



## Transplant technology

# More lung transplants

DOCTORS AT THE PUERTA DE HIERRO HOSPITAL IN MADRID HAVE PRESENTED A NEW TECHNIQUE WHICH WILL BRING HOPE TO THE OVER 150 PATIENTS IN SPAIN WAITING FOR LUNG TRANSPLANTS.



**U**sing a specially developed cabinet they have been able to "recover" a lung which was damaged whilst the donor suffered a fatal heart attack.

During heart attacks the lungs often become filled with fluid or swell which make them unsuitable for donation and so far the majority of lung transplants have been from donors who have died from strokes or other brain malfunctions.

The technique has been denominated 'ex vivo' and it's the first time that it has been possible anywhere in the world to recover and successfully transplant the lungs of a donor who has

died from a heart attack.

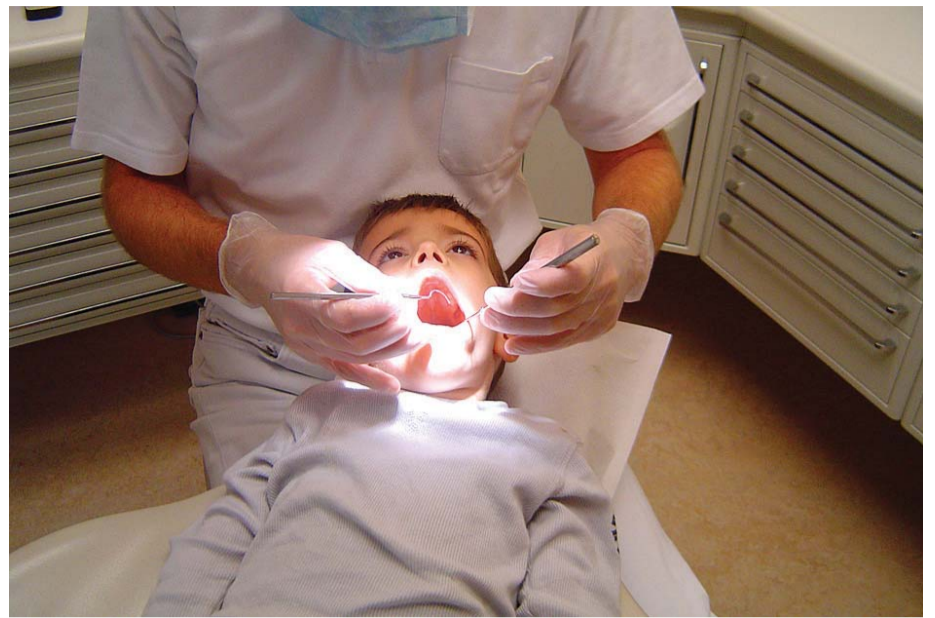
The cabinet restores the lungs and keeps them working outside the body through a system which completely simulates the conditions inside the chest cavity. The lungs are maintained at 37 degrees temperature connected to tubes containing a liquid similar to blood, oxygen and an exit tube for carbon dioxide. If any infection is present this can also normally be filtered out. The lungs stay in the cabinet for eight hours whilst they are evaluated and swellings or lobular flattening are corrected

So far there have been two successful operations, both on sufferers of emphysema, caused by smok-

ing and the lungs which are known to be the least lasting of the organs, were outside the body 22 and 19 hours respectively. The head of chest surgery, Andrés Varela, believes that this time may be cut down in future, except in the cases of seriously damaged organs.

The technique has been used in Sweden, Canada and England, but only for the lungs of people who died from brain problems, "now we can work with lungs that were impossible to use before and we can increase the number of transplants by 25 per cent," assured Varela.

The Madrid specialists believe they will be able to use the same technique to genetically alter organs outside the human organism to reduce the possibilities of rejection. Javier Moradiellos, the person responsible for the ex vivo project believes that when the technique becomes cheaper it will be used to assess all lungs for transplants, whether or not they look damaged and he believes that with modifications, the same system could be used for heart and kidney transplants.



Clínica Dental Fañabé

## How food can affect mouth health

**C**hanges begin in your mouth the minute you start to eat certain foods. Bacteria in your mouth make acids. The acids start the process that can lead to cavities.

All carbohydrate foods eventually break down into simple sugars. Fermentable carbohydrates break down in the mouth. Other foods don't break down until they move further down the digestive tract.

It's the fermentable carbohydrates that work with bacteria to form acids that begin the decay process and eventually destroy teeth. Certain bacteria on your teeth use sugars from these foods and produce acids. The acids dissolve minerals inside the tooth enamel by a process called demineralisation. Saliva helps to rebuild minerals in teeth.

Dental decay begins inside the tooth enamel when minerals are being lost faster than they are being regained. The longer food stays near the bacteria on the tooth, the more acids will be produced, so sticky carbohydrates, like raisins, can do more acid damage.

Teeth with a lot of nooks and crannies, such as molars, are more likely to trap food, that's why they tend to have more decay. To make matters worse, many of the foods that are unhealthy for teeth don't just create acids while they are being eaten, the acids stick around for the next half-hour. Depending on your eating and drink-

ing patterns, it's possible for the bacteria to produce acid almost constantly. Eating many small sweet or starchy snacks during the day can produce a worse effect if you don't brush your teeth after any sweet. Studies have shown that people who eat sweets as snacks between meals have higher rates of decay than people who eat the same amount of sweets with their meals.

Some foods actually seem to protect teeth from decay. That's because they increase saliva flow and neutralise the acids produced by bacteria. For example a mature cheese eaten immediately after other food helps to buffer the acid.

Chewing sugarless gum also can help protect your teeth against cavities. Xylitol is an ingredient in some sugarless gums and mints. This sweetener has been shown to reduce the amount of bacteria in the mouth. It also helps to buffer the teeth against the effect of acid thanks to an increase of the saliva's flow.

### Some recommendations to maintain a good general health would be:

- Eat whole grains daily (brown rice, wholegrain bread...)
- Eat healthier vegetables
- Eat a variety of fruit
- Choose fish, beans or nuts (for some of your protein needs)
- Choose and prepare foods

with less salt

- Reduce alcoholic intake to a minimum
- Be physically active each day

**To prevent tooth decay, you should follow a few additional guidelines, this can help to keep the amount of acid created by the bacteria to a minimum:**

- Limit between meal snacks: best choice cheese, chicken, meat, nuts.
- Limit the amount of soft drinks or any other drinks with sugar: a better choice is unsweetened tea or water.
- Avoid sucking on hard candies or mints except sugarless varieties
- Foods high in acid can make the mouth more acid (citrus fruits)
- Brush your teeth after eating and after drinking liquids containing sugar, to remove the bacteria plaque that creates the destructive acids.
- Chew sugarless gum or mints which that contains Xylitol.

Clinica Dental Fañabé Plaza is made up of a team of professionals dedicated to offering a dental service for all the family. The first check-up appointment is free. They can be found on CC Fañabe Plaza, Avda. Bruselas, local 355 2nd Floor, Playa Fañabé. Make an appointment now by calling 922 714225.

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Thomas Dolz has a German engineering diploma and is an expert on sanitation, heating and air conditioning systems

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AIRESOL CANARIAS, S.L. Plaza de Venezuela, 1. 38670 Adeje  
(Behind the bus stop - between the Post Office and the Health Centre)  
Tel.: 922 79 28 39 - 922 79 44 93. Fax: 922 75 06 02. Mob: 630 410 011