

NHS staff urged to get flu jab as winter arrives

MORE than 1,400 staff across Cwm Taf Health Board have been jabbed to protect themselves and those they come into contact with against the flu this winter.

Cwm Taf Health Board is urging NHS workers and local residents to make sure they get their flu jab, particularly those who are at the greatest risk including those aged 65 or over, pregnant women and those with health conditions such as asthma, chest or heart problems, lowered immunity and diabetes.

Gaynor Howells, 49, lives in Williamstown and works at the Royal Glamorgan Hospital as a waiting list management officer and is one of the staff members to have had their jab.

"She has worked at Cwm Taf Health Board since 2004. She said: "I had a bad bout of flu where I was in bed for four days. I couldn't eat anything.

"Someone I know came to visit me and the thing that frightened me was I had no recollection that she was there.

"I was so ill and would never want to feel like that again.

"Until you experience it, you don't realise how bad the flu can be. I couldn't eat anything, not even soup. I had no concept of time and was completely out of it.

"I started having the flu jab in 2008 and have had it every year since. I couldn't bear to have the flu again.

If I was elderly and living on my own, it would be so dangerous. My parents are now in their seventies so they have it religiously every year. But it's not just for old people. I see it as my responsibility to my job to have the jab. If I fell ill I wouldn't be able to come into work and support my colleagues here. If I was ill I could end up passing it on to them, or on to a patient or member of the public."

Flu is a contagious infection that spreads easily, sometimes causing serious illness and even death. Symptoms of flu come on very quickly, including a raised temperature, a dry, chesty cough, sore throat, chills, aching joints and muscles.

To get your jab, contact your GP to make an appointment or check NHS Direct for a local pharmacy that can give you the vaccine. It's safe, quick and free for those who are most at risk.

Glaze Charity Trust raised the money to buy the Green Light Laser equipment for the Princess of Wales Hospital in Bridgend in 2004 and has been supporting its upkeep and running costs ever since.

Glaze, which is an integral part of Prostate Cymru Charity Trust, said support from companies and donations from individuals has been crucial in providing the additional £106,000 required to ensure the continuance of the Green Light Laser Treatment.

The new Green Light Laser XPS system delivers laser energy to the prostate and removes prostate tissue that is causing obstruction.

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Prostate Cymru and Glaze founder and trustee Ray Murray said: "Prostate disease, both malignant and benign, is the most common form of disease diagnosed in Welsh men.

It's not only cold winds and dry rooms that damage skin – the sun can still take its toll too

AS the clocks change and we approach winter, we must all take extra care of our skin to prevent it drying out.

Dry skin looks less healthy and attractive than when it's properly hydrated, and can lead to soreness, irritation and itching.

First of all, don't forget about sunscreen. It's very easy to imagine that the sun's rays are less powerful now that the days are short, but this is far from being the case.

The sun is low in the sky at this time of the year, meaning that the sun shines directly on our faces. On a bright, sunny winter's day we can subject ourselves to a significant dose of damaging UV light.

My advice for those with very fair skin is to wear sunscreen with a minimum protection factor of SPF15, on a daily basis. As with summer sun defence, you need to ensure that the product you are using gives protection from both UVA and UVB light.

Sunglasses and a hat are also advisable to give further protection from the sun's harmful rays – especially if lots of outdoor activities are planned.

People planning ski trips need to be particularly careful because we are more likely to burn at high altitude as there is less atmosphere to screen out the damaging UV rays. Furthermore the glare from the sun off the snow means that we burn in places we might not have thought of – the underside of the

nose and chin for example. Eyes need particular protection in bright snowy conditions, and don't forget that sunlight can creep in from the sides of your shades and cause damage to your eyes, so wraparound glasses are essential for protection, not just to look cool.

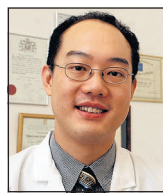
Inadequate eye protection can lead to photokeratitis, or snow blindness, which can cause an increase in tear production and is a painful condition.

Essentially, snow blindness is sunburn of the cornea and conjunctiva. It's not generally noticed until a few hours after exposure a little like sunburn on the skin, so the damage is occurring without the sufferer noticing until too late.

Ensure that the glasses you buy for skiing have an appropriately high UV filter. And remember, even on cloudy days UV light is filtering through the clouds, and can still cause damage.

Winter sun holidays need to be dealt with carefully too. Having suffered months of chilly weather as well as a wet summer, it's very tempting to bask in the sunshine when we escape to

Dr Harryono Judodihardjo, medical director of the Cellite Clinic in Cardiff explains how to take extra care of your skin during the chilly winter months



warmer climes. But pale winter skin is very vulnerable to burning, so the usual precautions need to be taken – making sure that the skin is protected with high protection factor sunscreen, that exposure to ultraviolet light is limited and damage minimised by wearing a hat, sunglasses and clothing.

Even if off-season Mediterranean sunshine is less powerful than that during the baking summer days, it is still strong. What's more, you don't need to be lying on the beach to be vulnerable, soaking up the rays on an outdoor terrace as you sip coffee or eat lunch can still result in scorched skin.

During crisp, dry weather, it's obvious that the cool winds and low temperatures are going to impact on our skin, but even on a normal winter's day, the humidity in the atmosphere is less than that of a summer's day – consequently having a drying effect on the skin.

Furthermore, the central heating in our offices and homes, blasting out all winter long, parches the skin still further.

Electric blow heaters are prime culprits for their desiccating effect on the body's largest external organ, and their use should be avoided if at all possible.

Given these factors, we all need to take extra care of our skin in winter, ensuring that it is adequately moisturised and defended from the sun's rays, but people suffering from eczema and psoriasis need to take even greater precautions.

The combined elements of low humidity, cold drying winds and central heating, mean that a flare-up is far more likely to occur in winter.

Extra moisturising, preferably with a product containing high levels of oil, helps keep the skin supple.

Ointments have a higher oil content than creams and can therefore stay in the skin longer.

Apply the moisturiser immediately after a bath or shower – while the skin is still damp – to help trap the moisture in the skin before it evaporates.

Urea is naturally present in healthy skin, but in particularly dry skin, or in the case of psoriasis and eczema sufferers, urea levels are reduced. Specialist products help replenish what has been lost.

Lips are very vulnerable to chapping during the winter months, so buy a good lip balm with a sun protection built in, or purchase a high protection factor sunscreen stick.

Exposure to ultra violet light can lead to painful and unsightly "cold sores".

These are caused by the herpes simplex virus. The virus passes through the skin and hides in the nerve root until it's activated by common triggers such as bright sunlight and cold winds.

And another tip, people with dry or irritated skin need to wear a cotton based lining in their clothes so that their problems are not aggravated by warm but prickly woolly outer layers.

Lastly, we must all remember to drink water. We may feel less like having a glass of cool liquid when the temperatures plummet, but keeping up our fluid intake is important.

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Big hopes that tiny technology can save lives

Dr Vincent Teng is a lecturer in the College of Engineering at Swansea University and his research interest is in the application of nanotechnology in electronics

FIRST of all, let me explain the popular question usually asked by visitors to our laboratory: "What is nanotechnology?"

The word "nano" means billionth and one nanometre is a billionth of a metre. The width of our hair is typically 100,000 nanometres in diameter. There are around four to six atoms arranged side by side within a length of one nanometre.

When a material or structure is less than 100 nanometres in size, it exhibits many new properties and functionalities. For example, electrons in nanomaterial travel at much higher speed with minimal energy loss because they experience fewer collisions.

This is due to the small number of atoms, impurities and defects present in the nanomaterial.

And back to the question, what is nanotechnology? It is about the control and use of the unique properties of structures having a size of 100nanometres or smaller, which usually involves the development of novel materials or devices within that length scale.

My research is in the study of nanoscale electronic materials and devices that have major impact in healthcare, computer, photonic and energy technologies.

This includes the development of ultrasensitive nanobiosensors for the detection of diseases, ultra-fast nanotransistors for high performance computers, light-trapping nanoplasmonics for efficient thin-film solar cells and other novel electronic devices using nanoscale materials.

Much of my research work is interdisciplinary and requires active interaction with experts from other disciplines, such as medicine, biological science, chemistry, physics, health informatics, material and mechanical engineering, to develop innovative solutions.

One of my current projects, funded by the Welsh Government, is in the development of a highly-sensitive and selective biosensor for the continuous monitoring of blood glucose using metal-oxide nanowires. Due to the relatively large surface area of nanomaterials, the materials are very sensitive to any events happening at its surfaces. Therefore the use of nanowires provides excellent sensitivity and response towards small changes in the blood glucose level.

The project is in collaboration with Welsh companies to develop a non-invasive, continuous monitoring technology that allows diabetic patients to take control of their long-term illnesses.

With colleagues who are experts in wireless mobile communication involved, we are able to develop a technology that could provide emergency text alerts to relatives or neighbours of the patients when they experience unconsciousness due to hypoglycaemia attack.

The highly sensitive nanowires biosensor can be modified for use in the early detection of other diseases, such as cancer, stroke, coronary heart disease and infectious viruses. The ability to detect diseases way in advance of patients noticing or developing any symptoms would significantly improve treatment of the disease and hence survival rates.

In addition, I am interested in developing fabrication processes that are suitable for high-volume, low-cost production of nanoelectronic devices using printing technology through collaborating with colleagues from the Welsh Centre for Printing and Coating at Swansea University.

This has major implications in the commercialisation of these devices at an affordable price, hence bringing the benefits of the technology to the general citizen.

Dr Vincent Teng is the head of Nanoelectronics Research Group at the Multidisciplinary Nanotechnology Centre. You can contact him at k.s.teng@swansea.ac.uk

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Charity funding laser treatment aims to provide robotic

A WELSH cancer charity has provided the funding for hi-tech treatment for prostate disease to continue for a further three years.

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Prostate Cymru and Glaze founder and trustee Ray Murray said: "Prostate disease, both malignant and benign, is the most common form of disease diagnosed in Welsh men.

Our charities want to ensure that we have the most modern and successful equipment available, as well as highly trained surgeons. We are tremendously grateful for the support we have received from companies in Wales and from people who have raised money on our behalf through sponsorships and other activities."

The charity is now seeking to raise funds for a Robotic Laparoscopic Surgical System.

This kind of precise and minimally invasive surgery is widely available in Europe and North America, but not in Wales, meaning patients often

have to pay up to £15,000 privately for treatment in England.

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Mr Murray said: "We are aiming to raise £1.7m for the first machine in Wales with our Operation Robot campaign.

"It's an ambitious target but we are planning some very big fundraising initiatives.

"We need all the support we can get, so we'd be delighted to hear from anyone out there who can help us achieve this important objective."

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