

Human Monocomponent Insulin for the doctors and nurses of tomorrow



Insulin treatment today may lead to antibody problems in the future, a persuasive argument in favour of using the least immunogenic insulin.

Novo's human insulin is identical to the hormone they are unable to make for themselves.

There are three U100 formulations, Human Actrapid, Human Monotard and Human Protaphane all made to the same exacting standard of Monocomponent purity.

As a result of their structure and purity, Novo Human Monocomponent insulins have been shown to cause fewer antibodies than even the purest animal insulins!



Prescribing Information

Human Actrapid® 100 i.u./ml ▼

Human Insulin (emp) (Neutral Insulin Injection)

Human Monotard® 100 i.u./ml ▼

Human Insulin (emp) (Insulin Zinc Suspension)

Human Protaphane® 100 i.u./ml ▼

Human Insulin (emp) (Isophane Insulin Injection)

Indications The treatment of insulin-requiring diabetic patients.

Human Actrapid is indicated for diabetics who require a quick and intense-acting insulin, particularly in emergencies such as diabetic hyperglycaemic coma, during surgery and severe infections in diabetics, and in the management of pregnant diabetics. **Human Monocomponent insulin** may be advantageous in the treatment of insulin-induced fat atrophy, insulin allergy, insulin resistance and when intermittent short-term therapy is required.

Dosage and Administration The dosage of **Human Actrapid**, **Human Monotard** and **Human Protaphane** is determined by the physician according to the needs of the patient.

Human Actrapid may be given by injection or infusion, subcutaneously, intramuscularly or intravenously. **Human Monotard** and **Human Protaphane** should be well shaken and given immediately by subcutaneous or intramuscular injection. They may be given twice, or occasionally once daily. **Human Actrapid** may be admixed with **Human Monotard** or **Human Protaphane** in the syringe and injected immediately. U100 insulins must only be used with U100 syringes. Peristaltic pumps (roller pumps) are not suitable for use with **Human Actrapid** due to the risk of precipitation. **Human Monotard** and **Human Protaphane** must not be used in insulin infusion pumps.

Contra-Indications, Warnings and Adverse Effects Insulin is contra-indicated in hypoglycaemia. In the event of an overdose, glucose should be given orally if the patient is conscious. The unconscious patient should be treated with glucose intravenously and glucagon may be administered intramuscularly or subcutaneously. On transfer from porcine monocomponent insulins or other highly purified porcine insulins to **Human Monocomponent insulin**, no change in dosage is anticipated other than the routine adjustments made in order to maintain stable diabetic control. However, patients transferred from conventional (predominantly bovine) insulins may require a dosage adjustment. The addition of corticosteroids, oral contraceptives or thyroid hormone replacement therapy is likely to lead to an increase in insulin requirements. The addition of a beta-adrenergic blocking agent or a monoamine oxidase inhibitor (MAOI) may also necessitate an adjustment of insulin dosage. Lipodystrophy, insulin resistance and hypersensitivity reactions have been associated with insulin therapy, but the incidence and severity of these unwanted effects is minimal with **Human Monocomponent insulins**. Severe local or generalised allergic reactions require immediate treatment and, in some cases, desensitisation may also be necessary.

Pack Size and Basic NHS Price (UK only)

All **Human Monocomponent insulins**

10ml vials 17.88

Product Licence Numbers

Human Actrapid 100 i.u./ml 4668/0003

Human Monotard 100 i.u./ml 4668/0006

Human Protaphane 100 i.u./ml 4668/0007

Product Licence Holder:

Novo Industri A/S, Novo Alle, DK-2880 Bagsvaerd,

Copenhagen, DENMARK.

Sole Distributor:

Farillon Ltd., Bryant Avenue, Romford, Essex RM3 0PJ.

Tel: Ingrebourne 71136

References

I. Scherthaner G, et al. Immunogenicity of Human Insulin (Novo) or Porcine Monocomponent Insulin in HLA-DR Typed Insulin-dependent Diabetic Individuals. In: International Symposium on Human Insulin, Eds Karam J H, Elzwtler D D, Diabetes Care: 6 (Suppl 1): 43-48.

NOVO INDUSTRIAS

Copenhagen, Denmark.

Further information is available on request from:

NOVO LABORATORIES LTD

Ringway House, Bell Road, Daneshill East,

Basingstoke, Hampshire RG24 0QN.

Tel: Basingstoke (0256) 55055.



Novo Human Monocomponent Insulin
for diabetic children with a full life
ahead of them

whatever his mum worries about, it won't be his asthma.

Regular Intal therapy can give real protection from asthmatic attacks, minimising both incidence and severity.¹

With reduced anxiety, there is less need to resort to symptomatic medication such as bronchodilators,² or oral corticosteroids.³

Current investigations suggest that these improvements are accompanied by a reduction of cellular infiltration in bronchial mucus.⁴ Which indicates that Intal therapy may have a beneficial effect on the underlying pathology of asthma.

Because the Intal routine can be integrated unobtrusively into the day's normal activities, the asthmatic child can get on with the real business of growing up.

He'll be more at ease with his condition.
And so will his parents, teachers and friends.

References:

1. Bernstein, L. et al., *J. Allergy Clin. Immunol.*, (1972), **50**, 4, 235-245.
2. Rubin, A. E., Alroy, G. & Spitzer, S., *Curr. Med. Res. Opin.*, (1983), **8**, 553.
3. Toogood, J. H. et al., *J. Allergy Clin. Immunol.*, (1973), **52**, 6, 334-345.
4. Diaz, P. et al., *Thorax*, (1983), **38**, 9, 702-703.

Presentation Intal and Intal Compound Spincaps® both contain 20mg Sodium Cromoglycate B.P. Isoprenaline Sulphate (0.1mg) is included in Intal Compound Spincaps. The powder from Spincaps is inhaled using the Spinhaler® or Halermatic® which work by the patient's inspiratory effort. The Intal Inhaler is a metered dose pressurised aerosol delivering 200 inhalations of 1.0mg Sodium Cromoglycate. Intal Nebuliser Solution is presented in ampoules each containing 20mg Sodium Cromoglycate in 2ml sterile aqueous solution. **Indication** Preventive treatment of bronchial asthma, including the prevention of exercise-induced asthma. **Dosage and Administration** Adults and children: the normal dose is one Spincap (Intal or Intal Compound) two puffs of Inhaler or one ampoule of Nebuliser Solution to be inhaled four times daily. Intal Nebuliser Solution is administered from a suitable power-operated nebuliser. Since Intal therapy is preventive it is important that the patient is instructed to maintain regular dosage as distinct from intermittent use to relieve symptoms. **Side effects** With the powder formulations of Intal, irritation of the throat and trachea may occur in patients sensitive to the inhalation of dry powder. Although it has not been reported for the Inhaler or Nebuliser Solution, rare cases of severe bronchospasm have occurred following the administration of Intal Spincaps using a Spinhaler. **Precautions** For Intal Compound the precautions normally applying to isoprenaline should be observed. **Withdrawal of therapy** This should be done progressively over one week. Symptoms may recur. Any previous steroid therapy should be reinstated prior to the withdrawal of Intal. **Basic NHS Cost and Product Licence Number** Intal (per 100 Spincaps) £10.07 PL0113/5022. Intal Compound (per 100 Spincaps) £8.19 PL0113/5023. Intal Inhaler (per 200 inhalations) £10.95 PL0113/0080. Nebuliser Solution (per 48 ampoules) £8.20 PL0113/0068. Fisons plc—Pharmaceutical Division, Loughborough, Leicestershire LE11 0BB. *Registered Trade Mark ©Fisons plc



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and exceptional
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from an extended spectrum
cephalosporin.

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FORTUM

ceftazidime

PRESCRIBING INFORMATION

Presentation

Fortum for Injection is supplied in vials containing 500mg, 1g and 2g ceftazidime (as pentahydrate) with sodium carbonate.

Uses

Fortum is a bactericidal cephalosporin antibiotic which is resistant to most beta-lactamases and is active against a wide range of Gram-positive and Gram-negative bacteria.

It is indicated for the treatment of single infections and for mixed infections caused by two or more susceptible organisms. Fortum, because of its broad antibacterial spectrum, may be used alone as first choice drug, pending sensitivity test results.

Dosage and administration

The usual adult dosage is in the range 1g to 6g i.m. or i.v. per day (see Data Sheet for details).

Contra-indication

Fortum is contra-indicated in patients with known hypersensitivity to cephalosporin antibiotics.

Precautions

Cephalosporins may, in general, be given safely to patients who are hypersensitive to penicillins. Care is indicated in patients who have experienced an anaphylactic reaction to penicillin.

Cephalosporin antibiotics at high dosage should be given with caution to patients receiving concurrent treatment with nephrotoxic drugs. Clinical experience with Fortum has shown that this is not likely to be a problem at the recommended dose levels. Reduce dosage when renal function is impaired (see Data Sheet).

As with all drugs, Fortum should be administered with caution during the early months of pregnancy and in early infancy. Fortum is excreted in human milk in low concentrations.

Fortum does not interfere with enzyme-based tests for glycosuria. Slight interference with copper reduction methods may be observed. Fortum does not interfere in the alkaline picrate assay for creatinine.

Fortum and aminoglycosides should not be mixed in the same giving set or syringe.

As with other broad spectrum antibiotics, prolonged use of Fortum may result in the overgrowth of non-susceptible organisms (e.g. *Candida*, *Enterococci*) which may require interruption of treatment or adoption of appropriate measures.

Side effects

Fortum is generally well tolerated with only infrequent adverse reactions, e.g. pain and/or inflammation after i.m. administration and phlebitis and/or thrombophlebitis after i.v. administration, rashes, fever, pruritis, gastro-intestinal disturbances, headache, dizziness, paraesthesiae and bad taste. Transient changes in laboratory values may occur including: eosinophilia, a positive Coombs' test, thrombocytosis and slight rises in hepatic enzymes.

Basic NHS cost (exclusive of VAT)

The basic NHS cost of Fortum is £9.90 per gram.

Available in packs of: 5 x 500mg, 5 x 1g and 5 x 2g vials and an infusion pack of 5 x 2g vials.

Product Licence numbers

500mg: 0004/0292

1g: 0004/0293

2g: 0004/0294

Further information is available on request from:

Glaxo

Glaxo Laboratories Limited, Greenford, Middlesex UB6 0HE

Fortum is a Glaxo trade mark.



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The Tuberosus Sclerosis Association gives grants for research into tuberous sclerosis and its associated problems. Grants are usually awarded for a maximum of 3 years. A case register and a tissue bank have already been established for the Association.

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North Leigh,
OXFORD OX8 6TX
Tel: 0993-881238

Further information is also available.

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NEONATAL STUDY DAY Friday, 16th November, 1984

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Both the DHSS¹ and the European Society for Paediatric Gastroenterology and Nutrition (ESPGAN)² advise against the early introduction of doorstep cow's milk. In fact, it may be beneficial to avoid it for the first 12 months. ESPGAN have set out guidelines for and recommend the use of a follow-on formula rather than cow's milk.

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References 1. D.H.S.S. (1980) (Revised 1983) HMSO Report No. 20. Present Day Practice in Infant Feeding 5.2.1. 2. ESPGAN Committee on Nutrition (1981) Guidelines on Infant Nutrition 11. Recommendations for the composition of follow up formula and Beikost. *Acta Paediatr Scand.*, Suppl. 287.



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1 Brooke, O. G., Wood, C., Barley, J. Arch. Dis. Child 1982, 57, 898-904.

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PEDIATRIC RESEARCH

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Iron Deficiency in the Rat: Effects of Oxidative Metabolism in Distinct Types of Skeletal Muscle

B. MACKLER, R. GRACE, AND C. A. FINCH (Seattle, Washington)

Oxidative energy production by mitochondria from iron-deficient red and intermediate skeletal muscles is greatly reduced with pyruvate-malate, succinate, and α -glycerophosphate as substrate.

Hypoxanthine and Oxygen Induced Lung Injury: A Possible Basic Mechanism of Tissue Damage?

O. D. SAUGSTAD, M. HALLMAN, J. L. ABRAHAM, B. EPSTEIN, C. COCHRANE, AND L. GLUCK (La Jolla, California)

The authors report that the combination of hypoxanthine and high levels of oxygen causes lung injury, possibly via free oxygen radicals.

Kinetics of Uptake of L-Leucine and Glycylsarcosine into Normal and Protein Malnourished Young Rat Jejunum

P. M. MILLER, D. BURSTON, M. J. BRUETON, AND D. M. MATTHEWS (London, England)

There is a 3-fold increase in both peptide and amino acid uptake in protein malnourished rats compared with the controls.

The Identification and the Excretion Pattern of Isovaleryl Glucuronide in the Urine of Patients with Isovaleric Acidemia

D. G. HINE AND K. TANAKA (New Haven, Connecticut)

Using gas chromatography, mass spectrometry, and enzymatic methods, the authors identify isovaleryl glucuronide in the urine of four patients with isovaleric acidemia. Isovaleryl glucuronide is more likely to be excreted when high amounts of 3-hydroxyisovaleric acid are excreted.

Colostrum-Induced Enteric Mucosal Growth in Beagle Puppies

W. C. HEIRD, S. M. SCHWARZ, AND I. H. HANSEN (New York, New York)

Enteric mucosa of naturally fed, but not artificially fed beagle puppies, undergoes marked growth over the first 24 h of life.

The Effect of Chloral Hydrate on Genioglossus and Diaphragmatic Activity.

M. HERSHENSON, R. T. BROUILLETTE, E. OLSEN, AND C. E. HUNT (Chicago, Illinois)

Chloral hydrate depresses genioglossus but not diaphragmatic activity

Urinary Excretion Rates of 6-Keto-PGF_{1 α} in Preterm Infants Recovering from Respiratory Distress with and without Patent Ductus Arteriosus

H. W. SEYBERTH, H. MÜLLER, H. E. ULMER, AND L. WILLE (Heidelberg, West Germany)

This study provides evidence that increased systemic prostanoid production may be involved in the pathogenesis of persistent patent ductus arteriosus.

Body Water Measurements in Premature and Older Infants Using H₂ ¹⁸O Isotopic Determinations

F. L. TROWBRIDGE, G. G. GRAHAM, W. W. WONG, E. D. MELLITS, J. D. RABOLD, L. S. LEE, M. P. CABRERA, AND P. D. KLEIN (Baltimore, Maryland and Houston, Texas)

Reliable total body water estimates can be obtained from sample volumes as small as 50 μ l of urine or plasma using a gas-isotope-ratio mass spectrometer equipped with an automated purification inlet system.

Contraplacental Hypogastrinemic Effect of Gastrin Infusion in Sheep

F. H. MORRISS, JR., S. S. CRANDELL, P. A. PALMA, AND L. M. LICHTENBERGER (Houston, Texas)

The observations in this study suggest that biologically active fragments of gastrin, but not the intact molecule, may cross the ovine placenta.

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carbamazepine BP

Tegretol[®]

Indications Epilepsy (generalised tonic-clonic and partial seizures), trigeminal neuralgia. **Dosage in epilepsy** Use a gradually increasing dosage scheme, adjusting to patient's needs. Adults: 100-200mg once or twice daily, increasing slowly up to 800-1200mg daily; in some cases 1600mg daily may be necessary. Children: up to 1 year old, 100-200mg daily; aged 1-5 years, 200-400mg daily; aged 5-10 years, 400-600mg daily; aged 10-15 years, 600-1,000mg daily. It may be helpful to monitor plasma drug levels; optimum therapeutic range is 3-10µg/ml (13-42µmol/l). **Dosage in trigeminal neuralgia** Begin with small doses, using 100mg tablets or syrup, and increase gradually until satisfactory therapeutic response is obtained; 200mg 3-4 times daily is generally sufficient to maintain pain-free state. **Side-effects** Dizziness and diplopia (usually dose-dependent), less frequently drowsiness, dry mouth, diarrhoea, nausea and vomiting. Generalised erythematous rash, disappearing on cessation of therapy. Isolated reports of oedema, hyponatraemia, exfoliative dermatitis, leucopenia, thrombocytopenia, agranulocytosis, aplastic anaemia, cholestatic jaundice and acute renal failure. Blood count should be checked in early stages of treatment. **Precautions** Caution in patients taking oral anticoagulants or requiring oral contraception. In pregnancy, potential benefits of Tegretol must be weighed against potential hazards. Do not administer with, or within two weeks of cessation of, MAOI therapy. In rats treated with carbamazepine for two years, incidence of liver tumours increased (no evidence of significant bearing on the therapeutic use of the drug). Serum folic acid levels should be observed during anticonvulsant therapy. **Contra-indications** Previous drug sensitivity to Tegretol. Do not administer to patients with atrioventricular conduction abnormalities unless paced. **Packs** Tablets of 100mg (PL0001/5027) basic NHS price £2.90 per 100, £13.95 per 500; tablets of 200mg (PL0001/5028) £5.38 per 100, £25.93 per 500; tablets of 400mg (PL0001/0088) £10.59 per 100; syrup 100mg/5ml (PL0001/0050) £5.17 per 300ml bottle. *denotes registered trademark. **Geigy**

Full prescribing information is available on request from Geigy Pharmaceuticals, Horsham, West Sussex.