Insulin Dependent Diabetes Trust

October 2002 Newsletter

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At Last- The High Quality Evidence!

Cochrane Review comparing 'human' and animal insulin - July 2002

On July 22, 2002 the Cochrane Collaboration published a systematic review of the research carried out to compare synthetic human insulin and natural animal insulins from 1966 to May 2002. It provides the following evidence:

- The reviewers 'could not identify substantial differences in the safety and efficacy between 'human' and animal insulins [mainly pork]'.
- 'Most studies were of poor methodological quality'.
- Many patient-oriented outcomes like health-related quality of life or diabetes complications and mortality were never investigated in high quality randomised clinical trials.
- No differences were found in metabolic control, with no differences in HbA1cs between 'human' and animal insulins.
- There was no difference in the presence of insulin antibodies.
- 70% of the trials were funded by insulin manufacturers.
- Only 40% of the trials provided at least some information on adverse effects. Apart from hypoglycaemia, other adverse effects were hardly ever mentioned. The overall picture does not show any substantial differences in hypoglycaemia events between insulin species.
- None of the studies assessed costs or socio-economic effects.
- 'Human insulin was introduced into the market without scientific proof of advantage over existing purified animal insulins, especially porcine insulin.'

This review means that although 'human' insulin has become the first choice insulin for the majority of prescribing doctors, this prescribing

habit is not based on any evidence of benefit for the people they are treating. The lack of evidence of any superiority of 'human' insulin over animal insulins, and the fact that the research that was done has been shown to be methodologically poor changes the whole perspective for patients, for doctors and indeed for government health departments. The absence of investigations into mortality, complications and quality of life is at best careless, at worst negligent and certainly does not put patient welfare at the top of the agenda. But this absence means that no one knows whether treatment with 'human' insulin improves or more importantly, harms the lives of people with diabetes compared to treatment with animal insulins with their proven safety records stretching back over 70 years.

While IDDT and our members knew this already, this is not the time for saying 'I told you so' but the time to recognise the importance of the publication of this independent, 'gold standard' Cochrane Review. Doctors and healthcare professionals can now provide their patients with insulin treatment choices based on evidence, not assumption. Developing countries can now ensure that affordable animal insulins remain available knowing that they are not providing 'inferior' insulins for their citizens. Above all, this review empowers patients.

It provides us with information to make truly informed choices about the species of insulin we wish to use. Our choices are simple - animal insulins with a history of 70 years research and post marketing surveillance [being used in real life for 70 years] or 'human' insulin with an absence of meaningful research and an ongoing history of reported adverse reactions.

* For the Consumer Summary of the Review, the abstract and the implications see page 8.

Genetically Produced Drugs Can Cause Sevre Side Effects - A Surpise For The Experts!

An outbreak of serious illnesses linked to the anaemia drug, Eprex, shows that some patients do not react to genetically engineered proteins as if they were natural.

This is a quote from an article in the New York Times, July 30, 2002, which also explains that human proteins like insulin and growth hormones are made through genetic engineering and given to people who do not make enough of their own. In the case of Eprex, a genetically produced anaemia drug from Johnson and Johnson, the patients react as if the protein was a foreign germ and the immune system tries to destroy it. The cause of the problems remains a mystery and the Johnson and Johnson factory in Puerto Rico is under criminal investigation.

The New York Times says that although the Eprex case is the most serious, as some people become dependent on blood transfusions to survive, virtually all genetically produced drugs provoke immune responses in some patients, though usually small numbers. But these reactions are becoming of greater concern as the numbers of genetically produced drugs increase.

Dr Hubb Schellekens, a professor at Utrecht University in the Netherlands, says of genetically produced drugs, "Sometimes there are miracle drugs, but they can still have severe side effects. That has come as a surprise to us, really."

This is exactly what was said about 'human' insulin when increased hypoglyceamia appeared in the early trials – the problems were a surprise! If patients had been listened to once 'human' insulin was on the market, the side effects from other genetically produced drugs may not have come as a surprise 20 years later!

Experts now believe that because genetically produced drugs are made by living cells, the outcome is not as predictable as chemically made drugs and even slight changes can affect the product, sometimes

in unpredictable ways. So the tide may be turning for these synthetic drugs and for genetically produced 'human' insulin. Let us hope that this awareness filters through to experts involved in diabetes care.

The New York Times quoted 'human' insulin made by genetic engineering as having a small percentage of people that cannot tolerate the 'human' version and are trying to keep beef and pork insulin available. What is a small percentage? If it is only 5% of people using insulin, then in the UK alone 20,000 people suffer adverse effects to genetically produced insulin – unnecessary effects because the natural alternatives are available. Imagine what this figure is for people using insulin throughout the world!

Are these large numbers the reason the experts, the health departments and the insulin manufacturers will not backtrack? Maybe they fear litigation, as has been threatened in other countries? If this is so, then they are failing to understand that the vast majority of people who need animal insulin simply want it to be available so that they have healthy and good quality lives. They want choice. If litigation was to succeed, financial compensation cannot bring back the years lost to 'human' insulin and financial compensation is valueless if life is plagued by adverse reactions.

Depression And Diabetes

Research has shown that depression may occur in up to 14-18% of people with diabetes with some research showing that people with chronic conditions, including diabetes, are three times more likely to suffer depression than the general population.

Depression and HbA1cs
A study by Brazilian researchers, presented at the American Diabetes Association Conference 1998, showed that among a group of people with diabetes with average HbA1c levels of less than 9%, only 21% tested positive for depression using a standardised test. By comparison of those with HbA1cs over 9%, 42% tested positive for depression.

The researchers used cognitive therapy to reverse the depression. In those people where depression improved, there was an average HbA1c of 8.3% while those who showed little improvement had an average of 11.3%. While these results show an association between high blood sugars and depression, it remains unclear whether high blood sugars cause the depression or depression causes high blood sugars.

How do you know if you are depressed?

The signs of depression include the following:

- No longer enjoying or being interested in most activities.
- Feeling tired or lacking energy.
- Being agitated or lethargic.
- Feeling sad or low much of the time.
- Weight gain or weight loss.
- Sleeping too little or too much.
- Difficulty paying attention or making decisions.
- Thinking about death or suicide.

If you have some or all of these symptoms over two weeks or more, then you should see your doctor.

How does depression affect people with diabetes?
Research [Ref 1] using questionnaires has shown that depression in people with both Type 1 and Type 2 diabetes may have the following effects:

- They are less likely to eat the types and amounts of food recommended.
- Less likely to take all their medications.
- Less likely to function well, both physically and mentally.
- Greater absenteeism from work.

Ref 1 Archives of Internal Medicine, Nov 27, 2000

Daily Mail, August 29, 2002

'The GM Injection' by Jo-Ann Goodwin
Many of you will have read this article but for those that haven't we are enclosing a copy with this Newsletter. It is a well-balanced article that emphasises that while the majority of people appear to be fine using GM produced insulin, some people have experienced very real adverse reactions that have had a tremendous effect on their lives. IDDT has been inundated with phone calls and e-mails from people with diabetes or their partners, none of whom have criticised the article although there has been expressed anger at the misinformation or lack of information they have been given.

Perhaps the overriding feelings are of relief:

- Relief that they are not alone with the adverse effects they are experiencing. Relief that these are not 'all in their mind' as said by their diabetes team when they are not believed. Relief that there are alternative insulins for them to try – natural animal insulins. Relief that the Cochrane Review has shown that synthetic insulins are not superior to animal insulin. Relief that now there is no reason why they should not change to pork or beef insulin and there may be a way out of the problems they are having. 'Light at the end of the tunnel'.
- Relief from people that are already using animal insulins – they have discovered that IDDT is actively campaigning to try to maintain availability of the insulins they need to maintain their health and wellbeing.

A great deal of anger expressed!

- Anger that they were never told that the 'human' insulin they are taking is produced by GM technology. Anger that the very name 'human' implies that it is derived from human beings.
- Anger that they have never been given the choice, especially now they know that GM insulin has no advantages over natural animal insulins. Anger that they or their loved ones have suffered all the adverse effects in the article but no one has ever suggested trying animal insulin to see if their adverse effects disappear.
- Anger that so little research has been carried out to compare GM and natural animal insulins, especially when people have complained of adverse effects from the outset.
- Anger at the apparent lack of honesty and at the marketing techniques used when their health and wellbeing is at stake.

The gratitude!
To Jo-Ann and the Daily Mail for publication and for the in depth investigation. To IDDT for being there and not giving up, despite all the odds and for providing information and support – 'just to talk to someone that believes me is wonderful'. And many people want to turn this gratitude into action to ensure that animal insulins continue to be available; that people with diabetes are no longer mislead and that they receive the informed choice of insulin they deserve. With this support, IDDT's cause will go from strength to strength!

For Our American Members

Medicare News
Cover for glaucoma testing
From January 1st 2002 the federal health insurance programme covers an annual glaucoma test for the following groups of Medicare recipients:

- People with diabetes
- People with a family history of glaucoma
- High risk groups such as African Americans aged 50 and over because they are five times more likely to develop glaucoma than Americans of European decent

Glaucoma affects 3 million Americans and early detection and treatment helps to prevent blindness.

Cover for nutritional therapy
Also from January 1st 2002 Medicare covers medical nutrition therapy for people with diabetes as well as those with kidney disease. This decision was based on a study carried out by the Institute of Medicine showing that nutritional therapy with a registered dietitian was cost effective for the elderly and improved their quality of life.

For Our Canadian Members

Approval for Hypurin Bovine Neutral cartridges
Health Canada, the drug regulatory body in Canada, has approved Hypurin Bovine Neutral insulin cartridges for importation from CP Pharmaceuticals in the UK with the appropriate documentation. Other Hypurin Bovine insulins may also be imported in vials only. The significance of Health Canada approving importation from the UK is that this means that the costs may be covered by the insurance companies.

Carol Baker, IDDT- Canada, has clarified the situation with Health Canada. Contrary to rumour, Hypurin pork cartridges have not been approved by Health Canada for importation and nor has beef insulin from Brazil. Anyone importing from Brazil risk having their insulin confiscated at customs.

Drug And Device Warnings!

Since the July edition of the IDDT Newsletter there seems to have been a cluster of official warnings issued to doctors about drugs and medical devices that could affect people with diabetes. In the US and Canada these notices are made public so that 'patients' as well as doctors have the information but in the UK such warnings about drugs are issued to a whole range of professionals but not to the very people that use the drugs! These warnings are important so surely everyone should be aware of them, whether patients or doctors, so that we as patients, are not reliant on the information being received and read by professionals and then transmitted to us.

Zyban - New safety precautions from Committee on Safety of Medicines, 30 May 2002
Zyban is a drug licensed to help people to stop smoking. Since it was first on the market it is estimated that 419,000 people have used Zyban. But the Committee on Safety of Medicines [CSM] have received over 5,000 Yellow card reports of adverse reactions. 126 of these reports were of people having seizures.

Therefore the CSM have issued warnings to doctors:

- changes in the recommended dose
- the use of Zyban is contraindicated in people with certain conditions where there is already a risk of seizures.
- there are certain conditions where Zyban must NOT be prescribed and these include people treated with oral hypoglycaemic drugs and those treated with insulin. Clearly this means that people with Type 1 and Type 2 diabetes should NOT be prescribed Zyban. The exception to this is where there is compelling clinical justification that the potential benefit of stopping smoking outweighs the increased risk of seizure for prescribing Zyban.

Device Alert - Medical Devices Agency [MDA], 10 June 2002
Lilly HumaPen Ergo insulin pens
The MDA and Eli Lilly have received reports of the breakage of both engagement tabs on the blue insulin cartridge holders for the HumaPen Ergo injection pen. Some of these breakages have meant that people have given themselves insufficient insulin resulting in loss of blood glucose control. The breakage can usually be identified by the user when the pen is primed prior to injection.

Lilly has made design changes to the cartridge holder as a result of these reports. The original blue cartridge holder has been replaced with a clear one since when there have been no reported breakages.

This Device Alert has been issued to remind healthcare professionals of the insulin cartridge holder replacement programme being run by Eli Lilly because there is still a significant number of users that have not yet had there cartridge holder replaced.

Action

- If the cartridge holder is clear, then no further action is needed. Pens with blue cartridge holders were not distributed after October 2000.
- If the cartridge holder is blue, it should be replaced and a new clear holder fitted.
- New clear cartridge holders can be obtained from Lilly on freephone 0800-085-3847 or from community pharmacists, diabetes clinics and dispensing GPs

FDA issue new warnings about Avandia and Actos

Avandos [rosiglitazone] and Actos [pioglitazone] are both drugs for the treatment of Type 2 diabetes. In the UK they should only to be used in combination with one of the other oral drugs for Type 2 diabetes, metformin or a sulphonylurea and only when adequate blood glucose control cannot be achieved with these drugs although in the US Avandia and Actos can used either on their own or in combination with the other two drugs. Neither Actos nor Avandia are approved for use with insulin.

They belong to a class of drugs known as the thiazolidinediones or glitazones and the first drug of this type, troglitazone [Rezulin] was withdrawn from the market following at least 92 known deaths in the US from liver failure and/or congestive heart failure. Avandos and Actos are successors to troglitazone and from the outset prescribing doctors have been advised that patients using either of these drugs should have liver function tests before starting the drug and at regular intervals thereafter. It has also been known that they may cause fluid retention [oedema] that can lead to congestive heart failure, especially in people with an existing heart condition.

New Warning from the US Food and Drug Administration [FDA] 26.4.02

On April 26th 2002 the FDA issued a new warning notice that thiazolidinediones or glitazones, which include Avandia and Actos, may cause fluid retention that can progress to heart failure. They should not be used in people who have or have had heart failure, fluid retention or active liver disease.

Patients who develop oedema, shortness of breath, weakness, fatigue or sudden weight gain should advise their doctor immediately.

They also warn that it is important to note that people with Type 2 diabetes are at an increased risk of diabetes related complications such as heart failure whether they take any specific type of diabetes treatment or not. Following discussions with the FDA, the manufacturers of Avandia and Actos have issued letters to health professionals reminding them of these safety concerns.

As early as October 2000, Takeda Chemical Industries, Japan's largest drugmaker, warned doctors of potential dangerous side-effects of Actos and in November 2001 Health Canada issued warnings to Canadians of their safety concerns related to the use of Avandia and Actos after 4 deaths were associated with Avandia. Health Canada warned that these drugs are not to be used in patients with acute heart failure or active liver disease and patients who develop oedema, shortness of breath, weakness, fatigue or sudden weight gain should advise their doctor immediately. Therapeutics Initiative in Canada [a body that functions rather like the UK's NICE] states "Long-term trials are required to know whether this class of drugs reduces morbidity and mortality outcomes". Worth noting!

Special Note - Avandia and Actos are NOT approved for use with insulin.

IDDT has received several calls from people that are using insulin and have been prescribed Avandia or Actos. In view of the fact that neither of these drugs is approved for use with insulin, we would recommend that you discuss this with your doctor.

Coeliac Disease - A Ticking Off!

In the Spring 2002 Newsletter I included a short article about coeliac disease and diabetes and I got a nice but sharp rebuke from one of our members for not providing the obvious information about coeliac disease and its symptoms. For this I apologise! I thought of it as a follow up article to ones published previously but I now realise that this was quite some time ago – time passes so quickly! So here goes.

What is coeliac disease?

- It is a condition in which the lining of the small intestine is damaged by gluten. Gluten is a protein found in rye, wheat, barley and possibly oats.
- This damage causes foods to not be absorbed properly by the small intestine and so before diagnosis there is weight loss and possibly malnutrition.
- Treatment is a gluten free diet.
- It is relatively uncommon with an incidence of 1 in 1000 people in the UK and it may occur at any age.

What are the symptoms?

Coeliac disease can cause people to be acutely and severely ill with weight loss, vomiting and diarrhoea or there may be chronic symptoms, such as tiredness, lethargy and breathlessness but usually the symptoms are somewhere between the two. However, some people are diagnosed without having any symptoms.

Adults may have a history of abdominal discomfort or they may develop coeliac disease at any time. Anaemia, mouth ulcers and weight loss are common signs.

Babies are fit and well until the introduction of solid foods that contain gluten when the baby becomes pale, bulky, offensive-smelling stools and is lethargic and miserable.

All these symptoms could apply to other conditions so it is important that you do not assume that you have coeliac disease but seek medical help. It is nearly always diagnosed by a gastroenterologist who carries out an intestinal biopsy.

Diabetes and coeliac disease

Both diabetes and coeliac disease are autoimmune diseases and there are increasing amounts of research to show that there is a link between the two in adults, children and adolescents. Increasingly there are views that more attention should be given to this link and that tests for coeliac disease should be routinely carried out.

What is the treatment?

A strict gluten free diet is the only treatment that puts the intestine back to normal.

Diabetes requires a well balanced diet with plenty of carbohydrate but once coeliac disease has been diagnosed, providing carbohydrate becomes more difficult as many of the carbohydrates we eat and enjoy, such as bread, pasta, cereal, pastry, crackers, biscuits and cakes contain gluten which has to be avoided. This is particularly difficult for children. These foods can be replaced with gluten-free products, some of which are available on the NHS in the UK. But as there is no gluten in the flour, the products do not have the same consistency and taste and are often not so delicious.

Some products are available with a gluten-free symbol but there are some difficulties:

- There is a lack of choice.
- Pre-prepared foods are much more difficult to obtain because many of them contain gluten eg the flour used to thicken sources contains gluten.
- It takes time to become familiar with the ‘hidden’ gluten eg wheat flour is often used as a carrier for flavouring in such things as crisps.
- Buying gluten-free products is very expensive.

NOTE: IDDT has now produced a leaflet ‘Diabetes and Coeliac Disease’. If you would like a copy contact IDDT, PO Box 294, Northampton NN1 4XS, Tel 01604 622837 e-mail bev@iddtinternational.org

Pharmaceutical Industry News

The mhi-500 needle-free injection system – is an alternative to pens or syringes for injections. It works by forcing a fine stream of insulin at high speed through a precision engineered nozzle. It costs £120 and is not available on the NHS although the manufacturers, The Medical House, are seeking approval. For more information there is a freephone helpline: 0800 917 7328 or visit www.insulinjet.com

Insulin aspart [NovoRapid] - the fast acting insulin analogue is now licensed for use in the insulin pump by subcutaneous insulin infusion through the stomach wall. Absorption from this site is faster than other injection sites.

Latest government figures for pharmaceutical company profits - all pharmaceutical companies operate to strict limits on their profits from NHS sales based on a maximum 21% return on capital employed. The last government figures show an actual profit of 17%.

CP praised – After visiting CP Pharmaceuticals, Doug Touhig, from the Ministerial Sub-Committee on Biotechnology praised the company for supplying animal insulin to the Czech Republic. CP's Chief Executive, Charles Savage, said the company was able to respond at fairly short notice to a request from the Czech Republic for animal insulins following Eli Lilly's announcement that they was replacing animal insulins with synthetic 'human' insulins. Mr Savage said that if the demand for animal insulins grows, it is still possible for additional manufacturing lines to be installed.

The Wall Street Journal, 19.6.02 - Medtronic Inc announced that early research in 5 people in France suggests that a surgically implanted device like an 'artificial pancreas' could be on the market in the next few years. The device would monitor blood glucose and pump insulin into the bloodstream and would have the advantage of preventing hypoglycaemia and long-term complications.

Driving Accident - The Victim's Wife Writes To IDDT

In July 2002 many of the Newspapers reported that Jo Taylor's husband was killed in a motor accident by a driver with diabetes who was hypo. Jo has written to IDDT and asked us to publish her letter.

My husband Phillip was killed by a diabetic driver last July, aged 33 years, the father of my two year old daughter. At Reading Crown Court on 3rd July 2002, Richard Turpin was found not guilty by a jury who accepted his defence of automatism. How does your organisation respond to the evidence of a man who got into his car everyday without testing, taking food or injecting himself before commencing his journey to/from work. He stated that at the time that he was having problems recognising the signs of hypo's coming on, and his doctor changed his medication. He stated in Court that he took no extra precautions with his new regime. A doctor gave evidence in his defence, having last treated him as a patient 4 years previously, stating that he had never told his insulin dependent patients to self-test prior to driving.

My reason for writing is that I am trying to get some awareness through the diabetic community that it is imperative that a diabetic self test prior to commencing his/her journey. We are being made more aware by the media that this isn't a one off. I would really like to see diabetics taking more responsibility for their condition, and to try and avoid another tragedy like this.

We DO NOT want to tar all diabetics with same brush, but if we can save someone else's life through getting this message over, it will all be worth it! I would welcome your views on this matter.

I look forward to hearing from you.

Mrs Jo Taylor

One can only imagine Jo's feelings in this awful situation and I found my reply difficult to write but here are the main points. Jo replied with a very nice letter of thanks saying that she was unaware of all these points.

Dear Jo,

Firstly on behalf of our Trustees, and I am sure every member of our organisation, I would like to express our condolences to you and your daughter for the very sad loss of your husband, Phillip. We all agree with you that their needs to be greater awareness of the dangers of hypoglycaemia and especially in relation to driving.

We are constantly raising this issue because we are very aware that the insulin automatically prescribed nowadays, synthetic so-called 'human' insulin, in ***some*** people is more likely to cause loss of warnings of hypoglycaemia compared to the natural beef and pork insulins.

In addition, doctors now recommend that blood sugars should be as near normal as possible but the drawback of this 'tight' diabetic control is a threefold increased risk of severe hypoglycaemia which in turn increases the risk of loss of warnings from which a state of automatism can arise.

It is also essential that people are given correct instructions about testing their blood glucose levels before driving and this should be given on their regular clinic visits. People are not allowed to drive if they have lost the warnings of hypoglycaemia and the doctors signing the medical fitness to drive forms should not sign them if patients have lost their warnings, assuming the doctor knows this to be the case. The vast majority of people are very conscientious about their diabetes and many people voluntarily surrender their licences.

Unfortunately many people with diabetes are not given all this information, as demonstrated by Mr Turpin's doctor admitting that he did not advise people to test before driving. We do our best to make this information public. Within the last 4 months I have written to every local paper in the UK describing the adverse effects of 'human' insulin, the dangers of hypoglycaemia without warnings and telling readers that animal insulin is available and many people that have changed to it find that their warning symptoms return.

I hope from this that you can see that we, as an organisation, have taken action to raise this whole issue in every way we know how since we formed in 1994.

Could I suggest that you also write to Alan Milburn as Secretary of State for Health, it is the Dept of Health that need to be made very aware of the dangers of hypoglycaemia and unawareness and the need for more resources for patient education.

Sincerely
Jenny Hirst

Intersting Note!

Doctors must inform patients of side effects of drugs
In June 2002 the supreme court of Hawaii ruled that doctors that fail to inform their patients about possible side effects of the medicines they prescribe may be liable, in the event of an injury or damage linked to the drug. The decision came in the case of an 11 year old girl who was knocked down by a car when the driver fainted at the wheel. He had been prescribed a blood pressure pill called Prazosin whose known side effects include light-headedness and fainting.

Out Of The Mouths...

I remember many years ago being a rather overbearing Mum and trying make sure that my daughter did a blood test before bed. One day she shut me up by saying, "Yes I do a blood test before bed but it

only tells me what my blood glucose is at that moment and not what really matters before bed – whether I am going up or coming down."

A Look At Diabetes Care Around The World

As we know diabetes occurs in countries around the world and treatment and care varies according to availability of health services and staff. Dr Ahmed is a doctor at the diabetic clinic at King Faisal Hospital in Saudi Arabia. He is responsible for the care of 2,500 people mainly with Type 2 diabetes. Here is his perspective of diabetes in Saudi Arabia and the effects on his patients.

The Black Zone in the life of diabetic patients
By Dr Almoutaz Alkhier Ahmed

Diabetes is a disease of figures, and each figure represents a meaning in the life of diabetics. At the moment of the first diagnosis, usually doctors ask for some investigations to confirm the diagnosis of diabetes. The blood glucose level (which is a figure) is the corner stone in diagnosis.

What is more there are dates that are important milestone of diabetes mellitus:

- 1920 is the date when Dr/Frederick Banting prepared pancreatic extract.
- 1922 the first time insulin was tested after efforts to purify it by teamwork Banting and Best, J B Collip, Professor J J R McLeod).
- 1979 is the date of the first scientific look to diabetes by the National Diabetes Data Group (NDDG).
- 1980 the World Health Organization (WHO) Expert Committee on Diabetes and later the WHO Study Group on Diabetes endorsed the substantive recommendation of the NDDG.
- 1995 an international expert committee, working under the sponsorship of American Diabetes Association [ADA] reviewed the scientific literature since 1979.

To the figures in the life of people with diabetes.
The WHO criteria for diagnosis is venous fasting blood glucose level is above 140 mg/dl [7.70mmols/l] and 2hour venous blood glucose above 200mg/dl [11mmols/l]. Then the Expert Committee of the ADA published its recommendations, which include new figures for diagnosis and a new category - venous fasting blood glucose above 126mg / dl [7mmols/l] for diagnosis and the new category of Impaired Fasting Glucose where the venous fasting blood glucose is between 110 mg/ dl [6.1 mmols/l] and 126 mg/ dl [7mmols/l].

"What is the optimum figure for the good control of diabetes?"

This is a daily question raised by the diabetics in our clinics.

To answer this question we should state something, that whatever we do, we cannot reach the level of adjustment of the living normal human body, but our goal will be reaching the near-normoglycaemiac level. From our experience a figure below 150mg/dl [8.3mmols/l] is accepted to avoid the hazards of chronic complications such as large vessels diseases.

So what do we mean by "THE BLACK ZONE".
This Zone represents the figures where blood glucose levels are high but where patients with Type 2 diabetes do not have symptoms although the process of complications is going on.

Factors that allow patients to slip into the black zone:

1. Lack of health services provided to the diabetics. In some areas there are no health services or the ratio of health care providers to the population is inadequate.
2. Defects in the health education program provided to people with diabetes.
3. Some patients are swinging in the early phases of emotional reaction to the diagnosis of diabetes (the denial, anger, depression and bargaining) and never reach the phase of adaptation with

diabetes. It is important that the doctor guides his/her patient safely and smoothly through these phases up to the adaptation. The phase of denial is sometimes very prominent especially if the patient has a bad family history due to diabetes and in the phases of anger and depression the patient could practice a self-damage behaviour such as alcohol or drug intake which may aggravate the development of complications.

How can the diabetics detect early complications?
Day by day science added new techniques and investigations to the benefit of diabetics. Among those are:

1. Early detection of microalbuminuria to check for early stages of diabetic nephropathy.
2. Checking for early warnings of vascular changes.
3. Checking for autonomic neuropathy in diabetics of more than 5 years duration of diabetes.
4. Annual checking of the eyes to detect early retinal changes

Are there any lights to avoid falling into this Zone?
It is a matter of time for people with diabetes to reach adaptation to the diagnosis of diabetes, but it is possible to avoid falling into this black zone by the early detection of complications and by decreasing the risk factors for them and so increasing the life span of people with diabetes.

A Note From The Editor

I am very aware that this Newsletter concentrates heavily on the issue of 'human' and animal insulins so reducing space for the usual articles about other aspects of diabetes. I make no apologies as this was the reason for IDDT formed. The Cochrane Review provides very reliable information we have never had before - the evidence that 'human' is not superior to animal insulin. So if people choose to be treated with animal insulin, then there is no scientific evidence on which this can or should be refused. The review means that animal insulins must not be discontinued because the adverse reactions and long term treatment with 'human' and animal insulins have not been researched. This is no longer an issue that matters to those people who know they cannot tolerate 'human' insulin but one that the whole diabetes community needs to address, not to mention the regulatory bodies and diabetes associations throughout the world.

THANK YOU!

Many thanks to all the people that filled in our questionnaires, took the time and trouble to send us their personal accounts of their experiences with 'human' insulin and have offered to be involved in press coverage or in lobbying their MPs. We now have a database of people prepared to take action and an up to date file of evidence from 'patients'. We are most grateful for your offers of help and will be in touch with you in due course. We must act together and at what appears to be the right time.

Jenny Hirst

The Cochrane Consumer Summary
'Human' insulin versus animal insulin in people with diabetes mellitus
by Richter B, Neises G
Date: July 22, 2002

Insulin for people with diabetes was only derived from animal sources [pigs or cows] until the 1980s. Biologically synthesised human insulin was then introduced. These human or semi-human products were much more expensive and heavily marketed.

It was thought that pig [porcine] insulin was more suited for use than cow [bovine] insulin, with human insulin or synthetic products possibly better. However, the new insulins were introduced before enough trials had been done to assess their effects. There were concerns about the possible adverse effects of the new forms of insulin.

A new Cochrane review found 45 trials of insulin from different sources – mostly human and porcine insulin. The reviewers found no proof of superiority of human over animal insulin, in terms of diabetes control or

adverse effects [including episodes of hypoglycaemia].

The reviewers call for utilisation studies of different insulin types especially in developing countries, so that authorities can be in a better position to negotiate with insulin manufacturers for their communities' needs.

The abstract of the systematic review prepared and maintained by the Cochrane Collaboration.

Background: Human insulin was introduced for the routine treatment of diabetes mellitus in the early 1980s without adequate comparison of efficacy to animal insulin preparations. First reports of altered hypoglycaemic awareness after transfer to human insulin made physicians and especially patients uncertain about potential adverse effects of human insulin.

Objectives: To assess the effects of different insulin species by evaluating their efficacy [in particular glycaemic control] and adverse effects [mainly hypoglycaemia].

Search Strategy: A highly sensitive search for randomised controlled trials combined with key terms for identifying studies on human versus animal insulin was performed using the Cochrane Library [Issue 2 2002], Medline [1966 to May 2002]. We also searched reference lists and databases of ongoing trials. Date of last search: May 2002

Selection criteria: We included randomised controlled trials with diabetic patients of all ages that compared human to animal [for the most part purified pork] insulin. Trial duration had to be at least one month in order to achieve reliable results on the main outcome parameter glycated haemoglobin.

Data collection and analysis: trial selection as well as evaluation of study quality was performed by two independent reviewers. The quality of reporting of each trial was assessed according to a modification of the quality criteria as specified by Schulz and by Jadad.

Main results: Altogether 2156 participants took part in 45 randomised controlled studies that were discovered through extensive search efforts. Though many studies were of a randomised, double-blind design, most studies were of poor methodological quality. Purified porcine and semi-synthetic insulin were most often investigated. No significant differences in metabolic control or hypoglycaemic episodes between various insulin species could be elucidated. Insulin dose and insulin antibodies did not show relevant dissimilarities.

Reviewers' conclusions: A comparison of the effects of human and animal insulin as well as of the adverse reaction profile did not show clinically relevant differences. Many patient-oriented outcomes like health-related quality of life or diabetes complications and mortality were never investigated in high quality randomised clinical trials. The story of the introduction of human insulin might be repeated by contemporary launching campaigns to introduce pharmaceutical and technological innovations that are not backed up by sufficient proof of their advantages and safety.

Note: The importance of this review is such that it has been made 'Feature Review' on the Cochrane website and there is open access to the complete review by visiting:

www.update-software.com/cochrane/abstract.htm

Implications Of The Cochrane Review

What does the Cochrane review really mean to people with diabetes?
It means that there was not very much research carried out to compare 'human' and animal insulins and the research that was carried out, was mostly of poor quality. 70% of the trials were funded by the insulin manufacturers, so for those of us that already are just a little suspicious about industry funded research and the risk of bias, we now see that most of this industry funded research was also of poor quality! So with this in mind, we see that the review found no evidence of differences

in the adverse effects related to hypoglycaemia but only 40% of trials mentioned them. The other reported adverse effects were not investigated in any of the trials.

The review has dispelled many of the myths that are told to people with diabetes.

- It can no longer be said that 'human' insulin is better than animal insulins, because there is no evidence for this.
- It can no longer be said that 'human' insulin gives better control and better HbA1cs, there is no evidence for this.
- It can no longer be said that 'human' insulin produces less antibodies, there is no evidence to support this.
- The existence of other adverse effects, apart from hypoglycaemia, was not even investigated, so their existence can no longer be denied.

Important issues for people treated with insulin have never been investigated.

Perhaps the greatest importance of this review is that it highlights the research that has NEVER been carried out. This absent research is essential for us to know that we are being treated with the insulin that produces the best effects on our health, our wellbeing and indeed our lives and even our life expectancy. These are very basic requirements for any drug but perhaps especially so for 'human' insulin - the first ever genetically produced drug to be used on human beings. Twenty years after its arrival on the market with indecent haste, 'human' insulin has never been subjected to essential, quality post marketing research to answer the questions that must now be asked by people who are prescribed it.

We need to know:
Mortality – are the number of deaths, the type of deaths and/or the age at which the deaths occur different after treatment with 'human' or animal insulins?

Complications - do 'human' and animal insulins affect the development of complications? Do they occur sooner or more often with one type of insulin than another? Are different complications affected differently? Does the rate of the progression of these complications vary with the different insulin species?

Quality of life – is the quality of life better or worse with 'human' or animal insulins? Do people feel better or worse according to which insulins are used? What differences do people experience when using different insulins? Do they have more or less mild hypos, more or less severe hypos, are the hypos or the warnings different according to which insulin they use? Have they noticed any other effects, such as weight gain, depression, aches and pains, inability to concentrate etc?

If patients had been listened to, or better still, even involved in the trial designs [wash my mouth out with soap and water!] then investigations into all these questions and the reported adverse effects would have been included in the trials.

What does the Cochrane Review mean for doctors and healthcare professionals?
They now have the advantage of being able to provide information about insulin treatment choices that is based on evidence, not the assumptions they have had to use for the past 20 years. But they can no longer tell patients that 'human' insulin is superior to animal insulin, that it results in better diabetes control, that it is better because it produces less antibodies or any of the many claims that have been made in favour of 'human' insulin.

The Review may well mean a total re-think on the part of many doctors and diabetes specialist nurses. For some, this may be difficult to accept because it goes against their beliefs from the information they have been given. We can understand this and even sympathise with it but this Review now gives them the chance to fully discuss insulin treatment with their patients on the basis of evidence, something they, as well as we have been denied until now.

Without doubt, doctors everywhere understand that their first and foremost obligation is 'first do no harm'. With no research to compare

'human' and animal insulin in relation to mortality, complications and quality of life and with less than half of the trials investigating adverse effects, unfortunately doctors prescribing 'human' insulin can no longer be certain that they are 'first doing no harm' because they can't know.

In the absence of research, doctors cannot be held legally negligent for prescribing 'human' insulin, albeit with no superiority. But surely there must be some moral responsibility on the part of medical experts and leaders in the field of diabetes to ensure that appropriate comparative trials are carried out to ensure that 'human' insulin does not cause more harm than its predecessors. If this is not the case, and clearly it hasn't been so with 'human' insulin, then how can be patients feel that their best interests are being served? Surely patients can expect at least this level of assurance before the majority of the diabetic population is changed to 'human' insulin which can be for no other reason than the marketing wishes of the insulin manufacturers?

After 15 to 20 years of prescribing 'human' insulin on the basis of its believed superiority, doctors are now in an unenviable position. Their prescribing of 'human' insulin and the changeover of people from animal to 'human' insulin is not and never has been, based on any evidence of benefit. But perhaps worst of all, the complete omission of research into mortality, complications and quality of life means that they no longer know that they have followed their own code of 'first do no harm', especially when there is so much evidence from patients to the contrary.

Global implications

With the major insulin producers having already removed animal insulins from the market in many developed countries, this Review may not halt or revoke this process. Market forces and shareholder profits are clearly more important to them than patients' needs otherwise discontinuation of animal insulins would not be taking place, especially not without the essential research being carried out first. If doctors decide that they do not wish to prescribe 'human' insulin because of the lack of research to support them then market forces could change the situation. If the medical profession give patients ALL the information they need to make an informed choice of insulin species, then many people may well choose tried and tested natural animal insulin in preference to the under-researched and poorly researched 'human' insulin. But if doctors fail to give a fully informed choice including risks and benefits, then they are failing in their duties and carry the full responsibilities for this as pointed out by the Medical Defence Union in Pulse, May 20, 2000.

Cost Implications

The Review will enable a worldwide assessment of insulin species and their availability. Its biggest benefit may well be for people in developing countries who are dying as a result of the replacement of affordable animal insulins with significantly more expensive 'human' insulin. Healthcare decision-makers have now been provided with evidence to show that they can use less expensive animal insulins and they have the power to negotiate prices more effectively with insulin manufacturers.

But developing countries are not the only countries to be affected. Developed countries where animal insulin is still cheaper than 'human' are affected and the NHS is no exception – something IDDT raised several years ago but no one was interested in pursuing the extra costs to the NHS that are incurred by prescribing 'human rather than pork insulin.

For example a 10ml vial of Novo Nordisk Human Actrapid costs about £4.00 more than a 10ml vial of their Pork Actrapid. If the average person uses 3 vials per month then the extra cost to the NHS of using 'human' insulin, with its lack of superiority, is £150.00 per year. This might not sound much but if this is applied to only one quarter of people using insulin, assuming that as many as three quarters not using vials but pens, then this extra and unnecessary cost to the NHS is £15million per year! If half are using vials and not pens, then the waste is £30million per year!

These millions would go a long way towards funding the rising costs of diabetes care and the National Service Framework for Diabetes that we read so much about. Raising NHS standards of care has to be paid for and cutting these unnecessary expenses seems like a logical way of helping to do just that. But in an NHS era when the cheapest drugs

are supposed to be prescribed first, it is hard to understand why insulin has been made the exception to this. Is it the power and influence of the pharmaceutical industry, either directly or indirectly, or is it simply mismanagement?

Our thanks must go to the reviewers, Drs Richter and Neises, for their determined work in carrying out this very valuable review. We must also thank Sir Iain Chalmers of the UK Cochrane Centre for his unfailing support in trying to ensure that the diabetic community has the best possible evidence to inform their healthcare decisions.

Note: Information about the Cochrane Collaboration and systematic reviews

It is an international non-profit organisation that aims to help people make informed decisions about health care by reviewing and promoting the best available evidence from research on the effects of various treatments. The Collaboration also aims to influence what the direction of future research by identifying areas where more research is needed.

We are all aware that some health care treatments make you better, some don't and sometimes the treatment can be even worse than the condition. Sometimes it seems as though a drug/treatment worked, but really the benefit came from something else or maybe you would have just got better anyway. So both patients and doctors need good evidence from research to know the effects of a drug or treatment in order to decide whether we should try it. This also applies to decision-making bodies, such as the NHS.

How is this good evidence acquired?
However good individual studies maybe, they are often carried out on specific groups of people or on small numbers so the results cannot be extended to assume that the effects of the treatment will be the same for everyone with a particular condition. Publication bias also creeps in as a great deal of good research is not published and so we are not receiving the complete picture.

Cochrane groups carry out systematic searches for all the studies on a topic and then sort out which are the good quality studies [randomised controlled trials or RCTs]. Conclusions can then be drawn that give a much more complete picture of whether or not a drug/treatment is effective. A review may show that there is no evidence to support a particular drug/treatment or that little or no good quality research has been carried out. This is equally important because it means that the use or prescribing of that drug/treatment is not based on proven benefit from research.

Lantus Arrives In The UK

Insulin glargine, called Lantus, made by Aventis was launched on to the UK market in September and is a long acting basal insulin analogue,. Lantus is a synthetic insulin and is being proclaimed as the first truly long acting insulin. It seems to have been conveniently forgotten that long acting beef insulin has always been available and still is!

Lantus is intended to be injected as a single injection at bedtime and has a smoother action over 24 hours than previous synthetic long acting insulins. It is possible that this may be tolerated better than 'human' intermediate acting insulins but only time and research should tell us this. Much of the existing research has been in people with Type 2 diabetes and it has shown that there is a reduced risk of hypoglycaemia when using Lantus compared to the usual 'human' intermediate-acting insulin [isophane/NPH].

Lantus research so far…
Research has only compared Lantus to 'human' insulin. At an Aventis sponsored symposium at the annual professional conference of Diabetes UK, Professor David Owens who carried out some of the research said that compared to existing long acting insulin ['human']]:

- Lantus has greater molecular stability than previous 'human' insulins resulting in a flat action profile compared with an early peak in present longer acting insulin. Thus there is less risk

of hypoglycaemia.
- It is well tolerated and at least as effective as present longer acting 'human' insulin.
- It has NOT been shown to improve HbA1cs but is at least as effective at helping to maintain target HbA1c levels but with less risk of hypoglycaemia. [It is not clear from the report whether this reduced risk of hypos is theoretical or has actually been proved in trials.]
- No research has been carried out into its use in pregnant women.

Forewarned is forearmed – it's clear!
The UK can learn from the US experience! Unlike all other long acting insulins Lantus is clear not milky. At the Aventis symposium, diabetes specialist nurse, Jill Hill said this was an advantage because it would not have to be shaken before injections and that this was 'just one less thing that patients will have to remember to do.' But practical experience of using this new clear long acting insulin in daily life in the US, is a little different!

A letter in Diabetes Care, Feb 2002, warns that two patients described as having 'excellent compliance', mistakenly injected their very rapid short acting Humalog instead of their Lantus [glargine]. Both injected their normal larger bedtime dose but of Humalog instead of Lantus. As both insulins are clear, this is an easy mistake to make, especially when tired before going to bed. Fortunately both these people realised what they had done before going to bed took remedial action. However, the letter recommends that a coloured dye is added to Lantus to prevent similar mistakes that could have disastrous consequences as a result of a large dose of fast acting insulin being injected before bed. We would all rather shake the bottle than run this risk!

Aventis obviously were aware of the risk of confusion with clear short acting insulins, because Lantus is marketed in a different shaped vial from all other insulin vials – it is longer and thinner and the label is in purple writing. Responses from other physicians showed that these two cases were not isolated and as Lantus is only available in vials for injection with syringes, these physicians prescribed pens for the short acting insulin to avoid the risk of confusion. However, they expressed concern that if Lantus becomes available in cartridges for pens, then the risk of confusion would arise again.

IDDT Launches 'Sponsor A Child'

Just £2.00 a month – can you help?
Thanks to you and to the specialist nurses in diabetes clinics up and down the country, IDDT has been able to send almost weekly supplies of insulin and other supplies to help adults and children in developing countries. Over recent months our supplies have been going directly to the Dream Trust in India.

Dream Trust is a registered charity and non-government organisation [NGO] which helps towards making the life of underprivileged children with diabetes, especially girls, more bearable and more meaningful. Poor families find it difficult to commit a quarter of their monthly income for the treatment of a diabetic child.

Dream Trust formed in 1995 after the shocking deaths of two little girls whose mothers had stopped giving insulin because they simply could not afford it. The sponsored children are given free insulin, syringes, monitoring strips and Dr Pendsey monitors their healthcare.

But these are not the only problems. Debilitating, social, cultural and economic factors in India continue to discriminate against girls in appalling ways. In the Indian context, marriage of girls with diabetes is a serious problem. Parents find it difficult to arrange marriages of their daughters with diabetes and even hide it, but these marriages invariably end in separation. The Trust helps to arrange marriages and also focuses on vocational training to help the girls to become financially self-reliant.

Can you help?
It costs as little as £2.00 a month to sponsor a child and save lives at Dream Trust. Sponsoring these children will help to ensure that

they are cheerful, healthy and can be looked at as important family members with a future.

We all live with diabetes under very different circumstances and we get cross if things like pre-filled pens aren't available free on the NHS – the Rolls Royce way of injecting for the majority of people by comparison to the children of Dream Trust! In our world, it is impossible to imagine having to allow your child to die for lack affordable insulin.

Just as little as £2.00 a month from you will help to avoid these tragic deaths.

Just £2.00 a month from you will prevent these children from being small, sick and unhappy.

Please help us to help the children at Dream Trust. It's easy – just fill in the sponsorship form to make a regular monthly donation from your bank. If you require further information, contact: Bev Freeman, IDDT, PO Box 294, Northampton NN1 4XS
Tel 01604 622837
Fax 01604 622838
e-mail bev@iddtinternational.org

From Our Own Correspondents

Dear Jenny,

I studied your website for the first time and was impressed with the amount and clarity of your information regarding Type 1 diabetes and all the adverse effects of human insulin. I am a Certified Nurse Midwife in the US and used your site in an assignment for homework in my MSN degree.

Thanks for the opportunity to browse and learn from IDDT

Ms JWC, United States

Dear Jenny,

Having read your excellent article on the first three pages of the Summer 2002 Newsletter, I am horrified at the thought of not being able to obtain animal insulins that I need. I have been on these insulins for 52 years and have kept remarkably well and active.

I refused to change to synthetic insulin when it was ushered in as my consultant could not give me a reason why the change would be advantageous. My only experience of it was when I entered hospital about 8 years ago for a minor operation. They put me on a drip of human insulin and dextrose because they said there were no drips containing animal insulin. I later found out that they could have made one up for me! When I came round from the anaesthetic I felt very ill and not at all like a 'normal' hypo, but my blood sugar was 2mmols/l and dropping fast.

Your article mentioned that Biobras was the major supplier of animal insulin crystal. Does this mean that there are smaller ones?

The 'Truth in Medicine Campaign' must go on. Thanks to you all at IDDT for your diligent and excellent work.

Mrs TP, SW

Jenny comment: there are other suppliers of animal insulin crystals so we are not entirely reliant on Biobras, now part of Novo Nordisk, for the supply. We also have to remember that CP Pharmaceuticals make beef and pork insulins in vials and cartridges for pens, so we are not entirely reliant on Novo Nordisk pork insulin. However, for many people, this will mean changing brands and we know that even different brands of the same type of insulin can affect diabetic control so adjustments to dose and timing may be necessary as well as careful monitoring when changing to CP's Hypurin range of animal insulins.

Blood pressure pills and hypos
Dear Jenny,

I have been taking Enalapril for high blood pressure and having reached the maximum dose my GP thought he would try a different drug. I was put on Cardura [doxazosin] which brought down my blood pressure really well but in doing so triggered completely unpredictable and very aggressive hypos with blood glucose levels as low as 1.7 whilst I was still unconscious. After 3 months I was prescribed Hytrin [terazosin hydrchloride] and again had very aggressive hypos. I started to run my blood sugars higher in self defence but started to feel unwell and returned to my GP who decided that the risks were unacceptable and I was returned to my original drug.

Mr S.B.
Derbys

Jenny's comment – the message here is to be aware that all drugs can have adverse effects and these may affect blood glucose levels. Mr S.B. took the correct action and discussed alternatives with his GP.

NHS Direct pilot scheme using community pharmacists

The Dept of Health has reported on a pilot scheme in Essex where NHS Direct nurses refer callers to a community pharmacist for additional help when they would previously have been referred to a GP. The report showed that:

- Over 90% of people took less that ten minutes to get to their pharmacy and almost 70% went to a pharmacy within 4 hours.
- 80% of callers thought that it was appropriate to be referred to a community pharmacy and were satisfied with the advice that was offered.

The Dept of Health will roll out the community pharmacy scheme nationally later throughout this year.

IDDT News

ePolitix and IDDT
For internet users ePolitix is a website that provides information about what's happening in Parliament, the news and the media. It is widely used by politicians, civil servants, political researchers and journalists to find information about a whole variety of issues that are of concern to them or on which they may have to make a statement. The Trustees decided that IDDT should have a 'mini' website on ePolitix website as it used by the very people that can influence our cause, politicians, civil servants and journalists and this went live in July. You can visit IDDT's MicroSite at www.epolitix.com/forum/iddt or www.epolitix.com/forum/insulin-dependent-diabetes-trust

We are aware that many people do not have or even want access to the internet! But this is just one way that we can increase our presence and influence to get the issues that matter to us, to a wider audience.

IDDT and JustGiving
We are delighted to report that there is an increasing number of people joining IDDT through our website www.iddtinternational.org but we are very aware that there is understandable concern about making donations or payments of any kind over the internet. We have therefore become part of JustGiving which offers a secure way of making credit card donations via the website – you just CLICK on the JustGiving button on the Homepage of each country's website.

A Tribute To Bruce Beale

Bruce Beale died on July 26th this year, peacefully and pain-free. He will be sadly missed by the many hundreds of people that have gained information, help and support from him through his website. Many of our members have joined through their contacts with Bruce and he has supported IDDT through thick and thin. On a personal level, I shall miss him greatly as he has been of tremendous support and encouragement. He was my sounding block when I was angry and my mentor when I was in need.

Bruce had over 50 years experience of living with diabetes and was diagnosed as a child. He never waivered from his belief in the rights of people to be involved in decisions about their treatment and to have the treatment of their choice. He believed that any insulin that increased the risk of hypoglycaemia and loss of warnings was a risk not worth taking and that a carbohydrate restricted, and latterly the low carbohydrate diet was the only sensible way to treat diabetes.

I cannot pay greater tribute than to quote the words of Joan Hoover, who Bruce greatly admired for her voluntary work in diabetes that made real improvements in the lives and treatment of adults and children with diabetes.

“Bruce was a man of considerable spirit and intellect, and best of all, he was on the side of the angels, those who are trying to make things better.”

Our condolences go to Bruce’s wife and family.

Jenny Hirst

Say Goodbye To ‘Human’

As our readers know, ‘human’ insulin is not human insulin at all. It has always been amazing that insulin manufacturers were ever allowed to call it ‘human’ because this has an implication that it originates from the human body. Of course it doesn’t! But it’s a fairly reasonable assumption by people that know little about diabetes and perhaps even less about insulin, the newly diagnosed for instance, that ‘human’ insulin really is real insulin from human beings. When ‘human’ insulin first appeared in 1982, people with longer standing diabetes could be excused for assuming that it was in some way extracted from human beings. They were used to using beef or pork insulin extracted from cattle and pigs, so it wasn’t that unreasonable to assume that ‘human’ insulin was actually from human beings. It was a wonderful marketing technique to encourage people to change from the natural insulin that suited them to one with no proven benefits!

So where does ‘human insulin’ come from? Answer – different manufacturers make it from different ingredients, from e-coli or yeast. Genetic modification turns into something that is identical to the insulin molecule the body should produce. So it’s certainly NOT real human insulin. A cheap PVC jacket may look like leather but it isn’t and it cannot be sold as leather, indeed, the law doesn’t allow it.

But does this law apply to insulin? No, because believe it or not, drugs don’t come under the same regulations! One of IDDT’s first actions was to make a formal complaint that the name ‘human’ applied to insulin, was misleading to patients. The UK Dept of Health denied this but said if we wanted to take the matter further we would have to go to the World Health Organisation. This we did and the response almost said that we were really rather silly and of course ‘human’ insulin was not extracted from human beings and everyone knows that! Doctors and drug regulators may know this, but patients don’t have their knowledge – a view that IDDT passed to the World Health Organisation but to no avail.

So why discuss this now? One of our new members raised this

whole issue of the name 'human insulin' again. But she pointed out that by continuing to use the name 'human', even in inverted commas as we always do, we are helping to perpetuate the myth that 'human' insulin' is genuine insulin from the human body. Unintentionally, we have been helping to mislead people with diabetes and equally unintentionally, we have helped the drug companies to market their very cleverly named insulin. So as Editor of the Newsletter, I have taken a unilateral decision! This is the last issue that will use the name 'human' insulin. My News Year's resolution is already made and in the next issue due in January 2003 'human' is out! Synthetic insulin, GM insulin, genetically produced insulin, bacteriological insulin or any other names that spring to mind, are in!

News Flashes

The Welsh National Assembly is introducing national, free eye screening for everyone with diabetes that is registered with a GP.

New government targets - new performance targets have been published for health and social services. These include a new maximum waiting times for hospital treatment of 3 months by 2008 and reduced waiting times in accident and emergency. New standards to help elderly people live independently at home are also being introduced.

Merger of regulatory bodies - the Medicines Control Agency [MCA] that controls the licensing of medicines and monitoring of adverse effects and the Medical Devices Agency [MDA] that controls the use of medical devices eg insulin pens, are to merge into one Agency in April 2003.

Herbal medicine safety - the Medicines Control Agency has launched a new information service to provide up to date safety information about herbal remedies. Herbal Safety News aims to bring together information about past herbal remedies plus the latest news and advice as it arises. Herbal Safety News is available at: www.mca.gov.uk/ourwork/licensingmeds/herbalsafety.htm

NSF for renal services - an independent group of experts has been set up to advise the government on standards for kidney services with a National Service Framework [NSF] for renal services. It aims to raise standards, reduce variations in services and improve health care of renal patients. The group is expected to produce guidelines on prevention, dialysis and transplantation.

Analysis Of UK Newspaper Reports

Since January 2000, IDDT has used a press cuttings service to keep track of information in all local and national newspapers about any matters relating to diabetes. In particular we have tracked reports relating to hypoglycaemia. We have to be aware that newspaper reports are entirely dependent on the editor's decision to publish, but the reports show there are reasons to be concerned about hypoglycaemia and loss of warnings. Take a look:

Reports of sudden unexplained deaths or dead in bed syndrome

Year	Number of deaths	Average age at death
2000	4	35 years old
2001	10	27 years old
2002 to July only	10	31 years old

Notes:

1. We removed all deaths that were alcohol or drug related and deaths where coroner decided suicide was the cause.
2. The youngest age at death was two and the oldest age was one person of 53.
3. Two further cases of sudden unexplained death were reported to

IDDT during July – a 17 year old girl and a 35 year old man.

4. Unless a post mortem is carried out within 4-6 hours of death, it is not possible to ascertain whether the cause of death was hypoglycaemia. There were 17 additional reports where cause of death was assumed to be hyperglycaemia but this could not be proven because blood glucose levels rise sharply after death. All were found hours or days after death and all reports have evidence that the deaths could have been due to hypoglycaemia not hyperglycaemia.

Reports of people rescued from severe hypoglycaemia

Year	Number rescued	Average age
2000	3	26 years old
2001	9	34 years old
2002 to July only	11	30 years old

Reports of fatal road traffic accidents

Year	Fatal accidents	Average age
2000	2	62 years old
2001	5	45 years old
2002 to July only	6	31 years old

Notes:
There was a total of 13 deaths. In all but 2 cases, the diabetic driver killed themselves, the other 2 deaths were victims of the accident.

Discussion
Remembering that these figures do not represent the whole picture by any means, there is nevertheless, a pattern in both the people who died of dead in bed syndrome and the people rescued from unconsciousness usually by relatives. Firstly, they were all young people with Type 1 diabetes and so treated with insulin. Secondly, the number of reports has increased from the year 2000 to 2002 and the figure for 2002 could be expected to be even greater as we are only 7 months into 2002.

The first reports of dead in bed syndrome appeared in the mid to late 1980s after the introduction of tight control and 'human' insulin. Prior to this time doctors always reassured their patients that 'you can't die in a hypo because your insulin will run out and you will come round'. The cause of dead in bed syndrome is still not known and there appears to be little or no research to investigate.

Hypoglycaemia is not caused by diabetes but by the treatment of it, so all these deaths were unnecessary deaths. The fact that they were also in young healthy people is even sadder and our sympathies must go to their families

Novo Nordisk Stops Drug Trials

July 23rd 2002
Trials of Novo Nordisk's new drug, NN622 also known as ragaglitazar, have been stopped after finding bladder tumours in one mouse and several rats treated with NN622. The trials in man were at an advanced stage, Phase III, with 1100 patients being treated with the drug in Europe, North and South America and Asia, only 42 of whom lived in Denmark. All the patients have now been taken off the drug!

Originally Novo Nordisk were developing this new drug with another company called Novartis but they pulled out last year without giving any reason.

This new drug is part of the glitazone family of drugs classed as sensitisers that enhance the absorption of insulin in Type 2 diabetes. [Troglitazone [Rezulin], Avandia and Actos are all the same family of drugs.] NN622 was expected to be another blockbuster drug to be on the market 2004 or 2005 with expected sales of over one billion dollars.

Novo Nordisk's perspective
According to a statement from Novo Nordisk on their website, the effects on rats were known before the trials started in people but when a tumour appeared in another species, the mouse, the trials were stopped. They also state that they informed the participants of the tumours in rats and they all gave their consent. No doubt true but one wonders just how informed was this consent, especially in countries with differing understanding of 'consent'? Was it a reassurance that many drugs cause tumours in one species and it's only when they occur in a second species that it actually matters?

Most of us would expect that the trials on rats AND mice would be completed BEFORE a new drug is tested on people so that any possible development of tumours whether benign or otherwise, would be discovered BEFORE there was any possible risk to the people in the trials. But Novo Nordisk state that this is within international research guidelines and that these guidelines do not demand that trials in rats and mice are completed BEFORE Phase III trials in man take place. It is hard to believe that international guidelines do not offer greater safeguards than this but if they don't, then participants in research, need to think very carefully before taking part in any trials.

Consumer perspective
Remember this applies to trials of all new pharmaceutical products. Your doctor may ask you to take part in trials of a new insulin but insulin has to go through the same research – rats, mice and then people. Some years ago one of Novo Nordisk's first attempts at producing an analogue insulin had to be stopped because it produced tumours and this is why Lilly were first on the market with their analogue, Humalog.

If pharmaceutical companies are to rely on us to be participants in drug trials, then there has to be greater openness about possible risks. For our part, we have to be sure that the consent is TRULY INFORMED consent. This means not just relying on the information provided on consent forms but asking questions, taking time to decide and not being afraid to say NO, even if this is to our own doctor. In future, perhaps one of the questions we should be asking is *'Have the trials on rats and mice be completed?'*

Importance Treatment - A Perk For The Eurocrats!

Under the NHS people that suffer from impotence and want treatment with Viagra are only allowed 4 Viagra pills a month. Regular readers will remember that when this regulation was brought in, IDDT campaigned against it. We recognised that the theory behind this was that impotence is more likely to occur in older men and presumably the Dept of Health think that sex once a week is average for the majority of older men! However, we pointed out to them that impotence can affect fit, healthy young men with diabetes who do not want to have their sexual activity restricted to once a week.

We were recently contacted by just such a young man – 4 Viagra pills a week! His chemist has quoted him £62.00 to purchase 8 more pills. Unfortunately this young man is unemployed at the moment and his fortnightly income is £107.00 – can he afford 8 extra Viagra pills?

This situation is grossly unfair and not made any more acceptable by a report in the Guardian [9.8.02]. The EU institutions in-house medical insurer has now agreed to reimburse MEPs 85% of the cost of 6 Viagra pills a month. So a UK MEP could get 4 on the NHS and 6 cut price ones through his EU insurance – 10 a month while a young man with impotence caused by diabetes can only obtain four. Hardly fair!

Snippets

A look to the future through the magic of science!

- Scientists in Nabraska have found a genetic mutation that causes high bone mass and healthy strong bones. The mutation is caused by an amino acid within the gene and researchers are now trying to develop a medication that duplicates the action of the amino acid to treat or even prevent osteoporosis.
- Some tooth decay is caused by bacteria that live in the mouth and turn the sugar we eat into lactic acid which causes the decay. A researcher in Florida has genetically altered the bacteria so that it does not produce the lactic acid that in turn, prevents tooth decay. He put the altered bacteria in a mouthwash so that it crowded out the bacteria that cause decay.
- Kidney transplants have saved the lives of many people but there is always a shortage of suitable donors. Plasmaphoresis is a new technique being developed which may mean that mismatched kidneys can be transplanted by filtering out the harmful antibodies that would otherwise cause the transplant to fail.
- In the US, videophones made by a Bristol Company, Motion Media, are to be supplied to 1,000 CareStations to help doctors and nurses treat patients with AIDS, diabetes and TB. The CareStation sends and receives video images through standard phone lines. An array of medical instruments, including stethoscopes and blood pressure cuffs can be plugged into it. This means that doctors can "visit" their patients by using videophones and, of course, save money and time.
- Dr Minor, heads a department that has received £300,000 to replicate the controversial Wakefield study linking MMR and autism. But at the same time Dr Minor is being paid as an adviser to GlaxoSmithKline, one of the three MMR vaccine manufacturers being sued by families who claim their children were damaged by it. While we can all accept that his advice may not be compromised by fees from the manufacturer, it does little for public confidence in the system!

IDDT Christmas Cards

Our usual annual begging! Members have received a sample card, so please don't forget to order your Christmas cards to help to support IDDT. If everyone just ordered one pack it would be great and even greater if you can help to sell some on our behalf! In case you have lost your order form, here's another one!

Note: the cards can be viewed on our website www.iddtinternational.org/cards

Name of Card	No of Packs	Amount payable
Christmas Firs at £2.75 for 10		
Red Santa at £2.45 for 10		
P&P at 50p per pack to a max of £3.00		
Total amount to pay		

Name.....
Tel no.....
Address.....
Postcode.....

Please send payment with your order and it can be made by cheque, payable to 'IDDT', by Postal Order or by credit card [Visa, Delta, Eurocard or Mastercard]. If paying by credit card please fill in the following details:

Card No.....
Expiry date...../.....

Please return your order to: IDDT [C],
PO Box 294, Northampton NN1 4 XS

If you would like to join IDDT, or know of someone who would, please fill in the form (block letters) and return it to:

IDDT
PO Box 294
Northampton
NN1 4XS

Name: ——————————————————————————

Address: ——————————————————————————

——————————————————————————

Postcode: ——————————————————————————

Tel No: ——————————————————————————

From Your Editor – Jenny Hirst

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