

# Greeks are No. 1 in Europe in using antibiotics

Experts warn that the unlimited use of these medications hides a danger because a person might travel back in the ages before antibiotics, when infections were deadly. Measureless use of antibiotics makes microbes more resistant and this creates the life danger. It is scientifically proven that antibiotics start fighting microbes if their boundless use is stopped between three and six months.

Prof. Eleni Gimarelou from the Thessaloniki Hospital AHEPA noted that there are 160 types of antibiotics right now on the Greek market and despite that, a patient might die because he/she is infected with a resilient to all antibiotics microbe.

Dr. Gimarelou is basing her statements on a research about the use of antibiotics, in which 5000 people participated from the Attika region. The research showed that 70% of the surveyed have taken antibiotics in the last six months and 80% of the ones who answered are under 44 years old.

According to the data from the research, Greeks use too much antibiotics, because they don't know, in which cases to take them. And even though antibiotics are not supposed to be taken for flu, cold, high temperature, or viruses, 38% of the surveyed said that antibiotics cure the flu, 35% believe that they lower the temperature and 64% are certain that antibiotics kill viruses.

Based on the same research, parents are giving their children antibiotics without consulting with a doctor beforehand. But Dr. Gimarelou notes that doctors are not faultless in giving out medicines. Antibiotics are very often misused when given to children, shows a research done among pediatricians in Greece.

5-6 out of 10 mothers have antibiotics in their first aid home kit and 20%-40% give their children antibiotics without a prescription from a pediatrician and in case the pediatrician refuses to prescribe them, then 20% of mothers continue to insist on it or they just change their doctor.

## Sound of long-lost Ancient Greek instruments recreated by computer experts

The long-lost sounds of the epigonion, the salpinx and the kithara could be about to form the strangest musical group yet, thanks to the world's largest physics project. The epigonion, a harp-like musical instrument, was last played in Ancient Greece. But computer scientists have resurrected its sound as part of a project to conjure up an orchestra of long-lost instruments.

They don't know exactly what it looked like but they have used historical sources to re-create what it would have sounded like.

"It is a really interesting sound, metallic, crisp and bright," said Domenico Vicinanza, a Cambridge-based engineer who worked with the Italian project Astra.

"It fits perfectly in Middle Ages and baroque music ensembles, melding wonderfully with strings and woodwinds."

At a conference in Italy at the weekend, musicians played ancient scores on the epigonion, using an electronic keyboard that simulated its sound.

Now the team is working to bring more old instruments back to life. Next on their list are the salpinx, a trumpet-like instrument of the Ancient Greeks, and the kithara, a type of lyre that was played in the courts of Rome and Athens.

The ultimate aim is a concert played on instruments that have not been heard for more than 2,000 years. The idea and mathematical concepts behind remodelling early instruments have been around since the 1970s, but the amount of information that needed to be processed to put the theories into practice was too great for earlier computers.

Now researchers can tap into the massive computing power of the Grid, a network of computers set up to crunch the enormous amounts of data expected to spill out of the Large Hadron Collider at the CERN nuclear research centre near Geneva.

While the "big bang machine" suffered a catastrophic fault recently, and as a result, is likely to be switched off for at least a year, in the meantime the computing network designed to help to unlock the secrets of the Universe is being put to other uses - such as resurrecting the musical sounds of Ancient Greece.



An epigonion is similar to a modern harp or psaltery, and is mentioned in the works of Athenaeus, the Greek rhetorician and grammarian, in 183AD. Historians believe it was invented, or at least introduced to Greece, by Epigonus, a renowned musician from Ambracia in Epirus, a region that now straddles modern Greece and Albania.

Epigonus was given Greek citizenship as recognition of his great musical ability, having been the first person to pluck the strings of the epigonion with his fingers, instead of using a plectrum. The instrument, which Epigonus named after himself, had 40 strings of varying lengths.

The first instrument the Italian researchers worked on re-creating was a monochord, an instrument played by Pythagoras, the Greek mathematician

and scientist. Monochord means "one string", which was stretched over a soundbox. The successful remodelling of the monochord showed that the researchers could move on to re-create the sounds of other instruments.

This is done through data collected by archaeologists, engineers and historians, who help to describe the materials and shape of the ancient instrument.

This is all translated into a computer program that is run on hundreds of computers in Europe that make up the Grid. The process takes four hours to produce just 30 seconds of music.

But it should now be possible to create whole compositions based on the sounds of the epigonion. The researchers have already used the instrument and their efforts can be heard on the internet.



### 'Revolution is Female' ...

*A member of a women's organization carries a banner reading 'Revolution is Female' during a rally in central Athens on Saturday to mark International Women's Day. Some groups used the rally, which called for equal rights for women, as an opportunity to draw attention to the plight of unionist Constantina Kuneva, who was attacked with acid in December.*

## Hospitals pay over odds

No action on 2006 report showing system of overcharging by some suppliers

Companies that supply the national health system with medicines and equipment, a market that is worth more than 3 billion euros per year, have been able to take advantage of indifference by officials to systematically overcharge the public sector for their goods, Sunday's Kathimerini has learned.

A report compiled by civil service inspectors in 2006, which was submitted to then Health Minister Nikitas Kaklamanis and his successor Dimitris Avramopoulos, indicated that many of the state hospital suppliers had set up a system to show that they were purchasing goods at much higher prices than what they had actually paid for them.

A titanium screw, for instance, cost 18 euros in Cyprus, but was bought for 159 euros by Greek hospitals.

A stent, often used in coronary or vascular surgery, cost 620 euros in Cyprus, but 2,143 euros in Greece.

The process of overcharging involved working with companies in Cyprus that invoiced the Greek firms for drugs and

medical equipment that they had already bought from abroad.

The inflated invoices meant that the goods cost the public sector in Greece four to six times more than they did in Cyprus.

The scam is thought to be behind the skyrocketing spending on medical supplies for public hospitals in recent years. In 2001, the budget for these products was 1.3 billion euros. By 2007, it had risen to 3.4 billion.

The bill has been footed by taxpayers and social security funds, which cover part or all of the costs of medicines and equipment for those who are insured with them.

The investigation was actually launched in 2004 after New Democracy came to power, but its findings do not appear to have been acted on since 2006.

However, armed with the findings of the report, the bosses of 12 hospitals joined together in 2006 to negotiate discounts with their suppliers and were able to reduce prices from 15 to 50 percent.