

# Greek-Style Coffee May Aid Arterial Elasticity

BY BRUCE JANCIN

FROM THE ANNUAL CONGRESS OF THE EUROPEAN SOCIETY OF CARDIOLOGY

STOCKHOLM – The fountain of youth just might be a basin filled with rich, strong coffee, a study of one of the world's longest-lived people indicates.

“Our results suggest that drinking coffee in moderation should be encouraged even in elderly hypertensive subjects, as it seems it may improve arterial aging. Maybe regular coffee consumption is one of the key elements of the longevity we have noticed in the Ikaria Islanders, Dr. Christina Chrysohoou mused.

The Aegean Sea island of Ikaria has one of the world's highest proportions of individuals who survive into their 90s and 100s. Residents of the isolated Greek island were featured in “The Blue Zones: Lessons for Living Longer From



**Consumption of 1-2 cups/day was an independent predictor of enhanced arterial elasticity.**

DR. CHRYSOHOOU

the People Who've Lived the Longest,” by Dan Buettner (National Geographic Books, 2008).

Seeking an explanation for the Ikarians' exceptional longevity, last year Dr. Chrysohoou led a 5-month University of Athens-sponsored in-depth study of 343 male and 330 female long-time residents aged 65-100 years. As a cardiologist, Dr. Chrysohoou said, one of the factors she was particularly eager to examine was coffee consumption, since it is a deeply embedded part of the Ikarian way of life, and also because coffee – especially Greek-style coffee – is a rich source of antioxidants and anti-inflammatory compounds, which could have a salutary effect on cardiovascular risk.

This indeed appeared to be the case. Among the 465 study participants being treated for hypertension, those who were moderate coffee drinkers – averaging 1-2 of the traditional small 50-mL cups daily – had a significantly lower prevalence of diabetes, dyslipidemia, and cardiovascular disease as well as a lower mean body mass index and higher creatinine clearance than did hypertensive non-coffee drinkers (see box, next page).

Of particular interest was the finding that moderate coffee drinkers with hypertension had significantly greater aortic distensibility as measured echocardiographically than did hypertensive subjects who consumed coffee rarely or never. Consumption of 1-2 cups/day remained an independent predictor of enhanced arterial elasticity after adjustment for potential confounders such as age, physical activity, body mass index, blood pressure, education, diabetes, smoking, and diet.

Islanders who drank less than 1 cup or at least 3 cups of coffee per day did not



©ROBERT BROWN/FOTOLIA.COM

derive any benefit in terms of aortic distensibility compared with coffee teetotalers. This is probably because modest quaffers do not obtain adequate quantities of the beneficial polyphenolic compounds and other micronutrients, while people who consume 3 or more cups daily ingest so much caffeine that the pressor response outweighs the positive effects of the micronutrients, according to Dr. Chrysohoou.

Traditional Greek coffee is very strong and dark. It is made by boiling the beans for 2-3 minutes. The resultant beverage contains up to 50 times greater concentrations of cafestol, kahweol, and other diterpenes than those of filtered coffee. Greek coffee also is rich in flavonoids, niacin, magnesium, potassium, and vitamin E, she explained.

One caveat regarding the study findings is that coffee drinking on Ikaria is very

## Easy to teach<sup>1</sup>

- Can be used in 6 straightforward steps

## Easy to use<sup>1</sup>

- Only long-acting insulin pen in which dose can be set from 1 to 80 units in 1-unit steps, dialed both up and down
- Once opened, Lantus<sup>®</sup> SoloSTAR<sup>®</sup> can be used for up to 28 days and is not refrigerated

## Easy to inject<sup>1</sup>

- Dose cannot be dialed past the number of units left in the pen
- It is important to keep the injection button pressed all the way in and to **slowly count to 10 before withdrawing the needle from the skin**. After a full injection, the number in the dose window will return to zero. These steps help ensure that the full dose has been delivered
- To help ensure an accurate dose each time, patients should follow all steps in the Instruction Leaflet accompanying the pen; otherwise they may not get the correct amount of insulin, which may affect their blood glucose

## Important Safety Information for Lantus<sup>®</sup>

### Contraindications

Lantus<sup>®</sup> is contraindicated in patients hypersensitive to insulin glargine or one of its excipients.

### Warnings and precautions

Monitor blood glucose in all patients treated with insulin. Insulin regimens should be modified cautiously and only under medical supervision. Changes in insulin strength, manufacturer, type, or method of administration may result in the need for a change in insulin dose or an adjustment in concomitant oral antidiabetic treatment.

Do not dilute or mix Lantus<sup>®</sup> with any other insulin or solution. If mixed or diluted, the solution may become cloudy, and the onset of action/time to peak effect may be altered in an unpredictable manner. Do not administer Lantus<sup>®</sup> via an insulin pump or intravenously because severe hypoglycemia can occur. Insulin devices and needles must not be shared between patients.

Hypoglycemia is the most common adverse reaction of insulin therapy, including Lantus<sup>®</sup>, and may be life-threatening.

Severe life-threatening, generalized allergy, including anaphylaxis, can occur.

A reduction in the Lantus<sup>®</sup> dose may be required in patients with renal or hepatic impairment.

### Drug interactions

Certain drugs may affect glucose metabolism, requiring insulin dose adjustment and close monitoring of blood glucose. The signs of hypoglycemia may be reduced in patients taking anti-adrenergic drugs (e.g., beta-blockers, clonidine, guanethidine, and reserpine).

### Adverse reactions

Other adverse reactions commonly associated with Lantus<sup>®</sup> are injection site reaction, lipodystrophy, pruritus, and rash.

## Indications and Usage for Lantus<sup>®</sup>

Lantus<sup>®</sup> is a long-acting insulin analog indicated to improve glycemic control in adults and children (6 years and older) with type 1 diabetes mellitus and in adults with type 2 diabetes mellitus. Lantus<sup>®</sup> should be administered once a day at the same time every day.

Important Limitations of Use: Lantus<sup>®</sup> is not recommended for the treatment of diabetic ketoacidosis. Use intravenous short-acting insulin instead.

Lantus<sup>®</sup> SoloSTAR<sup>®</sup> is a disposable prefilled insulin pen.

**Please see brief summary of full prescribing information for Lantus<sup>®</sup> on the next page.**

References: 1. Data on file, sanofi-aventis U.S. LLC. 2. Lantus Prescribing Information. September 2009.

much a social experience. The elderly study participants generally take their coffee while socializing in the morning or early afternoon with long-time friends in tavernas and cafés, or with family at home. Coffee consumption on the island is a relaxing, unhurried experience enjoyed while discussing daily events.

"The psychological and social circumstances play an important role," she observed.

"I'm a clinical cardiologist, and most clinicians forbid coffee for their hypertensive patients," noted Dr. Xavier Bosch of the University of Barcelona, who

added he will reconsider his stance as a result of the Greek study.

The other key factor Dr. Chrysohoou and her coworkers identified as likely to contribute to the extended life expectancy of Ikaria Islanders is that these oldest residents are of a generation that tends to adhere most strictly to the traditional Mediterranean diet as popularized by the late University of Minnesota cardiovascular epidemiologist Dr. Ancel Keys, also known for formulating K-rations in World War II.

Dr. Chrysohoou declared having no financial conflicts. ■

**Key Characteristics of Greek Moderate Coffee Drinkers**

	Coffee Consumption	
	1-2 cups/day	Rarely or never
Prevalence of diabetes	22%	34%
Prevalence of dyslipidemia	41%	55%
Prevalence of diagnosed cardiovascular disease	19%	26%
Mean BMI (kg/m <sup>2</sup> )	28	29
Creatinine clearance (mL/min per 1.73 m <sup>2</sup> )	70	65

Notes: Data from a study of 465 Ikaria residents aged 65-100 years on current treatment for hypertension. All differences are statistically significant.  
Source: Dr. Chrysohoou

ELSEVIER GLOBAL MEDICAL NEWS

For patients with diabetes using an insulin vial and syringe

# Take aim with the Lantus® SoloSTAR® pen

**Delivers 50% more insulin units per prescription for the same co-pay as a vial and syringe on most insurance plans**



Prefilled with Lantus®, the only 24-hour insulin approved exclusively for use once a day to help patients with diabetes aim toward glycemic control<sup>2</sup>

Once-Daily  
24-HOUR  
**LANTUS® SoloSTAR®**  
insulin glargine [rDNA origin] injection  
**STARring the #1-prescribed insulin<sup>a</sup>**

<sup>a</sup>Based on TRx data from IMS Health, NPATM Monthly database, time period from May 2003 to March 2010.

