

# TO YOUR GOOD HEALTH

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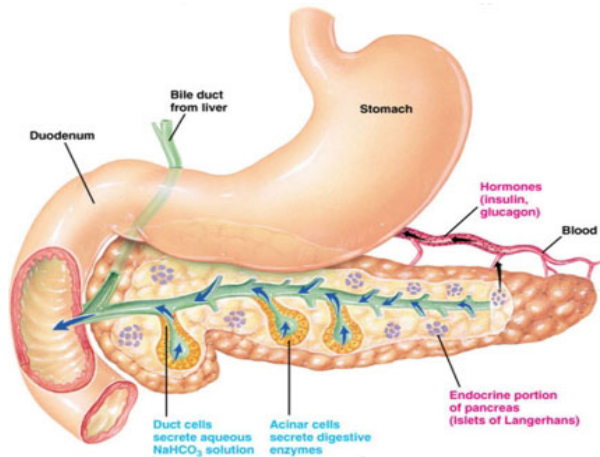
## Artificial Pancreas Is on the Way

JDRF (Juvenile Diabetes Research Foundation) has provided impetus to the development of an artificial pancreas to better manage the blood sugar of people with Type 1 diabetes. JDRF is funding investigations at leading academic institutions to test novel insulin formulations and delivery systems that speed insulin making it work faster than insulin currently used by diabetics. The objective is to use the faster-acting insulin in an artificial pancreas system to more closely mimic a human pancreas in sensing blood sugar

and secreting insulin in response. The new JDRF insulin initiative is another component in a four-year artificial pancreas program which

looks to automate blood sugar control by combining continuous glucose monitors with insulin pumps and a sophisticated computer program that links the two.

Earlier clinical studies demonstrated the system does work. But one of the missing pieces was to develop an insulin that works faster.



Source: Juvenile Diabetes Research Foundation International

## Heat Shock Protein Restores Nerve Damage

Researchers have been able to use a common protein to reverse the loss of function in the nerves of mice with diabetes. This scientific breakthrough has potential for those suffering diabetic peripheral neuropathy (DPN).

DPN is a common complication of diabetes and leads to high levels of pain and numbness in the extremities. There is no cure. Treatments have been limited to blood sugar control and pain management.

University of Kansas scientists suggest the new cellular shock treatment could be used in the future to cure the loss of feeling in the limbs that afflicts many diabetics.

Source: Biochemical Society, Article in ASN NEURO.

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## \$83 Billion: Annual Hospital Price Tag for Treatment of Diabetes

Something to consider: Hospitals in our country spent \$83 billion in 2008 caring for people with diabetes. Nearly one of every five hospitalizations involved a person with diabetes. The amount is 23% of what hospitals spent to treat all conditions in 2008.

The West had the lowest hospitalization rate for diabetes, 1,866 per 100,00 persons. The South had the highest rate, 2,829 per 100,000 persons.

Source: Agency for Healthcare Research and Quality

## Food Myths for Diabetics Debunked

Here are a few from Amy Campbell, nutritionist at the Joslin Diabetes Center:

### 1. *Diabetics have to eat different foods than the rest of the family.*

Not so. Diabetics can eat the same foods as the rest of their family. Current nutrition guidelines are very flexible and offer many choices, allowing diabetics to fit in favorite or special-occasion foods. Everyone, diabetic or not, should eat a healthful diet that consists of fruits, vegetables, whole grains, lean protein foods and heart-healthy fats.

### 2. *People with diabetes should never give in to cravings.*

Everyone has food cravings at some point. It's not uncommon for diabetics to cut out all sweets or even cut way back on food portions in order to lose weight. In turn, your body responds to these drastic changes by creating cravings. Nine times out of ten, your food choices tend to be high in fat and/or sugar, too.

The best way to deal with cravings is to try and prevent them by following a healthy eating plan that lets you occasionally fit sweets into your diabetes meal plan. If a craving does occur, let yourself have a small taste of whatever it is you want. By doing so, you can enjoy the flavor and avoid overeating later on.

## Infrared Light to Measure Blood Sugar

Folks at the Massachusetts Institute of Technology's (MIT) spectroscopy laboratory are developing a small spectroscopy machine, the size of a laptop computer, that can reveal blood glucose levels by scanning a patient's arm or finger

with near-infrared light, eliminating the need to draw blood.

The technology has been in development for some 15 years, but only now have researchers come up with a method that more accurately measures

blood glucose with the light system.

A clinical study is planned to test the system in coming months.

Source: MIT, reported in the journal, *Analytical Chemistry*



# Brown Rice, White Rice: Which is Best for You?



The verdict: Brown rice. That's the conclusion of researchers after a study of more than 197,000 adults who were tracked for 22 years. They found that eating more refined white rice was associated with higher risk of Type 2 diabetes, while eating more brown rice was associated with a lower risk of the disease.

Consumption of rice in the United States has tripled since the 1930s. However, most of it is refined white rice which is stripped of its fiber, vitamins and minerals in the refining process and is more likely to fuel an increase in blood sugar after eating than healthier whole grain brown rice. Current US dietary guidelines recommend that at least half of carbohydrates in the diet come from

whole grains.

The researchers at Harvard School of Public Health and Brigham and Women's Hospital said the public should pay special attention to their carbohydrate intake and try to replace refined carbohydrates, including white rice, with whole grains.

Source: *Archives of Internal Medicine*, June 14, 2010



## Milk... Your Best Post-Exercise Drink

Nothing like a refreshing glass of fat-free milk after a workout. That's what researchers at McMaster University in Canada confirmed after a study of young women who completed a rigorous 12-week resistance-training program. Researchers wanted to determine how drinking fat-free milk compared to drinking carbohydrate-based energy drinks after exercising.

At the end of the study, it was found that lean muscle mass had increased in both groups.

However, women in the group drinking the energy drinks had gained weight, while those in the milk-drinking group had lost fat. The findings echo previous research showing that post-exercise milk consumption increases muscle mass and fat loss in men.

Moral of the findings for diabetics: Exercise good. Sugar-laden energy drinks not good.

Source: *Medicine & Science in Sports & Exercise journal*.



**'Traffic Light' Food Labels**

The European Parliament has been considering new food labels that include a "traffic light" system with a red, amber or green code to designate how much fat, saturated fat, salt and sugar the product contains.



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