

DIABETES IN CONTROL.com Newsletter

The Newsletter for Professionals in Diabetes Care

December 13, 2006 Issue #342

IDF NEWS IS HERE!!!!!!!!!!

Top Diabetes Stories:

Alarming Message From the 19th World Diabetes Congress*

<http://www.diabetesincontrol.com/modules.php?name=News&file=article&sid=4394>

Levemir (insulin Detemir) Reduces Weight and Improves Blood Glucose Levels*

<http://www.diabetesincontrol.com/modules.php?name=News&file=article&sid=4392>

Oral Steroids Trigger 2% of All New Cases of Diabetes*

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Rosiglitazone Delays Treatment Failure in Patients with Type 2 Diabetes*

<http://www.diabetesincontrol.com/modules.php?name=News&file=article&sid=4388>

'Double Diabetes' a New Threat: 1 Plus 2 Equals 3*

<http://www.diabetesincontrol.com/modules.php?name=News&file=article&sid=4386>

New York City Bans Trans Fat*

<http://www.diabetesincontrol.com/modules.php?name=News&file=article&sid=4385>

After Gestational Diabetes, Postpartum Glucose Goes Unchecked*

<http://www.diabetesincontrol.com/modules.php?name=News&file=article&sid=4383>

Diet Drug Acomplia (Rimonabant) Lowers Blood Sugars and Reduces Weight*

<http://www.diabetesincontrol.com/modules.php?name=News&file=article&sid=4382>

From the editor's desk

Lots of news coming out of the IDF meeting in South Africa in this weeks newsletter:

Have you noticed how no one wants to hear about their diabetes right now? Most of my programs this past week were half full, and everyone wants to wait til next year to feel better. If only we could get everyone of our patients to eat one, yes only one cookie less we could all make a difference.

Now that your patients are over their fear of activity, **Sheri Colberg, Ph.D., FACSM** helps you *Choose Planned Activities—Strength and Flexibility* for your patients, and how you can get your patients to do them. [Click here](#) to read this and all of **Dr. Colberg's** features.

<http://www.diabetesincontrol.com/modules.php?name=News&file=article&sid=4395>

To ensure that you receive the **Diabetes in Control newsletter** arrives in your inbox, please add **diabetes@topica.email-publisher.com** to your Contact List, Safe List or Address Book.

Marc Santora, writer, New York Times wrote In Diabetes Fight, Raising Cash And Keeping Trust, about how the ADA gets funding *This Week Part 3, Valuable Advice*

<http://www.diabetesincontrol.com/modules.php?name=News&file=article&sid=4396>

dLife TV: December 17, 7PM ET on CNBC

A visit to the examining room of world-renown physician Dr. David Nathan. Plus, gastroparesis – could you have it? And who do you tell, and not tell, about your diabetes? Tune in for another episode of dLifeTV on: Sundays on CNBC at 7 PM ET, 6 PM CT, and 4 PM PT Check your local listings for details.

We can make a difference!

This week's overview:

- Item #2: Diabetes Cure From Stem Cell Research in Four Years?
- Item #5: More Support for Coffee's Anti-diabetes Benefits
- Item #6: Diabetes Vaccine Trial Offers New Hope
- Item #8: Twice Daily 70/30 Insulin + Metformin Vs. Lantus + Glimepiride in Type 2's
- Item#11: Protein Beverage Reduces Hyperglycemia in Type 2 Diabetes
- Item#14: New Data Shows Sitagliptin + Metformin Reduces Both Prandial and Fasting Blood Glucose
- Item#15: Skin Autofluorescence Reflects Vascular Damage in Type 2 Diabetes

Check out this weeks "Test Your Knowledge" question.

<http://www.diabetesincontrol.com/modules.php?name=News&file=article&sid=4397>

Dave Joffe, *Editor-in-Chief*

NEW STUDY:

Infusion sets- If you or your patient uses an Inset™ Infusion set then we want you to try the new improved version, click here to learn more.

<http://www.diabetesincontrol.com/studies/inset.php>

NEWS FLASH:

New Report: Diabetes is fast becoming the epidemic of the 21st century which, now affects a shocking 246 million people worldwide, and is expected to affect over 380 million by 2025 if no action is taken. See this week's Item #1

Tools for Your Practice:

Free Nutrition Facts & Calorie Counter- *Pantry Anywhere*



NutritionData (ND) provides a complete nutrient analysis for any food or recipe, and helps you select foods that best match your dietary needs. Starting next week there will be an upgrade: *Pantry Anywhere* — An Upgrade to Your Pantry- Free: Since ND's launch in June of 2003, the Pantry has used a cookie-based technology to store your favorite foods and recipes. Starting next week, ND will begin storing the contents of your Pantry on our servers. This change will provide four new benefits: You'll be able to access your Pantry from any computer at any location. You'll be able to create separate Pantries for individual family members. You'll be able to store a greater number of foods and recipes in your Pantry.

<http://nutritiondata.com>

New Product:



The Power Glove™ Strapless Heart Rate Monitor

is the most convenient means of calorie counting or monitoring fitness on the market today. The Power Glove™ captures and displays dynamic heart rate and calories burned right on the back of your hand without the use of a chest strap or special watch. The Power Glove™ provides instant feedback to augment your weight loss program or help optimize your fitness or calorie counting regimen. Power Glove™ is a revolutionary fitness and heart rate monitor for men and women of all ages.

- ?? Strapless Heart Rate
- ?? Calories Burned
- ?? Exercise Time *NEW*

- ?? Fat and Cardio Target Zones
- ?? Bright, easily read Light Emitting Diode (LED) display

Lightweight, easily cleaned, breathable fabric **MORE INFO:**

<http://www.rx4betterhealth.com/ccp51/cgi-bin/cp-app.cgi?pg=prod&ref=PGBASIC&cat=pedometer&catstr=HOME:pedometer>

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This Week's Items:

1. **Alarming Message From the 19th World Diabetes Congress***
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15. **Skin Autofluorescence Reflects Vascular Damage in Type 2 Diabetes**
<http://www.diabetesincontrol.com/modules.php?name=News&file=article&sid=4380>

ITEMS For The Week:

Item 1

Alarming Message From the 19th World Diabetes Congress

That diabetes is fast becoming the epidemic of the 21st century which, now affects a shocking 246 million people worldwide, and is expected to affect over 380 million by 2025 if no action is taken.

<http://www.diabetesincontrol.com/modules.php?name=News&file=article&sid=4394>

The International Diabetes Federation (IDF) closed the 19th edition of its World Diabetes Congress that was held in Cape Town, South Africa.

With over 12,600 people registered for the Congress and 400 speakers, the 19th World Diabetes Congress was the first diabetes meeting of this magnitude to be organized outside Europe. This unique Congress, which unites the whole diabetes community, did not only give the opportunity to healthcare professionals, researchers, and healthcare providers such as educators and nurses to share their findings but also allowed people with diabetes to share their experiences of life, care and management.

More than 300 presentations were given, covering various aspects of diabetes care, from basic science, clinical advances to education, care, epidemiology, Public Health, to living with diabetes, diabetes in Africa and discrimination. In addition, the Congress was the perfect opportunity for local associations from all over the world

to meet and share experiences about their efforts to achieve their common goal: the fight against diabetes.

By organizing the Congress in Africa, IDF managed to emphasize that diabetes care, advocacy and awareness in Africa needs proper attention and should be improved.

At the Diabetes Congress, IDF published new data demonstrating the magnitude of the diabetes epidemic. Data published in the 3rd edition of the Federation's Diabetes Atlas show that the disease now affects a shocking 246 million people worldwide, and is expected to affect over 380 million by 2025 if no action is taken.

Former IDF President Pierre Lefèbvre: "Just twenty years ago, the best information available suggested that 30 million people had diabetes. A bleaker picture has now emerged. Diabetes is fast becoming the epidemic of the 21st century."

Along with the growing number of people living with diabetes, the economic effects of diabetes are increasing significantly. New estimates indicate that USD232 billion USD are spent every year on diabetes care. The economic impact however goes beyond the costs that economies need to invest in diagnosis, care and prevention, and include loss of life, disability, the impact on quality of life, the economic impact that the disease has on individuals with diabetes and their families as well as lost economic growth.

The majority of people living with diabetes live in the developing world. Despite the fact that low and middle-income countries will bear the brunt of the forecast explosion, they account for less than 15% of global diabetes spending.

19th World Diabetes Congress Dec, 2006 Cape Town, South Africa

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Advertisement

Peripheral neuropathy results in chronic pain, numbness and tingling. One of the most successful treatments for reversing these symptoms is The ReBuilder 2405 Professional System. The ReBuilder promotes new nerve growth, restores blood circulation, returns feeling to the patient's extremities, and reduces pain. In many cases, the ReBuilder actually reverses neuropathy and chronic pain while restoring nerves back to their normal state. See how you and your patients can benefit from this therapy. Click Here

<http://www.diabetesincontrol.com/rebuilder/index.php>

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Item 2

Diabetes Cure From Stem Cell Research in Four Years?

The first big target for embryonic stem cell research in Australia will be a cure for diabetes, with a top researcher predicting major progress within four years.

<http://www.diabetesincontrol.com/modules.php?name=News&file=article&sid=4393>

It looks like the major results from stem cell research will not come from the US. The Australian Parliament last week passed legislation overturning a ban on therapeutic cloning, which paves the way for scientists to enter an exciting new field of research.

Prince of Wales Hospital diabetes transplant unit manager Dr Kuldip Sidhu said the effort was in "full gear" at the moment and they were waiting for approval to go ahead with their research.

The Bill has been passed and is expected to receive royal assent within a fortnight.

"Type 1 diabetes is the first port of call for us. Once we have the cells in the petri dish, we can see what regulates the disease, how we can understand the disease process and how we can go through drug discovery.

"We can do it in the petri dish, rather than in human or animal tests," Dr Sidhu said.

Embryonic stem cells have the potential to become any kind of tissue, offering hope they could be used to treat illnesses as diverse as diabetes, Parkinson's, Alzheimer's, stroke, spinal cord injuries and burns.

"We all have a basic understanding of (diabetes) processes. What I foresee with this technology is that we'll start to get some outcomes within three to four years," Dr Sidhu said.

Professor Peter Schofield, a neuroscientist who was on the Lockhart committee which recommended therapeutic cloning be adopted, said diseases and illnesses that have a focal cause would be the first to see results.

"Any disease that has a focal cause would be looked at first. For example Parkinsons' disease, where it is one small region of the brain that undergoes degeneration; diabetes, where you have the immune attack on the pancreatic beta cells; and spinal injury, where there is a lesion you're trying to get neurons to grow over," he said.

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DID YOU KNOW:

Among U.S. adults aged ≥20 years with diabetes, 11.0% have visual impairment: (i.e., presenting visual acuity worse than 20/40 in their better-seeing eye while wearing glasses or contact lenses, if applicable) and approximately 65.5% of these cases of visual impairment were correctable. Health-care providers and persons with diabetes should be more aware that poor vision often is correctable and that visual corrections can reduce the risk for injury and improve the quality of life for persons with diabetes. *MMWR. 2006;55(43):1169-1172.*
©2006 Centers for Disease Control and Prevention (CDC)

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Item 3

Levemir (insulin Detemir) Reduces Weight and Improves Blood Glucose Levels

In the PREDICTIVE Study in a subgroup of 2377 type 2's not on insulin prior, (82%) achieved these benefits with once daily dosing of Levemir®.

<http://www.diabetesincontrol.com/modules.php?name=News&file=article&sid=4392>

The long-acting modern insulin Levemir® (insulin detemir) improves blood glucose control, reduces weight and the risk of overall hypoglycemia when started once daily in people with type 2 diabetes, according to new data[1] presented at the 19th world congress of the International Diabetes Federation (IDF) in Capetown, South Africa.

The new data, a sub-analysis from a large, multinational study called PREDICTIVE™, are important because many people with type 2 diabetes gain weight when they start on other, conventional types of insulin therapy, further increasing their already high risk of cardiovascular disease.[2]

"Many people with type 2 diabetes are overweight or obese to begin with, and starting insulin therapy often leads to even more weight gain," said lead investigator Dr Anne Dornhorst. "Our findings showed that not only did Levemir® once daily improve glycemic control, but unlike many other forms of insulin, it actually led to weight loss and this benefit was even greater for the heaviest patients."

PREDICTIVE™ (Predictable Results and Experience in Diabetes through Intensification and Control to Target: An International Variability Evaluation) is a multinational, open-label, prospective, observational study to evaluate the safety and efficacy of Levemir® in people with type 1 and type 2 diabetes from more than 20 countries. The new data presented at IDF were from a 14-week analysis of a European subgroup of 2,377 individuals with type 2 diabetes who were being treated with OADs and had not previously used insulin therapy. Upon entering the study, these patients started taking Levemir®, dosed with or without their previous OADs, based on their physician's clinical judgement. Most patients (82%) used Levemir® once daily.

The results indicate that after 14 weeks, the individuals taking Levemir® lost 0.7 kg of body weight (1.5 lbs) compared to baseline ($p < 0.001$). The weight loss was more pronounced in those who entered the trial at higher weight. For example, those who had a body mass index (BMI, a measure of weight for height) between 27 and 29, which is considered overweight, lost an average of 0.56 kg (1.2 lbs), whereas those with a BMI at 31 or higher (considered obese) lost 1.51 kg (3.3 lbs). These reductions in weight were significant ($p < 0.0001$) compared to baseline. As expected, Levemir® improved glycemic control over the 14 weeks. The average level of HbA1c, an indicator of long-term glycemic control, decreased from 8.9% to 7.6% – over a period of three months. All these improvements in glycemic control were significant ($p < 0.0001$).

Hypoglycemia (low blood sugar) is also a concern in people with diabetes, and the risk of hypoglycemia can be increased with insulin therapy. However, the study showed that the incidence of hypoglycemic episodes four weeks after starting Levemir® was actually less than it was four weeks before the study: 1.2 vs 1.4, 0 vs 0.1 and 0.3 vs 0.4 episodes/patient-year for total, major and night-time hypoglycemic episodes, respectively. The decrease in major episodes was statistically significant ($p < 0.001$).

[1] Dornhorst A, Hernandez FO, Koenen C, Lüddecke H-J;. Poster presentation at: 19th world congress of the International Diabetes Federation, Capetown, South Africa, December 3-7, 2006. [2] Ridderstrale M, Gudbjornsdottir S, Eliasson B, Nilsson PM, Cederholm J, Steering Committee of the Swedish National Diabetes Register (NDR). Obesity and cardiovascular risk factors in type 2 diabetes: results from the Swedish National Diabetes Register. J Intern Med 2006; 259(3): 314-322.

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Item 4

Oral Steroids Trigger 2% of All New Cases of Diabetes

Researchers in the December issue of Diabetes Care, found that the use of oral steroids can be a precipitating factor in some cases of new-onset diabetes

<http://www.diabetesincontrol.com/modules.php?name=News&file=article&sid=4391>

Lead investigator Dr. Martin C. Gulliford stated that, the study results "suggest that use of orally administered glucocorticoids may be associated with up to 2% of all new cases of diabetes in primary care."

Dr. Gulliford and colleagues at King's College London School of Medicine note that frequency of atopic disease is increasing, as is the burden of diabetes.

To examine whether there might be a relationship between steroid therapy for atopic conditions and new-onset diabetes, the researchers used a family practice database to conduct a case-control study. In all, 2647 patients with newly diagnosed diabetes were identified and compared with 5294 matched controls.

The researchers found that the adjusted odds ratio for diabetes associated with 3 or more prescriptions for oral glucocorticoids was 1.36. Such patients appeared to account for about 2% of incident cases of diabetes.

However, "there appears to be either minimal or no association of new diabetes with prescribing of glucocorticoid-containing inhalers, topical preparations, eye drops, or infrequent glucocorticoid injections for joint problems," Dr. Gulliford concluded.

Diabetes Care 2006;29:2728-2729.



Start your own walking program

New StepTracker Available at special prices. See the results of the Step Program Study.

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DID YOU KNOW:

Due to Cost Issues 42% of Medicare Enrollees are Non-Compliant with Their Meds: Prior to implementation of the Medicare drug benefit, they found that in a national sample of 13 835 noninstitutionalized Medicare enrollees, 29% of the disabled and 13% of the elderly beneficiaries reported cost-related medication nonadherence; those in fair to poor health with multiple comorbidities and without coverage were most at risk. Among the disabled enrollees with 4 or more morbidities, 52% without drug coverage skipped prescriptions or doses compared with 26% with Medicaid drug coverage. Those with partial drug coverage through Medigap policies or Medicare health maintenance organizations reported intermediate rates of cost-related medication nonadherence. The rate of nonadherence to medications among the elderly and disabled,

because of their cost, is alarming. When there is lack of improvement to therapy, nonadherence should be considered as a possible reason. *Arch Intern Med.* 2006;166:1829-1835. September 25, 2006.

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Item 5

More Support for Coffee's Anti-diabetes Benefits

Drinking four or more cups of coffee a day could cut the risk of developing type-2 diabetes by over 23 per cent, say American and Finnish researchers.

<http://www.diabetesincontrol.com/modules.php?name=News&file=article&sid=4390>

Led by Nina Paynter from the Johns Hopkins Bloomberg School of Public Health, the scientists looked at coffee and sweetened beverage consumption and the risk of type-2 diabetes among 12,204 nondiabetic, middle-aged men and women taking enrolled in the Atherosclerosis Risk in Communities (ARIC) Study.

While no significant link between sweetened beverage consumption and type-2 diabetes was observed, the researchers do report a significant protective association amongst coffee drinkers.

The research adds to previous large prospective studies that reported a beneficial link between coffee intake and the risk of type-2 diabetes, but whether these apparent benefits are related to the caffeine content is controversial.

However, the doses reported to offer a protective effect are higher than the average worldwide daily coffee consumption of one and a half cups, while the US average is more than three and a half cups.

Paynter and her co-workers report in the *American Journal of Epidemiology* that consumption of at least four cups of coffee was associated with a 23 per cent reduction in the risk of men developing type 2 diabetes mellitus, compared to men who "almost never" drank coffee. Similar intakes in women were associated with an 11 per cent reduction of type-2 diabetes in women, although this was not statistically significant, said Paynter.

"In conclusion, a higher consumption level of coffee was associated with a decreased risk of type 2 diabetes in middle-aged adults," concluded the researchers.

Being an epidemiological study, no investigation of a potentially protective underlying mechanism was performed. Previous studies have stated that association between diabetes and coffee appears to be complex., with some scientists advocating coffee's magnesium content for improve insulin sensitivity. Additionally, the range of polyphenols, particularly chlorogenic acid, may explain some of the inverse association between coffee intake and risk of type-2 diabetes mellitus.

Some reports have stated that caffeine could also increase insulin sensitivity, but this relationship is controversial. A study published in June in the journal *Archives of Internal Medicine*(Vol. 166, pp. 1311-1316) reported that drinking six or more cups of coffee every day could reduce the risk of developing type-2 diabetes by more than 20 per cent, but if the coffee is decaffeinated, the reduction in risk rises to over 30 per cent – a result that suggested the benefits of coffee for this population group are not due to caffeine.

"Although several observational prospective studies have yielded consistent findings and although biological explanations for decreased diabetes risk with increased coffee consumption have been postulated, further research, particularly experimental studies that can examine the long-term effect of coffee consumption on glucose metabolism, insulin sensitivity, and diabetes risk, is needed before recommendations can be made about coffee drinking with respect to the prevention of type-2 diabetes," said Paynter.

American Journal of Epidemiology; Volume 164, Issue 11, Pages 1075-1084; doi:10.1093/aje/kwj323; "Coffee and Sweetened Beverage Consumption and the Risk of Type 2 Diabetes Mellitus - The Atherosclerosis Risk in Communities Study" Authors: N.P. Paynter, H-C. Yeh, S. Voutilainen, M.I. Schmidt, G. Heiss, A.R. Folsom, F.L. Brancati and W.H.L. Kao

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Multivitamin Supplements & Diabetes:

Recent research confirmed that taking a daily multivitamin and mineral supplement has a positive impact on the quality of life for people with diabetes. So regularly taking a multiple is an easy choice, but for most finding the right one to trust with their health proves to be a more difficult matter. alpha betic(r) is uniquely balanced to meet the special dietary needs of people with diabetes and those predisposed to diabetes. alpha betic(r) contains 23 important nutrients in safe and balanced doses, with no copper. For more information: [Click Here](#)

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Item 6

Diabetes Vaccine Trial Offers New Hope

Hopes for a vaccine to guard against juvenile diabetes have been boosted with the launch of a ground-breaking clinical trial in Melbourne.

<http://www.diabetesincontrol.com/modules.php?name=News&file=article&sid=4389>

The trial will use insulin administered with a nasal spray to children and young adults who are genetically predisposed to developing Type 1 diabetes.

If successful, researchers believe it could offer thousands of children protection from the disease, and the opportunity to avoid a life of constant blood-sugar monitoring, insulin injections and a regimented diet.

Researchers from the University of Melbourne's Diabetes Vaccine Development Centre are seeking 13,000 people aged between four and 30 who have a blood relative with Type 1 diabetes - and a higher risk of developing the disease - to undergo screening for the trial.

As part of the four-year program, young people will self-administer the intranasal spray every day for one week, and then once a week for a year, while receiving regular health checks to determine if the onset of diabetes has been delayed or prevented.

A spokeswoman for the National Health and Medical Research Council (NHMRC) said the nasal spray encouraged the body's protective immune cells to fight the onset of the disease.

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Do you have patients in pain? Over 4,800 Anodyne Therapy Care Providers are increasing circulation and reducing pain for thousands of patients per month. To find out how you can help your patients get back to life, click here.

http://www.diabetesincontrol.com/annodyne/anodyne10_31_01.php

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Item 7

Rosiglitazone Delays Treatment Failure in Patients with Type 2 Diabetes

Initial treatment with rosiglitazone slowed the progression to monotherapy failure more effectively than either metformin or glyburide.

<http://www.diabetesincontrol.com/modules.php?name=News&file=article&sid=4388>

Overall, the adverse effect profile differed significantly among the different agents, with the risk for congestive heart failure associated with rosiglitazone similar to metformin, a risk that was higher in both drugs when compared with glyburide.

William Herman, MD, of the University of Michigan, Ann Arbor, one of the ADOPT investigators," told Diabetes in Control Newsletter that, in terms of the primary outcome, it is clear that rosiglitazone prevents monotherapy failure as we defined it in this study," "No matter how we looked at the outcome, rosiglitazone did considerably better than glyburide and moderately better than metformin, which has come to be the standard of care. The side effect profiles of the drugs are very different though, and both treatment alternatives to rosiglitazone are generic, so there is a big cost difference. I think, based on this study, rosiglitazone would be preferred to glyburide as initial therapy, but it's more of a judgment call when it comes to metformin."

The results of study, known as A Diabetes Outcome Progression Trial (ADOPT), were presented at the World Diabetes Congress in Cape Town, South Africa, and published in the Dec. issue of *The New England Journal of Medicine*. In their article, investigators, conclude that "the relative costs of these medications, their profiles of adverse events, and their potential risks and benefits should all be considered to help inform the choice of pharmacotherapy for patients with type 2 diabetes."

In an editorial published with the ADOPT article, David Nathan, MD, of the Harvard Medical School in Boston, Massachusetts, argues that the data are simply not sufficient to consider the use of rosiglitazone as initial monotherapy in the treatment of type 2 diabetes. "Given the modest glycemic benefit of rosiglitazone (with the risk of fluid retention and weight gain) and higher cost (including the need for more statins and diuretics), metformin remains the logical choice when initiating pharmacotherapy for type 2 diabetes," writes Dr. Nathan.

Dr. Herman stated that, glycated hemoglobin levels were not selected as the primary outcome because the guidelines at the initiation of the study, which began enrollment in 2000, focused largely on plasma glucose levels.

Publishers comment: Treatment with a single drug was called a failure when a SINGLE fasting blood glucose level reached 180 or higher. It was NOT based on glycosylated hemoglobin (HbA1c), the standard gauge for glycemic control.

When comparing HbA1c levels, rosiglitazone's effect is much less impressive. Rosiglitazone keeps HbA1c at acceptable levels in 40% of patients, compared to 36% with metformin after 5 years. And glitazones such as rosiglitazone are NOT recommended first line due to their downside...weight gain... edema...and risk of congestive heart failure. And rosiglitazone costs much more than metformin.

N Engl J Med. Published online December 4, 2006.

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Dr. Bernstein will be doing another live teleconference call soon. If you would like to ask a question or just register for the free teleconference call, just go to www.askdrbernstein.com and register. There were over 600 people on the last call. More info at www.diabetes911.net

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See clinical data on the sustained benefits of BYETTA for the treatment of type 2 diabetes. BYETTA delivers sustained glycemic control, with most patients losing weight, and simple, fixed BID dosing before morning and evening meals. Click here:

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Item 8

Twice Daily 70/30 Insulin + Metformin Vs. Lantus + Glimepiride in Type 2's

Which treatment therapy was more effective?

<http://www.diabetesincontrol.com/modules.php?name=News&file=article&sid=4387>

Purpose of the study was to compare the efficacy and safety of two analog insulins as starting regimens in insulin-naive Type 2 diabetes patients.: In this randomized, open-label parallel study, twice-daily biphasic insulin aspart 30 (30% soluble and 70% protaminated insulin aspart; BIAsp 30) plus metformin (met) was compared with once-daily insulin glargine (glarg) plus glimepiride (glim) in 255 insulin-naive patients (131 male; mean \pm -SD age, 61.2 \pm -9.1 years).

Mean baseline HbA (1c) (\pm -SD) was 9.2 \pm -1.4% and 8.9 \pm -1.3% for BIAsp 30 plus met (N=128) and glarg plus glim (N=127), respectively (P=0.0747). Primary endpoint was the difference in absolute change in HbA (1c) between groups after 26 weeks of treatment

The results showed that HbA1c change was significantly greater in the BIAsp 30 plus met group than the glarg plus glim group (between-group difference: -0.5% (95% CI: -0.8; -0.2); P=0.0002). Mean prandial plasma glucose increment was significantly lower for BIAsp 30 plus met compared with glarg plus glim: 1.4 \pm -1.4 mmol/l vs. 2.2 \pm -1.8 mmol/l; P=0.0002. During the maintenance phase (weeks 6-26), one major hypoglycemic episode occurred in each group; 20.3% and 9% of patients experienced minor hypoglycemic episodes in the BIAsp 30 plus met and glarg plus glim groups, respectively (P=0.0124). At end-of-trial, mean daily insulin doses were 0.40 U/kg BIAsp 30 and 0.39 U/kg glarg. Glarg plus glim-treated patients experienced significant weight gain of 1.5 kg (95% CI: 0.84; 2.19; P<0.0001). Weight change with BIAsp 30 plus met of +0.7 kg was not statistically significant (95% CI: -0.07; 1.42; P=0.0762).

From the results it was concluded that starting insulin in Type 2 diabetes patients with twice-daily BIAsp 30 plus met can reduce HbA (1c) and mean prandial plasma glucose increment to a greater extent than once-daily glargine and glimepiride.

[Exp Clin Endocrinol Diabetes. 2006 Oct;114\(9\):527-32.](#)

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Proc Natl Acad Sci 2006;103:17438-17443.

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FACT:

Cure for Diabetes: For all those out there suffering from type 1 diabetes, there may now be hope for a cure. Type 1 diabetes occurs when the body's own immune system destroys the insulin-producing cells of the pancreas. An article in the Nov. 24 issue of Science Magazine talks about the most recent findings of research tests done on mice. In these experiments, the mice were given injections and infusions of insulin and spleen cells. The experiment resulted in the cure of 32 percent of the mice of their established diabetes.

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Item 9

'Double Diabetes' a New Threat: 1 Plus 2 Equals 3

The obesity epidemic is leading more people to develop type 1 and type 2 disease.

<http://www.diabetesincontrol.com/modules.php?name=News&file=article&sid=4386>

Despite the flurry of public service campaigns and education efforts, the diabetes epidemic in the United States continues to escalate out of control.

An estimated 20.8 million Americans -- or 7 percent of the population -- are now believed to be diabetic. Of those, 6.2 million people have the disease but don't know it. And that doesn't include the 41million people with pre-diabetes.

In fact, the epidemic has become so pervasive that doctors are now finding patients who suffer from *both* type 1 and type 2 diabetes -- a phenomenon known as "double diabetes" or "hybrid diabetes."

"It's mostly people who have type 1 diabetes who become overweight and show the profile of a type 2, with obesity and hypertension," said Dr. Stewart Weiss, an assistant clinical professor of medicine at New York University School of Medicine in New York City.

Doctors and health-care experts are urging people to take the steps necessary -- basically proper nutrition and plenty of exercise -- to avoid joining the ranks of those already diagnosed with the disease.

Type 1 diabetes is caused by the body's inability to produce insulin, the hormone that ushers blood sugar -- called glucose -- to cells for energy. An estimated 5 percent to 10 percent of Americans with diabetes have type 1 disease. Type 2 diabetes results from insulin resistance -- the body's inability to properly use the hormone. Most Americans diagnosed with diabetes have type 2 diabetes, and excess weight and lack of exercise are big contributors to this form of the disease.

But, doctors are now seeing strong indications that double diabetes is a growing phenomenon. For instance, recent studies suggest that as many as 30 percent of newly diagnosed diabetes cases among children involve youngsters with both type 1 and type 2 diabetes.

Generally, double-diabetes sufferers will often look as though they have the more common type 2 version because they're overweight. But subsequent blood tests reveal they also have type 1 disease.

Double diabetes takes the suffering caused by the disease a step further, and complicates efforts to treat it.

Type 1 diabetics normally have to take daily injections of insulin to remain healthy, while type 2 diabetics require different medication and regular monitoring of their blood sugar. Doctors now are researching how to juggle treating both types of diabetes in the same patient, Weiss said.

"We have all sorts of medications that address different problems for different types of diabetes," Weiss said. "The question with double diabetes becomes, when can we use the different types of medications and what would be appropriate for different patients?"

Weiss suspects that double diabetes might be caused, in part, by type 1 diabetics who are taking insulin but haven't made the other lifestyle changes necessary to deal with the disease.

"One of the consequences of proper insulin use is weight gain," he said. "Often, patients who have not had a good understanding of how to eat are taking the insulin to cover what they normally eat."

The federal Diabetes Prevention Program study found that diet and exercise actually worked better than some medications in delaying the development of diabetes, according to the association. Just 30 minutes a day of moderate physical activity, coupled with a five percent to 10 percent reduction in body weight, produced a 58 percent reduction in diabetes.

Weiss recommends improving diet by eating more vegetables, fewer starches and more lean meat and fish. "I like to say there's no medication that can overcome a bad diet," he said.

He also said people should not only eat healthier, but they should try to eat less, too.

"The problem really is overeating in general," he said. "The portion size put before us is very large, so portion control is the single most important thing. You've got to know when to say when."

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Item 10

New York City Bans Trans Fat

Department of Health of NY City, shows Trans Fats the Door, after voting unanimously to ban the substance from the city's restaurants.

<http://www.diabetesincontrol.com/modules.php?name=News&file=article&sid=4385>

Partially hydrogenated vegetable oil, also known as trans fat, was officially shown the door today in New York City as the department of health voted unanimously to ban the substance from the city's restaurants.

Under the approved ban, restaurants have until July 1, 2007 to switch to oils, margarine, and shortening with less than 0.5 g of trans fat per serving and until July 1, 2008 to eliminate trans fat from all other foods. The New York City plan is believed to affect approximately 24 000 establishments, ranging from McDonald's and Burger King to chic bistros and neighborhood delis. The new rules allow restaurants to serve foods that come in the manufacturer's original packaging.

The proposed ban to eliminate trans fat and to make caloric labeling mandatory, another measure approved by the department of health, was supported by a number of organizations, including the **American College of Cardiology, American Diabetes Association, National Hispanic Medical Association, the American Academy of Pediatrics**, and the **Center for Science in the Public Interest**. The **American Heart Association** offered only conditional support for the ban, saying it would prefer the plan be phased in slowly, which would give restaurants time to adapt, as well as ensuring that heart-healthy oils were available, both physically and financially, to restaurants looking to make the change.

Health Commissioner **Dr Thomas Frieden** said officials took concerns from the restaurant industry into consideration, noting that the board of health extended the amount of time they would have to replace trans fat cooking oils and shortening, as well as the amount of time needed to phase trans fat out altogether. "We know that trans fats increase the chance of heart attack, stroke, and death, and they don't have to be there," Frieden told a news conference after the vote.

A spokesperson for the **National Restaurant Association**, one of the groups that did not support the ban, told the *New York Times* that the proposals were "an attempt at misguided social engineering by a group of physicians that don't understand the restaurant industry. [1]"

Newman M. City health board approves ban on trans fats. *New York Times*, December 5, 2006. Available at: <http://www.nytimes.com>.

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Item 11

Protein Beverage Reduces Hyperglycemia in Type 2 Diabetes

Drinking a protein hydrolysate/leucine beverage with meals reduces the prevalence of hyperglycemia in patients with type 2 diabetes, according to a new report.

<http://www.diabetesincontrol.com/modules.php?name=News&file=article&sid=4384>

Dr. Ralph J. F. Manders from Maastricht U, states that, "The current study shows for the first time that co-ingestion of a protein hydrolysate/leucine mixture effectively improves glycemic control in a group of long-standing type 2 diabetes patients under actual real-life conditions.

Dr. Manders and colleagues used continuous glucose monitoring to assess the impact of protein hydrolysate/leucine ingestion with each main meal as a nutritional strategy to improve daily glycemic control in 11 long-standing type 2 diabetic patients.

In the crossover trial, the patients had significantly lower 24-hour glucose concentrations during the protein beverage phase, with an 11% decline in the overall glucose response, the investigators report.

The prevalence of hyperglycemia was 39% during the protein beverage period of the trial, the results indicate, compared with 55% during the placebo period.

"Nutritional interventions (i.e., protein/amino acid) can be applied as an effective strategy to improve daily glycemic control in patients with type 2 diabetes," Dr. Manders concluded.

"In future studies we want to further elucidate the potential of protein (hydrolysates) and/or specific amino acids as pharmaconutrients in the prevention and treatment of type 2 diabetes," Dr. Manders added.

Diabetes Care 2006;29:2721-2722.

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DID YOU KNOW:

Global Prevalence of Diabetes Set to Top 380 Million by 2025: The global diabetes epidemic is projected to affect 7% of the world's adult population by 2025 as developing countries embrace bad health habits associated with affluence. The stark picture painted by the rapid worldwide spread of the disease -- expected to affect 380 million people in 20 years time -- was illustrated by a new "Diabetes Atlas," launched at the World Diabetes Congress in Cape Town. Experts say diabetes kills as many people as HIV/AIDS and is emerging as one of the chief public health challenges of the 21st Century, especially in developing nations. The IDF estimates that

diabetes already affects 246 million across the world, up from just 30 million two decades ago. Diabetes is blamed for the deaths of about 3.8 million people each year, mostly through complications such as strokes and heart attacks.

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Item 12

After Gestational Diabetes, Postpartum Glucose Goes Unchecked

Only 45% women in the cohort underwent postpartum glucose testing, as recommended.

<http://www.diabetesincontrol.com/modules.php?name=News&file=article&sid=4383>

Rates of postpartum glucose testing after gestational diabetes are low, according to a retrospective study of 344 women with GDM who received prenatal care in a maternal diabetes clinic in Rhode Island between 2001 and 2004.

According to a report in the December issue of Obstetrics and Gynecology, only 45% women in the cohort underwent postpartum glucose testing, as recommended by the American Diabetes Association and the American College of Obstetricians and Gynecologists.

More than one third of those tested (36%) had persistent abnormal glucose tolerance, Dr. Michelle A. Russell, from the Department of Veterans Affairs Medical Center in White River Junction, Vermont, and colleagues report.

The only factor strongly associated with postpartum glucose tolerance testing was attending a postpartum doctor's appointment. The rate of testing was three-fold higher in those who attended a postpartum visit compared with those who did not (54% versus 17%).

There were no demographic or clinical factors that predicted postpartum glucose tolerance testing.

This study, the authors say, confirms that women with GDM are at increased risk of persistent glucose intolerance after delivery and shows that "many are not retested postpartum."

They conclude: "With the magnitude of the public health problem posed by the rising incidence of diabetes in the United States, further attention needs to be given to these high-risk women, including identifying and eliminating obstacles to postpartum care and glucose testing."

Obstet Gynecol 2006;108:1456-1462.

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Item 13

Diet Drug Acomplia (Rimonabant) Lowers Blood Sugars and Reduces Weight

New study results show patients with an HbA1c level of at least 8.5 when they started taking Acomplia saw their blood sugar level decrease 1.9 points compared to 0.7 points in patients on a placebo.

<http://www.diabetesincontrol.com/modules.php?name=News&file=article&sid=4382>

Diet drug Acomplia (rimonabant) can significantly improve blood sugar levels in patients with type 2 diabetes while also helping them reduce their weight, according to clinical trial data released December 5th.

The results of the SERENADE (Study Evaluating Rimonabant Efficacy in Drug Naive Diabetic Patients) trial, a six-month study, were announced at the World Diabetes Congress in Cape Town, last week. The SERENADE study involved 278 patients with type 2 diabetes who were not taking any diabetic drugs.

In the study, blood sugar levels of half of the patients on Acomplia fell to below 7 percent -- the target set by the American Diabetes Association for good glucose control -- and the patients taking Acomplia lost almost 15 pounds of weight compared to 6 pounds for those on a placebo.

The trial showed that HbA1c levels (a measure of blood glucose) in patients with a baseline average of 7.9 who took a 20 mg Acomplia pill once daily fell 0.8 percentage points compared to a drop of 0.3 points in those taking a placebo.

Patients with an HbA1c level of at least 8.5 when they started taking Acomplia saw their blood sugar level decrease 1.9 points compared to 0.7 points in patients on a placebo.

"It is extraordinary that in this last group -- about 25 percent of the participants -- rimonabant was as efficient as several of the best anti-diabetic treatments," said Marc Cluzel, head of international development scientific and medical affairs for drug developer Sanofi-Aventis. In addition, the waist circumference of patients in the trial who were on Acomplia shrank 2.34 inches compared to less than an inch for those on a placebo. Those on Acomplia also saw improvements in their HDL (good) cholesterol and triglycerides (bad fats in the blood).[C](#)

The rate of patients leaving the trial before the finish due to adverse effects -- including dizziness, nausea, anxiety, depressed mood and headache -- was 9.4 percent for those on Acomplia and 2.1 percent for those on placebo.

Sanofi's previous one-year diabetes trial, RIO Diabetes, focused on obese and overweight patients with type 2 diabetes who already were being treated with a diabetes drug. In the SERENADE trial, 5 percent of the diabetic patients were not obese or overweight, and none had been on any diabetes drugs prior to starting on Acomplia.

Acomplia has been approved as a diet pill in the European Union, Mexico and Argentina, but has been bogged down for months for reasons never disclosed by Sanofi-Aventis at the U.S. Food and Drug Administration.

Sanofi aims to position Acomplia, which switches off the same brain circuits that make people hungry when they smoke cannabis, to help treat obesity-related ailments such as heart conditions linked to blood pressure and high cholesterol.

Sanofi clearly intends to ultimately seek to get a diabetes indication added to the weight-loss indication, in hopes that this will bolster prospects that European governments and ultimately U.S. health insurers will pay for what is otherwise a quite expensive prescription drug.

In the news conference, results of the SERENADE trial were presented by Dr. Julio Rosenstock, a Professor of Medicine at the University of Texas Southwestern Medical School in Dallas.

Also participating in the news conference was Dr. André Scheen of the University of Liège in Belgium; Dr. Luc van Gaal, a professor at University Hospital Antwerp in Belgium; and Nick Finner, an honorary consultant in obesity medicine at Addenbrooke's Hospital in Cambridge, United Kingdom.

Announced at the World Diabetes Congress in Cape Town 12-06-06

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FACT:

Type 2 Diabetes Epidemic In Asia: India and China have the greatest numbers of people with diabetes in the world, and by 2025 they could each have 20 million affected individuals. The proportion of people with type 2 diabetes and obesity has increased throughout Asia, and the rate of increase shows no sign of slowing. Type 2 diabetes has now reached epidemic levels in Asia, according to a new survey. India and China have the greatest numbers of people with diabetes in the world, and by 2025 they could each have 20 million affected individuals. In Korea, Indonesia, and Thailand, the prevalence rates of type 2 diabetes have increased three-fold to five-fold during the past 30 years. "Although the prevalence in Asia is currently similar to that in the US, the rate at which diabetes has increased and the likelihood that it will continue to increase at this rate, provide substantial grounds for concern," states Professor Yoon. "The cost of inaction is clear and unacceptable". *Lancet Nov 20, 2006*

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Item 14

New Data Shows Sitagliptin + Metformin Reduces Both Prandial and Fasting Blood Glucose

Data Support JANUMET™, an Investigational Combination Therapy of Sitagliptin Phosphate Plus Metformin for Type 2 Diabetes

<http://www.diabetesincontrol.com/modules.php?name=News&file=article&sid=4381>

Initial treatment with sitagliptin phosphate 50 mg twice daily in combination with metformin 1,000 mg twice daily provided substantial reductions of post prandial, or post-meal, glucose (PPG) levels and fasting plasma glucose (FPG) levels in patients with type 2 diabetes, according to new data. Patients with a mean baseline 2-hour PPG of 287 mg/dL (n=152) achieved reductions of 117 mg/dL, and patients with a mean baseline FPG of 197 mg/dL (n=180) achieved reductions of 70 mg/dL, compared to placebo (primary analysis of all patients treated, p<0.001).

"Typically, oral medications for type 2 diabetes principally either reduce post-meal glucose levels or reduce fasting blood glucose levels. These study data are important because they showed substantial reductions in both measures of blood glucose levels, PPG and FPG, with sitagliptin phosphate plus metformin," said John Amatruda, M.D., vice president, clinical research, Merck & Co., Inc.

The American Diabetes Association (ADA) recommends that post prandial (PPG) levels should be below 180 mg/dL, and pre-prandial (FPG) levels should not rise above 130 mg/dL in patients with type 2 diabetes. Blood glucose levels both after meals and after fasting contribute to the A1C level, which is a commonly used measure of a person's average blood glucose over a two- to three-month period.

This study is part of the clinical program supporting JANUMET, an investigational therapy combining Merck's sitagliptin phosphate with metformin. In the study, combination treatment with sitagliptin phosphate plus metformin was generally well tolerated and showed no meaningful differences in tolerability compared to metformin alone. Side effects of combination treatment with sitagliptin phosphate 50 mg twice daily plus metformin 1,000 mg twice daily compared to metformin 1,000 mg twice daily alone included diarrhea (9 percent vs. 10 percent, respectively), nausea (6 percent vs. 8 percent, respectively), abdominal pain/discomfort (3 percent vs. 5 percent, respectively) and vomiting (3 percent vs. 1 percent, respectively).

A1C efficacy results of sitagliptin phosphate plus metformin as initial therapy

This 24-week, randomized, double-blind, placebo-controlled study involved 1,091 untreated patients with type 2 diabetes (mean baseline A1C = 8.8 percent). After a run-in period of diet, exercise and/or placebo, patients were randomized to receive one of six daily treatments: sitagliptin phosphate 50 mg/metformin 500 mg twice daily (n=190), sitagliptin phosphate 50 mg/metformin 1,000 mg twice daily (n=182), metformin 500 mg twice daily (n=182), metformin 1,000 mg twice daily (n=182), sitagliptin phosphate 100 mg once daily (n=179), and placebo (n=176).

As previously disclosed at a meeting of the European Association for the Study of Diabetes (EASD) in September, this study demonstrated a significant mean placebo-subtracted reduction in A1C of 2.1 percent from a mean baseline A1C of 8.7 percent (primary analysis of all patients treated, p>0.001) in the patients treated with sitagliptin phosphate 50 mg twice daily combined with metformin 1,000 mg twice daily, as initial therapy.

In clinical trials, JANUVIA demonstrated an overall incidence of side effects comparable to placebo. The most common side effects reported with JANUVIA (greater than or equal to 5 percent and higher than placebo) were stuffy or runny nose and sore throat, upper respiratory infection, and headache.

Presented at the 19th World Diabetes Congress in Cape Town.

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Item 15

Skin Autofluorescence Reflects Vascular Damage in Type 2 Diabetes

Skin autofluorescence, as a measure of the accumulation of advanced glycation end products (AGEs) in tissue, may serve as an indicator of vascular damage in patients with type 2 diabetes, according to a new report.

<http://www.diabetesincontrol.com/modules.php?name=News&file=article&sid=4380>

"By linking skin autofluorescence to AGE accumulation and, therefore, to cumulative glycemic and oxidative damage in diabetes, we aim to create a tool that is able to give a rapid impression of the risk for diabetes complications," the authors explain.

Dr. Helen L. Lutgers from University Medical Center Groningen, the Netherlands, and colleagues investigated the association between skin autofluorescence and micro- and macrovascular complications in 973 patients with type 2 diabetes.

Autofluorescence was measured on the volar side of the forearm, by illuminating the skin with an 8 W blacklight and quantifying the levels of emission light.

Mean skin autofluorescence was 33% higher among type 2 diabetics than among controls, the investigators report, and this difference persisted across age categories.

Patients with both micro- and macrovascular complications had higher mean skin autofluorescence than did patients without complications and patients with only microvascular complications. Patients with macrovascular complications also had higher mean skin autofluorescence than did patients without complications, the researchers note.

Increased skin autofluorescence was also associated with increased age, female sex, current tobacco use, increased diabetes duration, increased plasma creatinine and glycated hemoglobin, and decreased HDL cholesterol, the report indicates.

"In this study, we showed that increased levels of skin autofluorescence [were] related to the extent of diabetes-related complications," the authors conclude.

"In a 4-year follow-up study," they add, "the progression of micro- and macrovascular complications, as well as mortality, is now (being) evaluated in the current study group of type 2 diabetic patients to analyze whether skin autofluorescence contributes to the prediction of the development or progression of diabetes complications."

Diabetes Care 2006;29:2654-2659.

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Quote of the Week!

"Opportunity is missed by most people, because it is dressed in overalls and looks like work."

Thomas Edison (1847-1931) inventor, salesman

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