NOVO

Human Monocomponent Insulin for the architects 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.[1]

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	£7.88
Product Licence Numbers	
Human Actrapid 100i.u./ml	4668/0003
Human Monotard 100i.u./ml	4668/0006
Human Protaphane 100i.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
1. Schernthaner G, et al, Immunogenicity of Human Insulin (Novo) or Pork Monocomponent Insulin in HLA-DR Typed Insulin-dependent Diabetic Individuals, In: International Symposium on Human Insulin, Eds Karam J H, Etzwiler D D, Diabetes Care; 6 (Suppl 1): 43-48.

NOVO INDUSTRI A/S
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 symptons. **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

FISONS Pharmaceuticals

Trust

Intal® for firm control of asthma

SODIUM CROMOGLYCATE B.P.

A new milk drink specially made for babies 4-6 months and older and nutritionally superio to cow's milk. That's Progress.

By the age of four months a baby's digestive system is maturing to cope with changing nutritional needs, such as extra protein intake.

Even when solids are introduced milk is still a very important source of nutrients.

Both the DHSS[1] 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.

PROGRESS is such a formula, for babies four to six months and older. Progress is not intended to replace breastfeeding. Given in conjunction with solids it provides more complete nutrition than cow's milk.

Boiling of cow's milk depletes vitamins such as B_1 and C and of course, diluting with water lowers all nutrients.

Parents will be pleased to know Progress contains a full complement of vitamins and minerals especially iron and vitamins A, C, D and E which are insufficient in cow's milk. The all vegetable fat blend contains a lot less saturated fat than cow's milk, with energy provided mainly from carbohydrate rather than fat.

Progress has 67% more carbohydrate than cow's milk and the high quality protein is readily usable for building of body tissue.

You will be pleased to know that Progress has been specially formulated for the older baby by Wyet Nutrition, makers of Britain's most popular baby milk-food.

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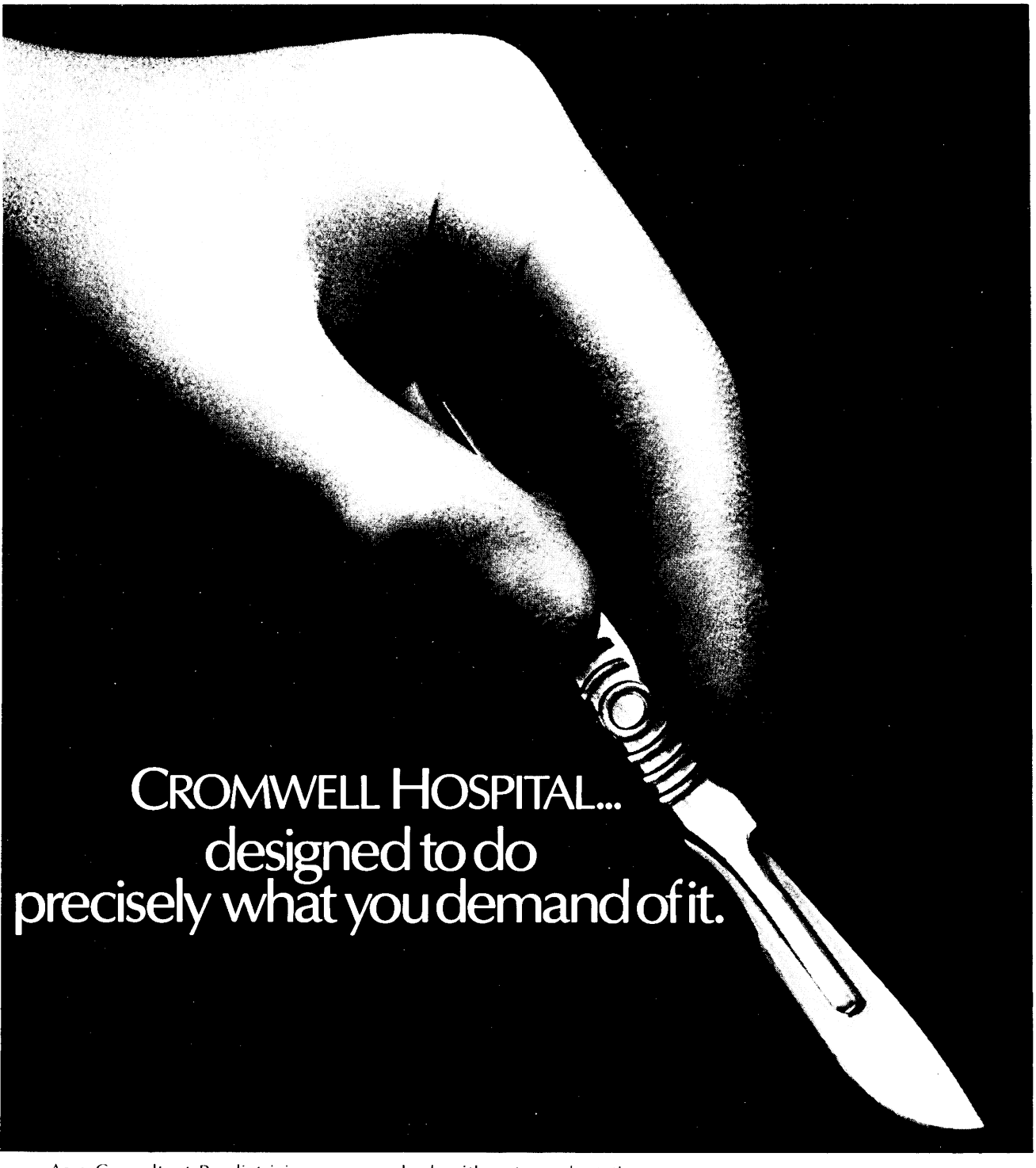
More suitable than cow's milk for older babi

Wyeth Nutrition
Leading the way

*Trade marks

Wyeth Laboratories, Huntercombe Lane South, Taplow, Maidenhead, Berks. SL6 0

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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THE HEINZ FELLOWSHIPS OF THE BRITISH PAEDIATRIC ASSOCIATION

H. J. Heinz Company Limited generously endows Fellowships in Paediatrics which are administered by the British Paediatric Association.

Two or three Fellowships will be offered each year, the number and type awarded in any one year depending on circumstances and the calibre of applicants available.

The types of Fellowship, which are open to men or women are:

A To enable a paediatrician from any part of the Commonwealth overseas to spend up to twelve weeks in the United Kingdom, meeting British paediatricians and seeing something of their work. Preference will be given to those recently established in an academic career who can arrange their visit to allow attendance at the Annual Meeting of the British Paediatric Association in April 1986

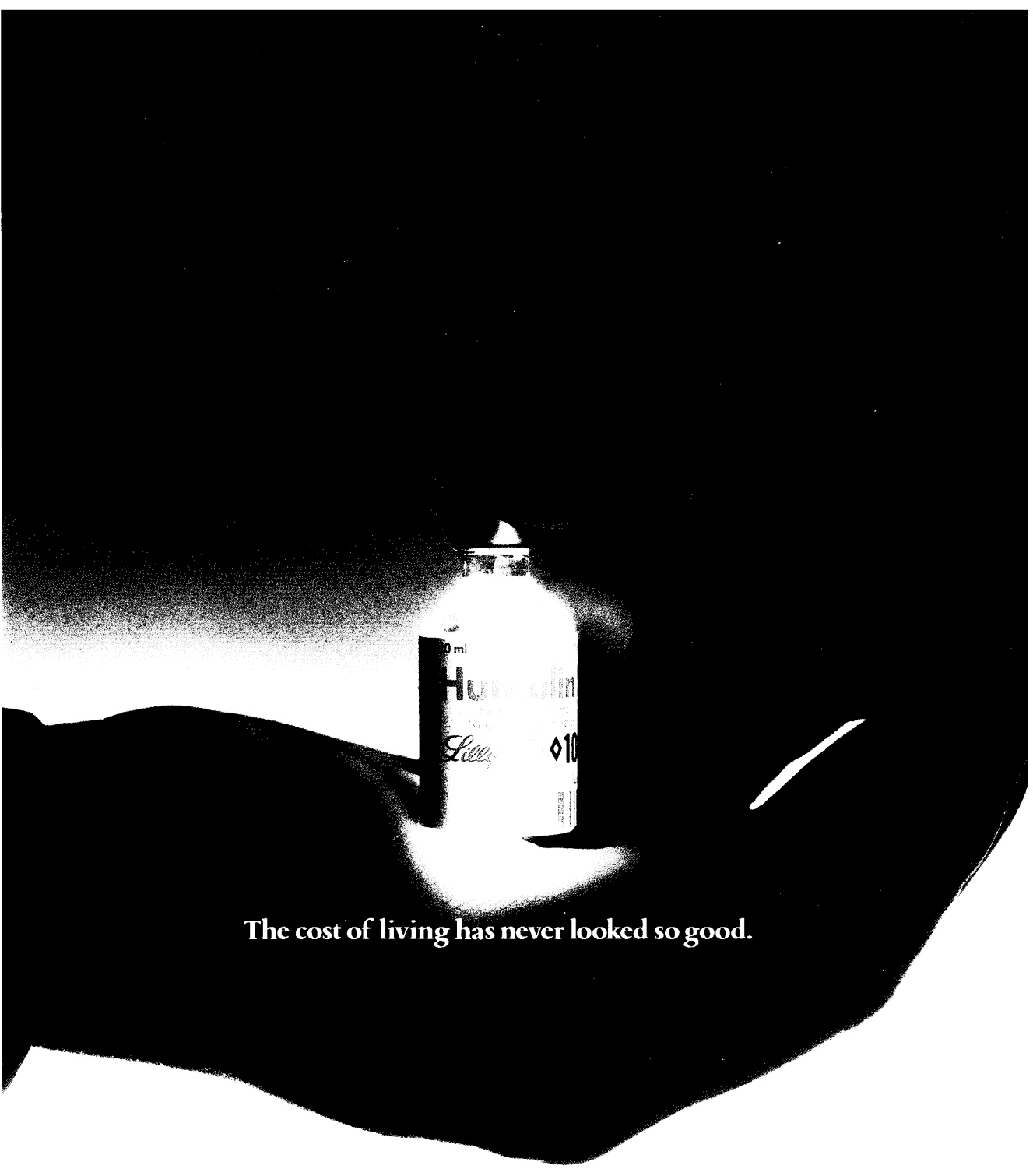
B *Discontinued.*

C To enable a paediatrician from the United Kingdom of Senior Registrar or Consultant status, but in the early years of professional life, to make a short working visit (up to three months) to a centre in a developing country, teaching or conducting research so as to benefit both fellow and hosts. Registrars may also be considered.

Applications for A Fellowships must be received by the British Paediatric Association not later than 31st December 1984.

Applications for C Fellowships can be accepted by 31st January 1985 or 31 July 1985.

The conditions for the Fellowships and application forms may be obtained from the British Paediatric Association, 23 Queen Square, London WC1N 3AZ.



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Thus, it can be produced economically, and in large quantities for years to come.

Humulin
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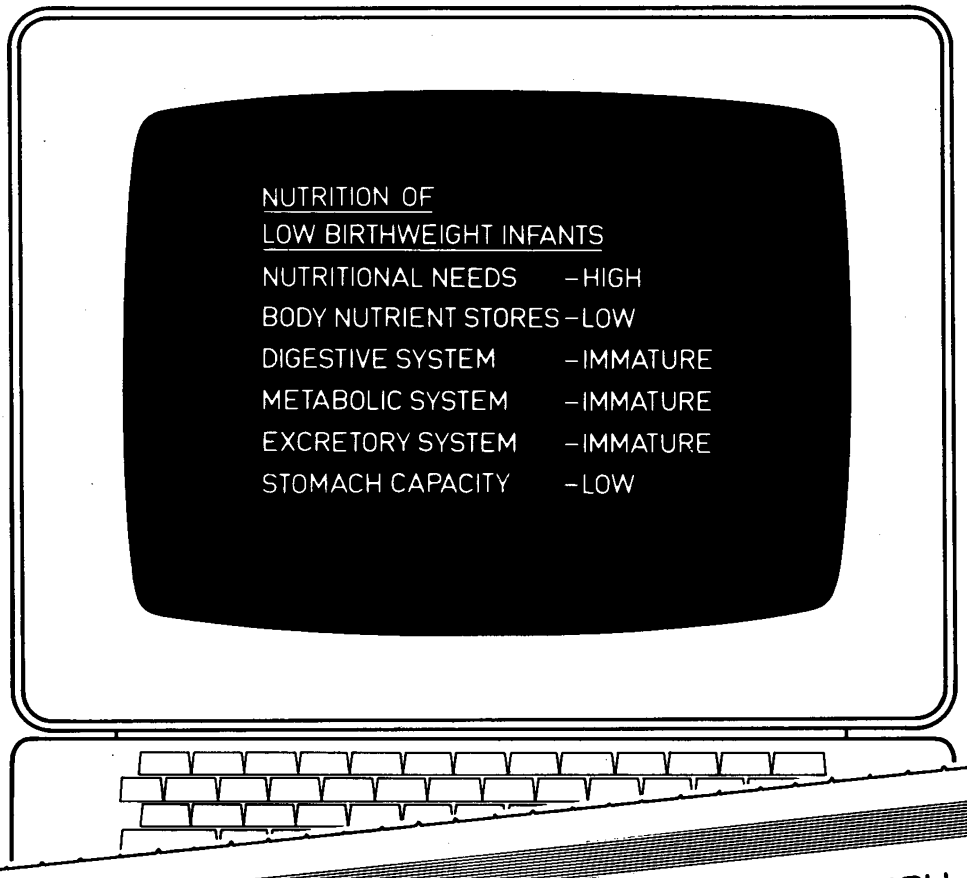
THE HUMAN WAY TO TREAT DIABETES

THE PROVEN ANSWER TO THE PRESENT DAY QUESTION...



REQUIREMENTS

EASILY DIGESTED WELL TOLERATED FORMULA MEET HIGH NUTRIENT REQUIREMENT. ADAPTED TO MEET SPECIAL NEEDS. APPROPRIATE FOR AGA AND SGA BABIES. READY TO FEED. PURE AND STERILE TO PROTECT IMMATURE DIGESTIVE SYSTEM. SCREENED AGAINST HERBICIDES, PESTICIDES AND LEAD.

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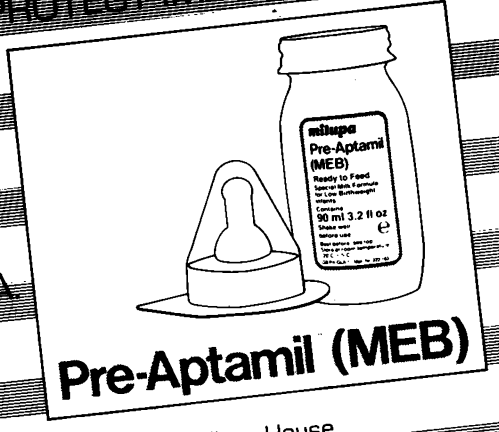

For further information contact Janet Souster BSc at Milupa Limited, Milupa House, Hercies Road, Hillingdon, Uxbridge, Middlesex UB10 9NA. Telephone (0895) 59851.

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

PEDIATRIC RESEARCH

Volume 18, No. 6 June 1984

Contents

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-$PGF_{1\alpha}$ 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 H_2 ^{18}O 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 μl 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.

INSTITUTE OF CHILD HEALTH

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1984/85 PAEDIATRIC COURSES

Special symposia:		
Oct 2–5	UNWANTED EFFECTS OF CHILD CANCER TREATMENT**	Dr J Pritchard
Oct 8–11	CONGENITAL HEART DISEASE MADE SIMPLE (fee £150)	Dr J Somerville
Oct 15–17	SURGERY FOR CONGENITAL HEART DEFECTS— "HOW WE DO IT" (fee £125)**	Mr J Stark
Nov 8–9	CHRONIC DIARRHOEA AND MALNUTRITION** (to be held at Queen Elizabeth Hospital for Sick Children, Hackney Road, E2)	Dr J Walker-Smith
Short courses:		
Oct 12–13	CHILD PSYCHIATRY FOR THE MRCPsych (fee £35)	Professor P Graham
Oct 19–20	PAEDIATRICS FOR GENERAL PRACTITIONERS AND COMMUNITY PHYSICIANS**	Dr R Dinwiddie
Oct 22–26	GROWTH AND ENDOCRINOLOGY	Dr M Preece and Dr D B Grant
Oct 29–Nov 2	NEUROLOGICAL DISORDERS	Dr E Brett
Nov 5–6	PROBLEMS OF VISION AND HEARING IN EARLY CHILDHOOD	Mr D S I Taylor Dr S Bellman
Nov 7	PAEDIATRIC DERMATOLOGY	Dr A Atherton
Nov 15–16	RADIOLOGY (please address enquiries to the X-ray Dept, Hospital for Sick Children, Great Ormond Street, London WC1	Dr I Gordon
Nov 24–25	CONSULTANT PAEDIATRICIANS' WEEKEND COURSE**	Professor O H Wolff

COURSES PLANNED TO-DATE DURING 1985

Short courses:		
Feb 18–22	LABORATORY, RADIOLOGICAL AND OTHER INVESTIGATIONS FOR THE CLINICIAN	Dr S G Haworth
Feb 25–Mar 1	RESPIRATORY MEDICINE AND INTENSIVE CARE	Dr P Helms
Mar 4–8	POSTGRADUATE NEPHROLOGY WEEK	Professor T M Barratt
Mar 11–15	CHILD PSYCHIATRY	Professor P Graham
Mar 18–20	UPDATED PAEDIATRIC IMMUNOLOGY	Dr R Levinsky
Mar 28–29	PAEDIATRICS FOR GENERAL PRACTITIONERS AND COMMUNITY PHYSICIANS**	Dr M Levin
Special symposia:		
May 13–15	GENETIC ENGINEERING IN MEDICINE: TECHNIQUES AND APPLICATIONS** (for specific information about this course, please contact extension 4)	Dr M Pembrey
May 16	DIAGNOSIS OF DYSMORPHIC SYNDROMES**	Dr M Baraitser
May 20–24	PAEDIATRIC ALLERGY**	Professor J F Soothill
June 3–7	PAEDIATRIC GASTROENTEROLOGY**	Dr P Milla

Fee: £25 per day except where indicated

Venue: Institute of Child Health except where indicated

If you are interested in any of these courses, would you please contact Miss Brenda Clayden for those which are asterisked, and Miss Gillian Brown for the remainder at the

Institute of Child Health,
30 Guilford Street,
London WC1N 1EH. 01–242–9789

A copy of the programme and an application form will be sent to you as soon as they are available

MRCP (PART II) COURSE

4.00–7.30 Monday evenings (except where Monday is a public holiday). Eight sessions per course. Three courses per year. The next course is full but places are available on the courses beginning December 3 1984 and April 22 1985. The fee is £100. Details from the Sub-Dean's Secretary.

Tegretol®
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making epilepsy easier to live with

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 800-1,200mg daily; in some cases 1,600mg 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 3-10ug/ml (13-42umols/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) £10.58 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.