

# DR MIRIAM STOPPARD



What everyone should know..

## about the importance of getting vaccinated

To vaccine deniers the threat of dying doesn't seem to matter. The plain truth is that getting vaccinated may not stop you from catching Covid but it will stop you from dying.

Deniers aren't paying attention to the stats which show they're almost the only people who end up in intensive care. And the majority of them are healthy, young people who, for one reason or another, decided not to get jabbed.

They thought they were fire proof. They're not and they're clogging up the NHS which is on its knees and they may die.

There are precious few fully vaccinated people needing intensive care treatment.

We argue that getting vaccinated protects other people but the extent to which it'll prevent serious disease in yourself is surely a strong argument in favour.

# Our brains can re-tune to cope with having 11 fingers

The brain is amazing. It can learn new tricks and skills whatever the age. Just how clever it is was demonstrated by researchers at Imperial College, London, showing pianists can adapt to using an extra robotic thumb (11 fingers!) after just one hour of practice.

The scientists had been trying to understand how the brain could cope with extra limbs using robotics.

Why? Because of our ancient fascination with gods and goddesses with extra limbs, such as those found in Indian mythology and present day superheroes.

Professor Aldo Faisal of Imperial's Department of Bioengineering and his team attached robotic thumbs next to the little finger in a group of piano players. The thumb was controlled by the pianists using their feet.

Prof Faisal said: "The basic question was: Can we use 11 fingers in a task that requires actual skills? Are our brains capable of playing music with extra limbs? We answered that with a clear yes."

The researchers found that the group of volunteers, which included six experienced piano players and six people who had never played, were



The piano study could be used to improve robotics in industry

able to learn how to play with all 11 digits within an hour of being shown how to use the extra thumb.

And it wasn't only experienced

piano players who learned quickly how to use the robotic digit, revealing that people can learn to use an extra digit for unfamiliar tasks too.

Prof Faisal was surprised to find being a piano player isn't a strong predictor of how well you'll play with 11 fingers.

It seems dexterity and agility are much better predictors of being able to use this technology and play the piano with an extra digit.

The study could be used to improve robotic devices in industrial settings and help research on prosthetic limbs.

Dr Ali Shafti, of Imperial's Department of Computing, who also worked on the research, has bigger plans. He said: "From a robotics point of view it is important to understand the best way to integrate a human into a robotic device."

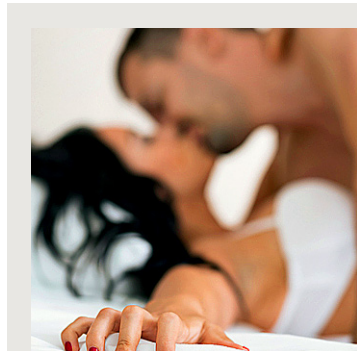
This is a whole new way of seeing and using robotics – not just helping people with prosthetics but assisting people where human beings and robots interface.

Professor Faisal added the next step for the research team is to see if human beings could use a whole robotic arm and control the device using brain signals instead of foot controllers.

## BOOK OF THE WEEK Golden Threads by Gemma Levine

After 45 years of photographing royalty, actors and politicians, this exciting collection contains some of the amazing people Levine has shot. All proceeds go directly towards lymphoedema research, for whom she voluntarily raises

awareness. Levine is an honorary member of the Lymphoedema Support Network, the Lymphatic Education & Research Network USA, and a Trustee of the charity commission of the Lymphoedema Research Fund. [gemmalevine.co.uk](http://gemmalevine.co.uk)



Avoid these dangers at New Year

### Scenario:

» If you get carried away drinking over the Christmas festivities and lose control, a chance sexual encounter is more likely to be dangerous as it's easy to forget to use protection under the influence.

» People living alone are especially vulnerable to being exposed to cold temperatures for long periods, leading to shivering, shortness of breath and falling asleep.

» It isn't a Christmas party if someone doesn't overindulge in heavy, continuous drinking and then passes out.

### Could lead to:

» You could get **chlamydia (or any other STI)**, which causes a discharge in women but not in men, and which can be difficult to treat.

» **Hypothermia**, which in severe cases can be very serious and even fatal because vital organs can't work when cold.

» **Alcohol poisoning** which should never be taken lightly. The liver can only detox one unit of alcohol per hour so the more and quicker you drink the riskier it is for your body.

### Stop it:

» Always use protection such as a condom to prevent the spread of bacterial STIs like chlamydia. Get tested for any discharge. If you test positive tell all contacts.

» Prevention is about staying warm, which means wearing layers, socks, hats and gloves, and changing out of any wet clothes as soon as possible. Keep an eye on a relative who lives alone.

» **Drink water before the party then pace yourself. Eat between drinks. Take a glass of water between drinks even when no one else is. Drink more water before you go to sleep.**

## 5 REASONS TO Drink less in the new year

**1 Less stress and anxiety** If you suffer from these conditions alcohol can make them worse because it stimulates the anxiety centres in the brain.

**2 More energy** If you can't sleep and you suffer from anxiety due to alcohol, your energy levels will plummet. You'll feel tired all the time.

**3 Better sleep** Alcohol affects the quality of our sleep and we spend

less time in deep sleep. Deep sleep helps restore the body.

**4 Healthier skin** Alcohol can affect your skin, making it dry and dull-looking. After a few days of not drinking you should see a difference.

**5 Weight loss** A lot of people don't realise just how calorific alcoholic drinks are. If you reduce the number of drinks per day you should see some weight dropping off.



## BUST THAT MYTH 'The blue people of Kentucky is a hoax'

Have you ever read about the blue-skinned families who lived in Kentucky during the 1800s and thought, surely it was a hoax?

Well, believe it or not, this story is true. And the reason they had blue skin is because they were suffering a rare genetic condition called methemoglobinemia.

In this condition a mutated gene causes the body to build up a rare form of haemoglobin called methaemoglobin that can't bond with oxygen (haemoglobin carries oxygen in the blood) and it changes the colour of blood from red to almost dark blue. In turn the skin appears blue too. Fortunately, nowadays methemoglobinemia can be treated with a simple pill.

