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THE FLU AND YOU

Another year has gone by and it is time once again to get those flu shots done! A little history for you on how this all comes about on a greater scale in the world...

You may not know that this is a world health effort...to ensure the health and safety of our world's peoples. The WHO (World Health Organization) coordinates the efforts of over 100 influenza centers in over 100 countries. These centers conduct surveillance efforts all year long, every year, in their areas, doing studies and watching trends for how and when people get the flu. They take samples of the various flu types they see and send them to one of the WHO Centers for Reference and Research to be analyzed and saved. All of the information for the world is compiled to determine what flu we will be grappling with in a given area the next flu season. The seasonal flu vaccine for this 2010-2011 flu season is a trivalent (meaning it has 3 components) vaccine made up of the 3 flu viruses most expected to be infecting people this coming flu season. These 3 flu types are:

1. A/California/7/2009 (H1N1)-like virus (pandemic flu)
2. A/Perth/16/2009 (H3N2)-like virus
3. B/Brisbane/60/2008-like virus*

So, what is the FLU? Many people think the flu vaccine is for the stomach flu. But, it is NOT. The flu vaccine is for the respiratory flu that is very contagious and can cause mild to severe illness, even death. Some symptoms common to this type of flu are:

- Chills, body aches, fatigue
- Sore throat, stuffy nose, runny nose, cough
- Headache
- Fever, although some people with flu may never run a fever

You can pass the flu on to others before you even know you've got it yourself! CDC states that for up to 24 hours prior to symptoms developing and for up to 7 days after becoming sick, you can pass this virus on to others.* Children and people with weakened immune systems might be able to infect others for longer than this.

RECOMMENDATIONS FOR GETTING VACCINE:

Whether you get the flu shot or take the nasal spray flu

vaccine, it takes about 2 weeks for the antibodies to develop in your body that protect you against the flu virus infection. Flu season can begin as early as October, however, most years its incidence peaks in January or February. Vaccines can be given anytime throughout that period but earlier is generally considered to be better.

The flu shot is an inactivated vaccine, meaning that it contains killed virus. It is given with a needle. It is approved for people age 6 months and older, to include healthy people and people with chronic medical conditions, even pregnant women. The flu vaccine spray is a live, weakened virus (called an "attenuated" virus) and is approved for healthy people age 2-49 who are not pregnant.

PREVENTION: The CDC recommends a yearly flu vaccine as the first and most important step in protecting you against the flu viruses.* Everyone 6 months of age or older should be vaccinated as soon as the current flu vaccine is available to you.

Take preventative actions every day to stay healthy and prevent the spread of germs. **COVER** your nose and mouth with a tissue when you sneeze or cough. If a tissue is not available, sneeze into your shoulder or sleeve...not in your hand. Wash your hands several times a day with warm water and soap or use an alcohol-based hand wash. Do **NOT** touch your eyes, nose, or mouth to prevent spreading germs. If you are sick, **STAY HOME** for at least 24 hours after your fever is gone! Avoid close contact with sick people.

CARING FOR SOMEONE WHO HAS THE FLU:

- Give the sick person his/her own room if possible
- Designate 1 staff to care for the ill person
- Supply a sports bottle with ice water, tissues, trash can with lid and liner, and facemasks for staff
- Limit visitors as much as possible
- Medicate for fever, aches & pains per orders
- Observe for signs of dehydration or worsening of illness and report to nurse or call doctor



Sneezing or coughing without covering your mouth can spray droplets of infection from 8 to 10 feet.

PAIN CONTROL: TOUCH

Your brain is smart. But, sometimes it needs to be re-trained. For instance, your brain has a perception of what your body is like, how it's shaped, 2 arms, 2 legs, couple of ears...and so on. But in conditions like 'phantom pain' (the sensation that a limb or part of the body is intact although it is gone) and some other situations we'll address shortly, your brain kind of lags behind what's really going on with your body. It is thought that in phantom pain, there is a kind of disconnect between the way the body really is after an amputation, and the way the brain remembers or represents it as being whole.

In *Current Biology*, published online on Sept. 23rd, 2010, an interesting study that investigates this brain perception of pain in the body is presented. The study, done at University College of London, purports that self-touch can provide significant relief from acute pain. And, in the case of the phantom limb pain, a retraining of the brain to 'teach it' that the limb is gone is necessary for the pain to subside. Have you ever burned your finger on a hot curling iron? What do you do? You touch the spot you burned. Somewhere in there, our brains do know that this action evokes a relief response to some degree. The researchers in the London study state that the brain builds a "body representation" which is a working blueprint of all your

body parts and how they are connected. Researchers used an experiment known as TGI or Thermal Grill Illusion which is a well-established method for studying pain without actually inflicting pain on the study's subjects. In this study, they had people put the index and ring fingers in warm water and their middle finger in cold water. This creates a feeling that the middle finger is painfully hot! ODD.

They took this further and would do both hands of an individual at the same time, and when they asked the person to touch their fingers together from both



hands, the pain in the middle fingers dropped by 64%. This only happened when the 2-hand experiment was done. Not when just the fingers on one hand were soaked in water, not when only

some fingers were touched to each other. It required the whole body parts (2 hands) to be touching. This suggests that therapies that look at strengthening this wholistic picture of the body as a brain representation may be the clue to effective pain therapies in the future. Try the experiment and see what you think. Science is the future.

NEW DRUG: KAPVAY FOR ADHD

ADHD, or Attention Deficit Hyperactivity Disorder is a neurological disorder that arises in childhood that is typified by behaviors that last at least 6 months and appear before age 7. There is a strong hereditary connection although the exact cause or causes are unknown.

ADHD is a lifelong disorder and has 3 subtypes that range from inattentive behaviors to hyperactive behaviors or a mixture of the 2 extremes. These symptoms create difficulty in social relationships, school, work, and home at various times as they follow the person through their life. Treatment has been multifaceted, to include behavioral strategies, education about the condition, parental training, and medications for some. The medications used for years for ADHD have been psychostimulants (Cylert, Ritalin, Concerta, Adderall, others) that, although they stimulate the central nervous system, have a



paradoxical effect on people with ADHD and calm them down, allowing them to concentrate and interact more appropriately with others.

Kapvay is a brand new medication just approved by the FDA for the treatment of ADHD and it is different than other meds used previously. Kapvay is a non-stimulant extended-release tablet approved for ages 6-17. It is the first and only approved ADHD treatment indicated for use as an ADD-ON therapy to current stimulant meds. It can also be used alone. Studies suggest that Kapvay has an effect on the pre-frontal cortex of the brain, which plays a role in impulse control, memory, and higher level critical thinking, organization and such tasks.

Side effects may include sleepiness or sedation and may have an additive effect for people taking CNS depressant drugs. More information on Kapvay can be obtained by going to www.drugs.com/newdrugs.

VACCINATIONS

One of the most significant developments in the history of medicine and public health and safety has been the development of vaccines. Vaccines have reduced several serious preventable diseases to an incredibly small percentage. Very few people in the U.S. ever have to deal with pertussis, diphtheria, tetanus and the negative after effects of measles. The Food and Drug Administration (FDA) is the government entity responsible for insuring our vaccinations are safe and effective, however no vaccine can be 100% safe and effective in all people in all places. Individual differences in peoples' immune systems, how these react to the vaccine, and what other illnesses they may be fighting off...all come into play. For instance, we know that some people with sluggish immune systems will not react to the vaccine when it is given. A normal response would be for the body to mount an 'attack' against the proteins in the vaccine, seeing it as a foreign invader. The body's immune response creates antibodies (pac-man-like cells that kill the invader) against the proteins in the vaccine. In the future, when the person comes in contact with that disease out in the world, her body already has reinforcements ready to combat the disease. Ready and waiting. The body is familiar with the invader and kills it off before it can flourish.

But, if the person does NOT mount an attack to the initial vaccine because he has a sluggish immune system...he will NOT FORM ANTI-BODIES, and he will NOT BE PROTECTED. Just because a person receives a vaccination does not mean they are protected.

Vaccine safety has been a topic of discussion in healthcare for years and in developmental disabilities. It has been posed by some in the community, that thimerisol, an ingredient in some vaccinations, has caused autism in young children. There have been many, many studies completed to test this outcome, but, to date, no study has proven a positive relationship between thimerisol in vaccinations and developing autism. The CDC does have a current study under way that is in the data gathering stages that will add to this compendium of



information, but the results are yet to be reached.

In 1986, Congress did pass the National Childhood Vaccine Injury Act (NCVIA)** as a reaction to this public outcry in the 1970s about possible connections between vaccines and developmental changes observed in some children. The NCVIA follows all potential vaccinations from initial development, through 3 phases of experimentation, through licensing, and after...to monitor vaccine safety even after it is on the market with a reporting procedure that identifies any issues that may not have been seen in the research environment. All manufacturers of any vaccine are required to submit samples from each vaccine lot prior to its release. The NCVIA requires all healthcare providers who administer vaccines that contain diphtheria, tetanus, pertussis, polio, measles, mumps, rubella, hepatitis B, Haemophilus influenzae type b, and varicella to provide vaccine information to the recipient or their legal guardian. This vaccine information must be given prior to every dose. The CDC develops these and you can obtain these by going to www.cdc.gov/vaccines/pubs/vis/. Healthcare providers are also responsible for providing information on any adverse events that are reported to them concerning a vaccine. As a part of NCVIA law, a National Vaccine Injury Compensation Program

was created to compensate people injured by vaccines on a no fault basis.**

In the past few years, many changes in how vaccines are produced and how they are administered have resulted in safer and safer vaccines. The technique of the healthcare provider giving you the vaccine is very important also. It is up to each individual or their guardian whether they determine that a vaccine should be given based on all the available information at the time. There is no doubt, however, that vaccines are still the best intervention we have in healthcare today for preventing disease and protecting public health now and in the future.

IMMUNIZATION SCHEDULES: Go to <http://www.cdc.gov/vaccines/recs/schedules/child-schedule.htm#printable> to print off schedules for children, adolescents, adults, and catch-up schedules. ALL immunizations are listed, including Hepatitis B. This information can also be found on the PAL website at www.palrx.com under "Resources" and click on "Information Links" and "Quick Links for Nurses".



VACCINATIONS: DID YOU KNOW?

1798	Smallpox
1885	Rabies
1926	Pertussis
1927	Tuberculosis (BCG), Tetanus
1940s	DTP
1945	Flu (first identified strains)
1963	Measles
1967	Mumps, Rubella
1971	MMR, Swine Flu
1980	Smallpox declared eradicated
1982	Hepatitis B
1990	Hib
2006	HPV (Gardasil)

**CDC Vaccine Safety (2010). www.cdc.gov/vaccinesafety/Vaccine_Monitoring/history.html



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*Centers for Disease Control (2010). Retrieved at www.cdc.gov/flu/about/qa/1011_vac_selection.htm