyperlipidaemia, diabetes mellitus, smoking), particularly if high doses of ibuprofen (2400 mg/day) are required.

### **Impaired Female Fertility:**

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

### **Gastrointestinal:**

NSAIDs should be given with care to patients with a history of gastrointestinal disease (ulcerative colitis, Crohn's disease) as these conditions may be exacerbated. (see section 4.8) GI bleeding, ulceration or perforation which can be fatal, has been reported with all NSAIDs at any time during treatment, with or without warning symptoms or a previous history of GI events. The risk of GI bleeding, ulceration or perforation is higher with increasing NSAID doses, in patients with a history of ulcer, particularly if complicated with haemorrhage or perforation (see section 4.3) and in the elderly. These patients should commence treatment on the lowest dose available.

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 ulceration or bleeding, such as oral corticosteroids, anti-coagulants such as warfarin, selective serotonin – reuptake inhibitors 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.

### **Masking of symptoms of underlying infections**

Ibuprofen can mask symptoms of infection, which may lead to delayed initiation of appropriate treatment and thereby worsening the outcome of the infection. This has been observed in bacterial community acquired pneumonia and bacterial complications to varicella. When Ibuprofen is administered for fever or pain relief in relation to infection, monitoring of infection is advised. In non-hospital settings, the patient should consult a doctor if symptoms persist or worsen.

### **Excipients:**

Contains sunset yellow (E110), which may cause allergic reactions.

### **Advice for patients with sugar-related disorders:**

Contains sucrose. Patients with rare hereditary problems of fructose intolerance, glucose-galactose malabsorption or sucrase-isomaltase insufficiency should not take this medicine. Contains lactose. Patients with rare hereditary problems of galactose intolerance, total lactase deficiency or glucose-galactase malabsorption should not take this medicine.

### **Advice for patients on a controlled sodium diet:**

This medicine contains less than 1 mmol sodium (23mg) per two tablets, that is to say essentially 'sodium-free'.

### **The leaflet will include:**

This medicine contains less than 1 mmol sodium (23mg) per two tablets, that is to say essentially 'sodium-free'.



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If you have been told by your doctor that you have an intolerance to some sugars, contact your doctor before taking this medicinal product.

These tablets contain sunset yellow (E110), which may cause allergic reactions.

### **The label will include:**

Read the enclosed leaflet before taking this product.

### **Do not take if you:**

- have (or have had two or more episodes of) a stomach ulcer, perforation or bleeding
- are allergic to ibuprofen or any other ingredient of the product, aspirin or other related painkillers
- are taking other NSAID painkillers, or aspirin with a daily dose above 75mg

### **Speak to a pharmacist or your doctor before taking if you:**

- have or have had asthma, diabetes, high cholesterol, high blood pressure, stroke, heart, liver, kidney or bowel problems
- are a smoker
- are pregnant

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 be avoided in combination with:**

#### **Aspirin (Acetylsalicylic Acid):**

Concomitant administration of ibuprofen and acetylsalicylic acid is not generally recommended because of the potential of increased adverse effects unless low-dose aspirin (not above 75mg daily) has been advised by a doctor, (see section 4.4)

Experimental data suggest that ibuprofen may competitively inhibit the effect of low dose aspirin (acetylsalicylic acid) on platelet aggregation when they are dosed concomitantly. Although there are uncertainties regarding extrapolation of these data to the clinical situation, the possibility that regular, long-term use of ibuprofen may reduce the cardioprotective effect of low-dose acetylsalicylic acid cannot be excluded. No clinically relevant effect is considered to be likely for occasional ibuprofen use (see section 5.1).

#### **Other NSAIDs including cyclooxygenase-2 selective inhibitors:**

Avoid concomitant use of two or more NSAIDs as this may increase the risk of adverse effects (see section 4.4).

### **Ibuprofen should be used with caution in combination with:**

#### **Corticosteroids:**

As these may increase the risk of gastrointestinal ulceration or bleeding (see section 4.4).

#### **Antihypertensives and diuretics:**

Since NSAIDs may diminish the effect of these drugs. In some patients with compromised renal function (e.g. dehydrated patients or elderly patients with compromised renal function) the co-administration of an ACE inhibitor or Angiotensin II antagonist and agents that inhibit cyclooxygenase may result in further deterioration of renal function, including possible acute renal failure, which is usually reversible. These interactions should be considered in patients taking a coxib concomitantly with ACE inhibitors or angiotensin II antagonists. Therefore, the combination should be administered with caution, especially in the elderly. Patients should be adequately hydrated and consideration should be given to monitoring of renal function after



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initiation of concomitant therapy, and periodically thereafter. Diuretics can increase the risk of nephrotoxicity of NSAIDs.

### **Anticoagulants:**

NSAIDs may enhance the effects of anti-coagulants, such as warfarin (see section 4.4).

### **Anti-platelet agents and selective serotonin reuptake inhibitors (SSRIs):**

Increased risk of gastrointestinal bleeding (see section 4.4).

### **Cardiac glycosides:**

NSAIDs may exacerbate cardiac failure, reduce GFR and increase plasma glycoside levels.

### **Lithium:**

There is evidence for potential increase in plasma levels of lithium.

### **Methotrexate:**

There is evidence for the potential increase in plasma methotrexate.

### **Ciclosporin:**

Increased risk of nephrotoxicity.

### **Mifepristone:**

NSAIDs should not be used for 8-12 days after mifepristone administration as NSAIDs can reduce the effect of mifepristone.

### **Tacrolimus:**

Possible increased risk of nephrotoxicity when NSAIDs are given with tacrolimus.

### **Zidovudine:**

Increased risk of haematological toxicity when NSAIDs are given with zidovudine. There is evidence of an increased risk of haemarthroses and haematoma in HIV (+) haemophiliacs receiving concurrent treatment with zidovudine and ibuprofen.

### **Quinolone antibiotics:**

Animal data indicate that NSAIDs can increase the risk of convulsions associated with quinolone antibiotics. Patients taking NSAIDs and quinolones may have an increased risk of developing convulsions.

## **4.6 Fertility, pregnancy and lactation**

### **Pregnancy:**

Inhibition of prostaglandin synthesis may adversely affect the pregnancy and/or the embryo/foetal development. Data from epidemiological studies suggest an increased risk of miscarriage and of cardiac malformation and gastroschisis after use of a prostaglandin synthesis inhibitor in early pregnancy. The absolute risk for cardiovascular malformation was increased from less than 1%, up to approximately 1.5%. The risk is believed to increase with dose and duration of therapy. In animals, administration of a prostaglandin synthesis inhibitor has been shown to result in increased pre- and post-implantation loss and embryofoetal lethality. In addition, increased incidences of various malformations, including cardiovascular, have been reported in animals given a prostaglandin synthesis inhibitor during the organogenetic period. During the first and second trimester of pregnancy, Ibuprofen should not be given unless clearly necessary. If Ibuprofen is used by a woman attempting to conceive, or during the first and second trimester of pregnancy, the dose should be kept as low and duration of treatment as short as possible.

During the third trimester of pregnancy, all prostaglandin synthesis inhibitors may expose the foetus to:



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- cardiopulmonary toxicity (with premature closure of the ductus arteriosus and pulmonary hypertension);
  - renal dysfunction, which may progress to renal failure with oligohydroamniosis; the mother and the neonate, at the end of the pregnancy, to:
  - possible prolongation of bleeding time, an anti-aggregating effect which may occur even at very low doses;
  - inhibition of uterine contractions resulting in delayed or prolonged labour.
- Consequently, Ibuprofen is contraindicated during the third trimester of pregnancy.

### Lactation/Breastfeeding:

In limited studies ibuprofen appears in 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 doses and duration of therapy.

### 4.8 Undesirable effects

Adverse events which have been associated with Ibuprofen are given below, listed by system organ class and frequency. Frequencies are defined as: very common ( $\geq 1/10$ ), common ( $\geq 1/100$  to  $<1/10$ ), uncommon ( $\geq 1/1000$  to  $<1/100$ ), rare ( $\geq 1/10,000$  to  $<1/1000$ ), very rare ( $<1/10,000$ ) and not known (cannot be estimated from the available data). Within each frequency grouping, adverse events are presented in order of decreasing seriousness.

The list of the following adverse events relates to those experienced with ibuprofen at OTC doses (maximum 1200mg per day) for short-term use. In the treatment of chronic conditions, under long-term treatment, additional adverse effects may occur.

The adverse events observed most often are gastrointestinal in nature. Adverse events are mostly dose-dependent, in particular the risk of occurrence of gastrointestinal bleeding is dependent on the dosage range and duration of treatment.

Clinical studies suggest that use of ibuprofen, particularly at a high dose (2400 mg/day) may be associated with a small increased risk of arterial thrombotic events (for example myocardial infarction or stroke) (see section 4.4).

System Organ Class	Frequency	Adverse Event
Blood and Lymphatic System Disorders	Very rare:	Haematopoietic disorders (anaemia, leucopenia, thrombocytopenia, pancytopenia, agranulocytosis). First signs are: fever, sore throat, superficial mouth ulcers, flu-like symptoms, severe exhaustion, unexplained bleeding and bruising.
Immune System Disorders	Uncommon	Hypersensitivity reactions consisting of <sup>1</sup> : Urticaria and pruritus
	Very rare	Severe hypersensitivity reactions. Symptoms could be facial, tongue and laryngeal swelling, dyspnoea, tachycardia, hypotension (anaphylaxis, angioedema or severe shock).



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	Not Known	Respiratory tract reactivity comprising asthma, aggravated asthma, bronchospasm or dyspnoea.
Nervous System Disorders	Uncommon Very rare	Headache Aseptic meningitis <sup>2</sup> .
Cardiac Disorders	Not Known	Cardiac failure and oedema
Vascular Disorders	Not Known	Hypertension
Gastrointestinal Disorders	Uncommon	Abdominal pain, nausea, dyspepsia
	Rare	Diarrhoea, flatulence, constipation and vomiting
	Very rare	Peptic ulcer, perforation or gastrointestinal haemorrhage, melaena, haematemesis, sometimes fatal, particularly in the elderly. Ulcerative stomatitis, gastritis
	Not Known	Exacerbation of colitis and Crohn's disease (section 4.4).
Hepatobiliary Disorders	Very rare	Liver disorders
Skin and Subcutaneous Tissue Disorders	Uncommon	Various skin rashes
	Very rare	Severe forms of skin reactions such as bullous reactions including Stevens- Johnson syndrome, erythema multiforme and toxic epidermal necrolysis can occur.
	Not known	Drug reaction with eosinophilia and systemic symptoms (DRESS syndrome) Acute generalised exanthematous pustulosis (AGEP) photosensitivity reactions
Renal and Urinary Disorders	Very rare	Acute renal failure, papillary necrosis, especially in long-term use, associated with increased serum urea and oedema.
	Not Known	Renal insufficiency
Investigations	Very rare	Decreased haemoglobin levels

### Description of Selected Adverse Reactions:

<sup>1</sup> Hypersensitivity reactions have been reported following treatment with ibuprofen. These may consist of (a) non-specific allergic reactions and anaphylaxis, (b) respiratory tract activity comprising asthma, aggravated asthma, bronchospasm, dyspnoea or (c) assorted skin disorders, including rashes of various types pruritus, urticaria, purpura, angioedema and more rarely exfoliative and bullous dermatoses (including epidermal necrolysis and erythema multiforme).

<sup>2</sup> The pathogenic mechanism of drug-Induced aseptic meningitis is not fully understood.

However, the available data on NSAID-related aseptic meningitis points to a hypersensitivity reaction (due to a temporal relationship with drug intake, and disappearance of symptoms after



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drug discontinuation). Of note, single cases of symptoms of aseptic meningitis (such as stiff neck, headache, nausea, vomiting, fever or disorientation) have been observed during treatment with ibuprofen, in patients with existing auto-immune disorders (such as systemic lupus erythematosus, mixed connective tissue disease).

### **Reporting of suspected adverse reactions:**

Reporting suspected adverse reactions after authorisation of the medicinal product is important. It allows continued monitoring of the benefit/risk balance of the medicinal product. Healthcare professionals are asked to report any suspected adverse reactions via the Yellow Card Scheme at: [www.mhra.gov.uk/yellowcard](http://www.mhra.gov.uk/yellowcard) or by searching for MHRA yellow card in the google play or Apple App store.

### 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

#### **ATC Code:** M01A E01

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.

Experimental data suggest that ibuprofen may competitively inhibit the effect of low dose acetylsalicylic acid on platelet aggregation when they are dosed concomitantly. Some pharmacodynamic studies show that when single doses of ibuprofen 400 mg was taken within 8 h before or within 30 min after immediate release acetylsalicylic acid dosing (81 mg), a decreased effect of acetylsalicylic acid on the formation of thromboxane or platelet aggregation occurred. Although there are uncertainties regarding extrapolation of these data to the clinical situation, the possibility that regular, long-term use of ibuprofen may reduce the cardioprotective





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effect of low-dose acetylsalicylic acid cannot be excluded. No clinically relevant effect is considered to be likely for occasional ibuprofen use (see section 4.5).

### 5.2 Pharmacokinetic properties

Ibuprofen is rapidly absorbed following administration and is rapidly distributed throughout the whole body. The excretion is rapid and complete via the kidneys.

Maximum plasma concentrations are reached 45 minutes after ingestion if taken on an empty stomach. When taken with food, peak levels are observed after 1 to 2 hours. These times may vary with different dosage forms.

Elimination half-life is approximately 2 hours.

In limited studies ibuprofen appears in the breast milk in very low concentrations.

### 5.3 Preclinical safety data

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

## 6. Pharmaceutical particulars

### 6.1 List of excipients

#### **Tablet core:**

Lactose, starch, methyl cellulose, sodium starch glycollate, colloidal anhydrous silica, magnesium stearate,

#### **Tablet coating:**

HPMC, talc, titanium dioxide (E171), , titanium dioxide (E171), sunset yellow (E110), erythrosine (E127),

### 6.2 Incompatibilities

None stated.

### 6.3 Shelf life

5 years.

### 6.4 Special precautions for storage

Blister pack - This medicinal product does not require any special storage conditions.  
Securitainer/Pharmapac bottles – Store below 25° C, Keep the bottle tightly closed.

### 6.5 Nature and contents of container

Ibuprofen Tablets are available in blister packs of 20 tablets in a moncraton

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### 6.6 Special precautions for disposal and other handling

No special requirements.

## 7. Marketing authorisation holder

**AC DRUGS LIMITED**

NO C5/C6 OLD AIRPORT ROAD EMENE, ENUGU, ENUGU