1. **Name of the medicinal product :**

   JEONOL

2. **Qualitative and quantitative composition :**
   Each uncoated tabletcontains
   Theophylline(anhy.) B.P…120 mg
   Salbutamol Sulphate B.P eq.to Salbutamol..2mg
3. **Pharmaceuticals form : Tablets**

White, circular, flat, uncoated tablets having embossed "JEONOL" on one side and break line on other side of each tablet

## Clinical particulars :

### 1.1 Therapeutic indication

Salbutamol & Theophylline Tablets are indicated in adults, adolescents and children aged 2 to 12 years.

1. For the relief of bronchospasm in bronchial asthmas of all types.

2. Chronic bronchitis.

3. Emphysema.

### 1.1 Posology and method of administaration

*Adults:*

The usual effective dose is salbutamol 2 mg and theophylline 120 mg: 1 or 2 tab 3-4 times daily. If adequate bronchodilation is not obtained each single dose may be gradually increased to as much as 8mg. However, it has been established that some patients obtain adequate relief with 2 mg three or four times daily. In elderly patients or in those known to be unusually sensitive to beta-adrenergic stimulant drugs, it is advisable to initiate treatment with 2mg three or four times per day.

*Children:*

The following doses should be administered three or four times daily.

Emphysema, Chronic bronchitis, Asthma
Adult: Per tab contains salbutamol 2 mg and theophylline 120 mg: 1 or 2 tab 3-4 times daily.
Child: Child (under 6 years) salbutamol (0.5-1mg) + theophylline (25-50mg) t.i.d/q.i.d. SR (S 4mg+T 300mg) 1 tab b.i.d.

Method of administration

For oral use.

## 1.2Contraindications

Hypersensitivity, thyrotoxicosis

## 1.3Special warning and precaution for use

Bronchodilators should not be the only or main treatment in patients with severe or unstable asthma. Severe asthma requires regular medical assessment including lung function testing as patients are at risk of severe attacks and even death. Physicians should consider using oral corticosteroid therapy and/or the maximum recommended dose of inhaled corticosteroid in those patients.

Patients should seek medical advice if treatment with salbutamol+theophylline tablets becomes less effective. The dosage or frequency of administration should only be increased on medical advice.

Patients taking salbutamol+theophylline tablets may also be receiving short-acting inhaled bronchodilators to relieve symptoms.

Increasing use of bronchodilators in particular short-acting inhaled $beta_2$-agonists to relieve symptoms indicates deterioration of asthma control. The patient should be instructed to seek medical advice if short acting relief bronchodilator treatment becomes less effective or they need more inhalations than usual.

In this situation patients should be reassessed and consideration given to the need for increased anti-inflammatory therapy (e.g. higher doses of inhaled corticosteroids or a course of oral corticosteroid). Severe exacerbations of asthma must be treated in the normal way.

Patients should be warned that if either the usual relief with salbutamol+theophylline tablets is diminished or the usual duration of action reduced, they should not increase the dose or its frequency of administration, but should seek medical advice.

Cardiovascular effects may be seen with sympathomimetic drugs, including salbutamol. There is some evidence from post-marketing data and published literature of rare occurrences of myocardial ischaemia associated with salbutamol. Patients with underlying severe heart disease (e.g. ischaemic heart disease, arrhythmia or severe heart failure) who are receiving salbutamol should be warned to seek medical advice if they experience chest pain or other symptoms of worsening heart disease. Attention should be paid to assessment of symptoms such as dyspnoea and chest pain, as they may be of either respiratory or cardiac origin.

salbutamol+theophylline should be administered cautiously to patients suffering from thyrotoxicosis.

Potentially serious hypokalaemia may result from beta-2 agonist therapy mainly from parenteral and nebulized administration. Particular caution is advised in acute severe asthma as this effect may be potentiated by hypoxia and by concomitant treatment with xanthine derivatives and steroids. It is recommended that serum potassium levels are monitored in such situations.

In common with other β-adrenoceptor agonists, salbutamol can induce reversible metabolic changes such as increased blood glucose levels. Diabetic patients may be unable to compensate for the increase in blood glucose and the development of ketoacidosis has been reported. Concurrent administration of corticosteroids can exaggerate this effect.

Patients with rare hereditary problems of galactose intolerance, total lactase deficiency or glucose – galactose malabsorption should not take this medicine.

salbutamol+theophylline tablets contain carmoisine (E122) which may cause allergic reactions.

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

## 1.4 Interaction with other medicinal products and other forms of interaction

Increased theophylline toxicity with propranolol, cimetidine, erythromycin (7-5 days), quinolone antibiotics. Reduced efficacy with rifampicin, phenobarbitone, phenytoin, carbamazepine, sulfinpyrazone and smoking. Increased risk of hypokalaemia with diuretics.

### 1.5 Pregnancy and lactation

Pregnancy

Administration of drugs during pregnancy should only be considered if the expected benefit to the mother is greater than any possible risk to the foetus.

As with the majority of drugs, there is little published evidence of its safety in the early stages of human pregnancy, but in animal studies there was evidence of some harmful effects on the foetus at very high dose levels.

Breast-feeding

As salbutamol is probably secreted in breast milk its use in nursing mothers requires careful consideration.

It is not known whether salbutamol has a harmful effect on the neonate, and so its use should be restricted to situations where it is felt that the expected benefit to the mother is likely to outweigh any potential risk to the neonate.

Fertility

There is no information on the effects of salbutamol on human fertility. There were no adverse effects on fertility in animals

## 1.5 Effects on ability to drive and use machines

**None**

## 1.6 Undesirable effects

The frequencies of adverse reactions are ranked according to the following

Common (≥1/100 to <1/10); Uncommon (≥1/1,000 to <1/100); Rare (≥1/10,000 to <1/1,000); Very rare (<1/10,000); Not known (cannot be estimated from the available data).

| System organ class | Common | Uncommon | Rare | Very rare | Not known |
|---|---|---|---|---|---|
| Immune system disorders | | | | Hypersensitivity reactions including angioedema, urticaria, bronchospasm, hypotension and collapse | |
| Metabolism and nutrition disorders | Hypokalaemia (with high doses) | Hyperglycaemia | | | Lactic acidosis<br><br>Metabolic change |
| Nervous system disorders | Tremor<br><br>Headache<br><br>Dizziness | | | Hyperactivity | |
| Cardiac disorders | Cardiac arrhythmias*<br><br>Tachycardia<br><br>Palpitations | Myocardial ischemia | | Peripheral vasodilation | |
| Respiratory, thoracic and mediastinal disorders | | Pulmonary oedema | | | |
| Gastrointestinal disorders | Nausea | | | | Vomiting |
| Musculoskeletal and connective tissue disorders | Muscle cramps | | | Akathisia | Feeling of muscle tension |

## 1.7 Overdose

The most common signs and symptoms of overdose with the most common signs and symptoms of overdose with salbutamol+thephylline are transient beta agonist pharmacologically mediated events, including tachycardia, tremor, hyperactivity and metabolic effects including hypokalaemia (see sections 4.4 and 4.8).

Hypokalaemia may occur following overdose with salbutamol+thephylline. Serum potassium levels should be monitored.

Lactic acidosis has been reported in association with high therapeutic doses as well as overdoses of short-acting beta-agonist therapy, therefore monitoring for elevated serum lactate and consequent metabolic acidosis (particularly if there is persistence or worsening of tachypnea despite resolution of other signs of bronchospasm such as wheezing) may be indicated in the setting of overdose.

Nausea, vomiting and hyperglycaemia have been reported, predominantly in children and when salbutamol overdose has been taken via the oral route.

Further management should be as clinically indicated or as recommended by the national poisons centre, where available.

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## 2. PHARMACOLOGICAL PROPERTIES :

### 2.1 Pharmacodynamics properties

Pharmacotherapeutic group: Selective beta-2-adrenoreceptor agonists, ATC code: R03CC02

Salbutamol is a selective beta-2-adrenergic agonist. At therapeutic doses it acts on the beta-2 adrenoceptors of bronchial muscle providing short acting (4-6 hours) bronchodilation in reversible airways obstruction

### 1.1 Pharmacokinetic properties

Salbutamol is a selective β2-agonist. It causes bronchial smooth muscle relaxation via the cyclic adenyl cyclase (cAMP) system. Theophylline is a phosphodiesterase inhibitor. It enhances intracellular cAMP conc thereby contributing to bronchial smooth muscle relaxation. It also suppresses airway hyper-response to stimuli. Advantage of this combination is the additive effect allowing reduction of individual doses.

### 1.2 Preclinical safety data

There are no pre-clinical data of relevance to the prescriber which are additional to that already included in other sections of the SPC.

## 2. PHARMACETICAL PARTICULARS

### 2.1 List of excipients

Maize starch,Sodium starch glycolate,Sodium lauryl sulphate,Magnesium stearate,Talcum,Microcrystalline cellulose,gelatin

### 2.2 Incompatibilities

Not applicable

**2.3 Shelf life**

**3 Years from the date of manufacturing**

**2.4 Special precaution for storage**

Store in the original package and protect from moisture

**2.5 Nature and contents of container and special and special equipment for use administration or implantation**

Tablets are packaged in printed aluminium – aluminium poly film and 10 such strips packed in printed carton.

Pack sizes:

Strips: 10 Tablets

**2.6 Special precaution for disposal and other handling**

No special requirements

**SOLE AGENT: DOMDIKE PHARM CO. LTD, NIGERIA**

**NAFDAC REG. NO. : 04-7985**