Health Updates- I – News/New Researches - Compiled

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Health Updates I – Details

S. No.	News / New Research	Internet Address	Date
1	**Global HIV/AIDS: Statistics**	http://www.who.int/hiv/data/2012_epi_core_en.png	**10-05-11**
2	**One World, One Heart**	http://thestar.com.my/health/story.asp?file=/2011/9/28/health/9555311&sec=health	**28-09-11**
3	**High Cholesterol Women catch up with Men**	http://timesofindia.indiatimes.com/articleshow/10150917.cms	**28-09-11**
4	**Lifestyle Changes to reduce Heart Disease Risk**	http://timesofindia.indiatimes.com/life-style/health-fitness/health/Lifestyle-changes-to-reduce-heart-disease-risk/articleshow/10168084.cms	**29-09-11**
5	**Four Major Medical Systems of India – Medicine and Health Care**	http://www.everyculture.com/Ge-It/India.html	**19-10-11**
6	**India Major Infectious Diseases**	http://www.indexmundi.com/india/major_infectious_diseases.html (Source: CIA, World Facts Book)	**09-01-12**
7	**State-wise Summary of Influenza A H1N1: 2009, 2010 and 2011**	http://www.mohfw.nic.in/WriteReadData/l892s/Summary%20table%20for%20Pandemic%20Influenza%20A%20H1N1yearwise-56370979.pdf	**29-05-12**
8	**30 Percent Cancer Deaths in India due to Tobacco Use – 2010**	http://indiafacts.in/facts/30-cancer-deaths-in-india-due-to-tobacco-use/	**25-06-12**
9	**Eating Habits of Urban Indians**	http://indiafacts.in/health/what-urban-indians-are-eating/	**25-06-12**
10	**Swine Flu Deaths in 2009 Topped Quarter Million**	http://www.medicalnewstoday.com/articles/247042.php	**26-06-12**
11	**One Maternal Death Every 10 Minutes in India: UN**	http://zeenews.india.com/news/health/exclusive/a-maternal-death-every-10-mins-in-india-un_17710.html	**03-07-12**
12	**U.N.: India likely to miss Millennium Development Goal (MDG) on Maternal Health**	http://www.thehindu.com/health/policy-and-issues/article3595095.ece	**03-07-12**
13	**National Institute of Communicable Diseases (NICD)**	http://www.nicd.nic.in/index1.asp?linkid=181	**03-07-12**
14	**Malaria Plasmodium falciparum (Pf) Rapid Test**	http://www.rapidtest.com/Malaria_172103P-25-web.pdf	**09-07-12**
15	**Medecins Sans Frontieres (MSF) battles Kala Azar in Bihar**	http://zeenews.india.com/news/health/exclusive/scared-hiv-ve-women-opting-for-abortion_17912.html	**17-07-12**
16	**Fight against HIV a Success in Poor Countries: UN**	http://www.firstpost.com/living/fight-against-hiv-a-success-in-poor-countries-un-382864.html	**19-07-12**

1. Global HIV/AIDS: Statistics - 2011

S. No.	Details	Numbers (in millions)
Number of People Living with HIV		
1	Total	34.00
2	Adults	30.70
3	Women	16.70
4	Children (< 15 years)	3.30
People Newly Infected with HIV in 2011		
5	Total	2.50
6	Adults	2.20
7	Children (< 15 years)	0.33
AIDS Deaths in 2011		
8	Total	1.70
9	Adults	1.50
10	Children (< 15 years)	0.23

http://www.who.int/hiv/data/2012_epi_core_en.png

2. One World, One Heart

September 28, 2011

Cardiovascular diseases remain the world's main killers, claiming about 17 to 18 million lives each year. Heart Foundation of Malaysia (Yayasan Jantung Negara) director Datuk Dr Khoo Kah Lin shares his views on the matter on the eve of World Heart Day tomorrow.

IT has been repeatedly said that the heart is an extremely vital organ. Can you put this into perspective?

The human heart is really the most amazing organ in the body. It beats even before you are born into this world, continuing to do so until you take your last breath. For as long as you are alive, your heart is hard at work. There is no other muscle in your body that works in such an astonishing way.

The human heart is tasked with pumping oxygen-rich blood and nutrients to the whole body. The heart's other function is also to "carry away" your body's waste products such as carbon dioxide, from the tissues. The heart is "connected" to every part of the body through blood vessels.

According to Dr Khoo, 65% of people with diabetes die from some form of heart disease or stroke.

Despite the importance of our heart, it is often the most neglected organ in our body, as the rising prevalence of heart disease in the nation illustrates.

Also, after a heart attack, the damage done to your heart is irreparable. As such, it is of utmost importance that we prevent heart disease well before it strikes. This can be done if we eliminate the risk factors of heart disease, and this has to begin from childhood itself.

Isn't heart disease a problem for older people? How do young children fit into the picture?

It's really not accurate to say that heart disease only afflicts the older age group. Heart disease can be caused by multiple factors, called risk factors, which in fact begin building up right from childhood. I have personally heard that even children as young as two can already have developed risk factors for heart disease.

In my opinion, the true problem lies in the fact that the perception of heart disease has not evolved. In Malaysia, heart disease has been the number one killer for the past three decades. Before we can understand heart disease, we need to go to the root of the matter – the risk factors. The key is that heart disease is largely preventable, if only parents cultivate a healthy lifestyle in their children from young.

You said that heart disease is largely preventable, if tackled early on in life. Can you elaborate a bit more?

Yes, prevention of heart disease from childhood is what I wish to stress upon. I term this loosely as the "modifiable risk factor", which largely co-relates to the diet and lifestyle of the child.

Under the umbrella of modifiable risk factor, we have five separate and equally important issues to deal with: high cholesterol levels, obesity, diabetes, high blood pressure and of course, a sedentary lifestyle.

Salt intake should not exceed 5gm (one teaspoon) a day.

Most people will not contest that fast food consumption, frequent dining outs and being a couch potato profoundly affect the growing child. In fact, the more we move away from consuming a "natural" diet, the worse the outlook is in terms of heart disease.

Well, the notion of change makes people uncomfortable. So, instead of dwelling on change, why not instil the habit of healthy living in the child right from the start?

Healthy living does not mean creating a good food vs bad food list. Neither does it mean adhering to a vegan diet or bland and tasteless foods. That is rather unrealistic to ask for.

I task it upon the parents and caregivers, not to control their children and dictate their life completely, but to be a good role model and provide proper guidance to the young to live and eat healthily.

Of course, to err is human, and I am not saying that as a parent, you should be perfect. Neither am I asking parents to mould a Stepford child. A child will always be a child and it is in fact wrong to deny your child her "childhood" indulgences totally, as suppressing a child's desires too much will result in unhealthy emotional growth.

How exactly can parents influence those modifiable risk factors?

To answer your question, allow me to elaborate on each of the modifiable risk factor in turn, and how parents can actually make a difference to all of it.

High Blood Pressure

Also known as hypertension, it often has no symptoms. You will not know that you are suffering from it unless you check your pressure regularly.

High blood pressure increases your heart's workload, causing the heart muscle to be enlarged as it forces your heart to work harder than necessary. This would increase the risk of a heart attack or heart failure, as in the long run, this causes the heart muscle to weaken and work less effectively.

High blood pressure can be easily controlled by limiting daily salt intake. Try cultivating healthier habits by avoiding foods such as processed food, fast food, or even try to limit eating out. Home-cooked meals are always healthier and more nutritious. According to the Malaysian Dietary Guidelines 2010, salt intake should not exceed 5gm (or one teaspoon) a day.

High Cholesterol

Cholesterol is a waxy substance and is needed by the body to perform its primary functions. In fact, your liver produces almost 75% of your body's cholesterol (also known as endogenous cholesterol) and the balance comes from the food you eat (dietary cholesterol).

It is important to understand the two different types of cholesterol – the good and the bad cholesterol.

> HDL-cholesterol (high-density lipoprotein): The "good" cholesterol is needed by your body to carry cholesterol away from cells back to the liver, where it is then broken down and passed out as waste products. Generally, high HDL-cholesterol levels may protect you from heart disease. Research has shown that regular physical activity can increase your levels of HDL-C.

> LDL-cholesterol (low-density lipoproteins): The "bad" cholesterol causes an accumulation of "deposits" on the artery walls, leading to blockage in the blood vessel (known as atherosclerosis). Progressive atherosclerosis with deposition of the LDL cholesterol in the walls of the arteries causes a build-up known as plaque.

When the plaque ruptures, this causes a formation of blood clot, which then obstructs blood flow to the heart, and this causes a heart attack.

> Triglycerides: This is a form of fat made in the body, brought on by obesity/overweight problems, lack of exercise, smoking and excessive alcohol consumption. High levels of triglycerides, especially in conjunction with low HDL cholesterol levels, also predispose to coronary heart disease.

To control high cholesterol, it is important to note that cholesterol comes mainly from animal products. Limit your children's consumption of cholesterol-rich food or saturated and trans fats, which increase the amount of bad cholesterol in your body. Consume oil sparingly, and always opt for healthier options such as fat-free products or rapeseed oil.

Diabetes

Diabetes is generally known as the mother of all diseases and is often linked to a host of other diseases that fast-tracks individuals to suffer from heart disease. It is reported by the American Heart Association that heart disease and stroke are the main causes of death and disability among people with type 2 diabetes.

In fact, 65% of people with diabetes die from some form of heart disease or stroke.

Contrary to popular belief, diabetes also affects the young. In fact, in Malaysia, children as young as 10 years old have been diagnosed with type 2 diabetes.

Diabetes amongst adults and children can be easily managed by controlling sugar intake from young. It is advised that sugar intake should not exceed 50g daily (Malaysian Dietary Guidelines 2010).

Obesity

Approximately 43% of Malaysians are either overweight or obese, an increase of a staggering 250% over a 10-year period from 1996, according to the National Health and Morbidity Survey III (2006).

Obesity is simply defined as having excess body fat. It is generally caused by consuming more calories than your body can burn up.

Nowadays, kids generally are more prone to obesity as they spend most of their time in front of their computers, being a couch potato or consuming too much unhealthy snacks or foods.

According to a study conducted by Segal and Sanchez (2001), after an obese child reaches six years of age, the probability the obesity will persist into adulthood exceeds 50%, and 70% to 80% of obese adolescents will remain so as adults.

According to the WHO, an estimated 17.6 million children under five are overweight.

Sedentary Lifestyle

Essentially, our children lack much needed exercise. According to a study reported in *Business Week*, children spend almost eight hours daily watching TV, playing video games or surfing the Internet.

How often do we see kids running around in the playground or in the park these days? Parents should try to encourage regular physical activity amongst family members. It is not only good for everyone's heart-health, but encourages bonding among the family members too.

As the saying goes, a family that plays together stays together.

For children with parents who suffer from heart diseases, physical activity is even more crucial. By exercising, you can increase your levels of HDL-C (good cholesterol) and also eliminate other risk factors such as obesity and high blood pressure.

Recent research has argued that genes play a large part too, especially when it comes to heart disease. Any comments on that?

I will answer that question with another question: what is the standard of proof of that statement? Has it been proven beyond reasonable doubt that genes will lead to heart disease, or are we talking about it on the balance of probabilities?

According to the Framingham Heart Study published in the May 2004 issue of the *Journal of the American Medical Association*, it was found that having one parent with premature heart or vascular disease can double or even triple one's risk of premature heart disease.

If both parents had premature heart disease, a daughter would have three times the risk, and a son, twice the risk.

Well, I am not denying that heart disease is a condition that can be passed down from generation to generation. But one word of caution here – even though you may have inherited such genes, that does not mean that it is cast in stone that you WILL suffer from heart disease.

This means that this case is not proven beyond reasonable doubt. Hereditary factors simply predispose you and make you more vulnerable to heart disease.

It is risk factors like these that are beyond our control that should motivate us to get our act together and start instilling heart-healthy habits amongst our children. There are still the modifiable risk factors which play a larger role in preventing heart disease, even if hereditary predisposition is a factor.

That is why I repeatedly tell my patients to take extra care of their children's lifestyle and diet habits, to reduce the likelihood that heart disease will become a vicious cycle. There is a saying that goes: hereditary loads the gun, environment pulls the trigger.

You have emphasised the link between parents and their children. What about the role of families as a whole in collectively reducing their risks of heart disease? How important is that?

There is a Latin quote: *non est vivere sed valere vita est*, which simply means, life is not about being alive, but being well.

Think about it this way: we all have our respective roles to play in society. In my family, I am a father and a husband. Of course, I pray for a long life so that I can be with my family, but at the same time, I need to be well to be that loving father and husband.

As I have mentioned earlier, genetically, you can be predisposed to heart disease. It is reported that in Malaysia, children as young as seven years old suffer from high cholesterol.

Heart-healthy initiatives at home aren't as hard as what we may think. Start by having family time together at parks, walking the dog, or even going for a family sporting event.

Show your child that if you can do it, so can they.

The prevalence of overweight children has jumped from 2% (NHMS II, 1996) to 5.4% (NHMS III, 2006). According to the *Journal of the American Heart Association*, studies have confirmed that when children learn and practise heart healthy eating habits, it can significantly reduce their heart disease risk later in life.

Can you tell us what are some of the activities championed by the Heart Foundation towards reducing the prevalence of heart diseases in our country?

The Heart Foundation has been actively involved in conducting road shows all over the country. These road shows, or YJM Heart Weeks, are held in shopping malls and we offer free health checks and advice by experts.

YJM is also actively involved in educating Malaysians on heart diseases; specifically on the major risk factors, through educational press articles in major newspapers or magazines.

YJM also collaborates with the private sector to conduct educational community-based programmes.

The most recent one we undertook was the Quaker Make Malaysia Heart Healthy campaign. – **Lee Mei Chieng**

http://thestar.com.my/health/story.asp?file=/2011/9/28/health/9555311&sec=health

3. High Cholesterol Women catch up with Men

Sumitra Deb Roy, TNN | Sep 28, 2011

MUMBAI: City doctors warn that the notion of women being less prone to cardiac problems needs to change fast. Now, a survey by a city-based laboratory has found that the possible underlying cause of rising heart ailments could be alarming cholesterol levels in women.

Metropolis laboratories released data on cholesterol levels of 17,379 men and 15,255 women who had got themselves tested between January 2009 and July this year. Whopping 36% men and 33% women were found to have at least one abnormal cholesterol parameter or undesirable cholesterol and triglycerides presence in their blood stream. But what is most worrisome is that women seem to be fast catching up with men in terms of high cholesterol levels.

Doctors say this calls for a detailed analysis as to how women are showing higher cholesterol levels despite the protection of estrogen (the primary female hormone). The survey revealed how 55.7% women in the 25-45 age brackets had abnormally high cholesterol in comparison to 43 .4% men. Also, out of the 3,586 women found to have abnormal cholesterol levels, around 1,225 had very high cholesterol. Further, the numbers reflected how more women had abysmally high level (56 .5%) of bad cholesterol, and an equal percentage were on the verge of tipping over.

According to Dr Rajesh Bendre, head of immunochemistry, Metropolis Healthcare, the situation could be grimmer as lipid profile tests are just basic parameters. "The incidence of atherosclerosis and coronary heart disease is increasingly seen in younger age groups. The numbers are surprising given that not many women smoke or drink." Interventional cardiologist Dr Vijay Bang from Lilavati Hospital blamed sedentary lifestyle for the incidence.

However, some doctors believe more research is needed on whether higher cholesterol level is translating into more heart attacks in women. Dr Anand Rao, interventional cardiologist of Holy Family Hospital , said that young women suffering heart attacks have some family history or underlying condition like diabetes . "Seldom do we find high cholesterol as a cause in women unlike in men," said Rao , who blamed smoking for heart attacks in women . "(But) the protection women enjoy from estrogen is quite strong ."

WHAT IS PERIPHERAL VASCULAR DISEASE

Arteries that carry blood to arms or legs become narrow due to build-up of cholesterol, causing blood flow to slow down or stop. Ignoring symptoms of pain, tingling or numbness could lead to gangrene and even loss of a limb. Deep vein thrombosis relates to clots deep in the body

EMERGENCY |

A clot from the heart can reach the limbs, cutting blood supply instantly. Prompt action is needed to save the limb

RISK |

It usually occurs in those over 50. More men than women are affected. Smoking, blood pressure, diabetes, cholesterol & obesity are contributory factors

TREATMENT |

Lifestyle changes and, at times, surgery or stenting

http://timesofindia.indiatimes.com/articleshow/10150917.cms

4. Lifestyle Changes to reduce Heart Disease Risk

Monami K. Thakur, Health Me Up | Sep 29, 2011, 12.01PM IST

Indisputably, heart diseases or cardiopathy are two leading causes of premature mortality, claiming over 17.1 million lives globally each year.

However, according to the World Heart Federation, a few basic lifestyle changes can prevent nearly 80 percent of such premature deaths. Besides managing trigger factors like smoking and alcohol abuse, it's useful to alter food and exercise habits as well, especially if you lead a sedentary lifestyle. Here are some vital lifestyle changes to help you prevent and overcome the harmful effects of heart diseases.

Physical Activity and Weight Management: One of the best ways to lead a heart-healthy life and avoid aliments is by indulging in a proper weight management program. Obesity is a major risk factor for heart disease, hypertension and stroke. Hence, if you are overweight or obese, now is the right time to plan an effective weight management program. For this, you can either seek help from a fitness trainer or consult your physician. Excessive weight loss may also be a source of concern if you have advanced heart diseases. Apart from this, make your fitness sessions as fun and entertaining as possible - after all, it's all for your heart.

Diet Modifications: To reduce the risk of heart diseases like cardiomyopathy, coronary heart disease and heart failure; it is mandatory to eat a healthy diet. Why not start with eating more fruits and vegetables? Fruits like bananas are packed with high levels of naturally occurring minerals called electrolytes that help to lower the blood pressure level. Lower your dietary intake of saturated fats, Trans fats and incorporate the use of unsaturated fatty acids like omega-3 fatty acids. Moreover, instead of using cooking oil, try grilling, boiling or steaming your foods more often. Even if you do use cooking oil, opt for the healthier varieties like olive oil.

Stress Control and Management: Learn to relax yourself and employ all possible means to lower your stress levels. This can be through breathing techniques, yoga postures or music. Also, try to listen to your body signals and try to adopt a positive attitude towards life.

Avoid Alcohol Abuse: Alcohol abuse is a major triggering agent for heart ailments and moderate consumption is the only way out. Make sure that you consume no more than one or two units per day. Alcohol abuse causes depression of the contractile function of the heart.

Cessation of Smoking: According to the American Heart Association, smoking is the most important preventable cause of premature death. It decreases the level of HDL (good cholesterol) in the body and makes the blood more likely to form dangerous clots. Smoking is also a leading cause for coronary heart disease where the blood vessels carrying oxygen to the heart are narrowed due to a buildup of plaque.

(Source: MedicineNet, World Heart Federation, Heart Failure Online)
Read more Personal Health, Diet & Fitness stories on www.healthmeup.com

http://timesofindia.indiatimes.com/life-style/health-fitness/health/Lifestyle-changes-to-reduce-heart-disease-risk/articleshow/10168084.cms

5. Four Major Medical Systems of India – Medicine and Health Care

India has a tradition of medical healing, teaching, and research that goes back more than two thousand years to the two basic medical treatises written by Charaka and Sushruta. Today the country has four major medical systems as well as dozens of localized and tribal ones that depend on herbal treatments. The **oldest of the four** systems is still widely followed under the name of *Ayurveda*, meaning "science of long life". It is highly developed, with its own hospitals, clinics, pharmaceutical factories, and medical textbooks. It depends primarily on non invasive herbal treatments. The diagnosis and treatment emphasize a holistic approach. *Sidda* **is a distinct tradition that developed in south India** and follows principles of physiology close to those of Ayurveda. Diagnosis depends on a careful reading of the pulse. Treatment is mostly herbal and psychological. A **third medical tradition is called** *Unani*. **This system came to India with Muslim travelers and was developed under the patronage of the Mughals.** It emphasizes holistic diagnosis and treatment, but the theory of human physiology is distinct. All three of these systems attribute disease to an imbalance between underlying constituents. **The fourth and most widely favored system is biomedicine, or scientific medicine.** It has been used in the cities for three centuries and is practiced in the best hospitals and training colleges. India has about 140 medical colleges.

Public health is a major concern of every state government because of the continuing incidence of epidemic diseases, high rates of infant mortality, and the need for family planning (usually sterilization) to control the growth of the population.

http://www.everyculture.com/Ge-It/India.html

6. India Major Infectious Diseases

Major Infectious Diseases: Degree of risk: High

Food or Waterborne Diseases: Bacterial diarrhea, hepatitis A and E, and typhoid fever

Vector borne Diseases: Chikungunya, dengue fever, Japanese encephalitis, and malaria

Animal Contact Disease: Rabies

Water Contact Disease: Leptospirosis

Note: Highly pathogenic H5N1 avian influenza has been identified in this country; it poses a negligible risk with extremely rare cases possible among US citizens who have close contact with birds (2009)

Definition: This entry lists major infectious diseases likely to be encountered in countries where the risk of such diseases is assessed to be very high as compared to the United States. These infectious diseases represent risks to US government personnel traveling to the specified country for a period of less than three years. The **degree of risk** is assessed by considering the foreign nature of these infectious diseases, their severity, and the probability of being affected by the diseases present. The diseases listed do not necessarily represent the total disease burden experienced by the local population.

The risk to an individual traveler varies considerably by the specific location, visit duration, type of activities, type of accommodations, time of year, and other factors. Consultation with a travel medicine physician is needed to evaluate individual risk and recommend appropriate preventive measures such as vaccines.

Diseases are organized into the following six exposure categories shown in italics *and listed in typical descending order of risk*. Note: The sequence of exposure categories listed in individual country entries may vary according to local conditions.

Food or Waterborne Diseases acquired through eating or drinking on the local economy:

Hepatitis A - viral disease that interferes with the functioning of the liver; spread through consumption of food or water contaminated with fecal matter, principally in areas of poor sanitation; victims exhibit fever, jaundice, and diarrhea; 15% of victims will experience prolonged symptoms over 6-9 months; vaccine available.

Hepatitis E - water-borne viral disease that interferes with the functioning of the liver; most commonly spread through fecal contamination of drinking water; victims exhibit jaundice, fatigue, abdominal pain, and dark colored urine.

Typhoid Fever - bacterial disease spread through contact with food or water contaminated by fecal matter or sewage; victims exhibit sustained high fevers; left untreated, mortality rates can reach 20%.

Vector Borne Diseases acquired through the bite of an infected arthropod:

Malaria - caused by single-cell parasitic protozoa *Plasmodium*; transmitted to humans via the bite of the female Anopheles mosquito; parasites multiply in the liver attacking red blood cells resulting in cycles of fever, chills, and sweats accompanied by anemia; death due to damage to vital organs and interruption of blood supply to the brain; endemic in 100, mostly tropical, countries with 90% of cases and the majority of 1.5-2.5 million estimated annual deaths occurring in sub-Saharan Africa.

Dengue Fever - mosquito-borne (*Aedes aegypti*) viral disease associated with urban environments; manifests as sudden onset of fever and severe headache; occasionally produces shock and hemorrhage leading to death in 5% of cases.

Yellow Fever - mosquito-borne viral disease; severity ranges from influenza-like symptoms to severe hepatitis and hemorrhagic fever; occurs only in tropical South America and sub-Saharan Africa, where most cases are reported; fatality rate is less than 20%.

Japanese Encephalitis - mosquito-borne (*Culex tritaeniorhynchus*) viral disease associated with rural areas in Asia; acute encephalitis can progress to paralysis, coma, and death; fatality rates 30%.

African Trypanosomiasis - caused by the parasitic protozoa *Trypanosoma*; transmitted to humans via the bite of bloodsucking Tsetse flies; infection leads to malaise and irregular fevers and, in advanced cases when the parasites invade the central nervous system, coma and death; endemic in 36 countries of sub-Saharan Africa; cattle and wild animals act as reservoir hosts for the parasites.

Cutaneous Leishmaniasis - caused by the parasitic protozoa *leishmania*; transmitted to humans via the bite of sandflies; results in skin lesions that may become chronic; endemic in 88 countries; 90% of cases occur in Iran, Afghanistan, Syria, Saudi Arabia, Brazil, and Peru; wild and domesticated animals as well as humans can act as reservoirs of infection.

Plague - bacterial disease transmitted by fleas normally associated with rats; person-to-person airborne transmission also possible; recent plague epidemics occurred in areas of Asia, Africa, and South America associated with rural areas or small towns and villages; manifests as fever, headache, and painfully swollen lymph nodes; disease progresses rapidly and without antibiotic treatment leads to pneumonic form with a death rate in excess of 50%.

Crimean-Congo Hemorrhagic Fever - tick-borne viral disease; infection may also result from exposure to infected animal blood or tissue; geographic distribution includes Africa, Asia, the Middle East, and Eastern Europe; sudden onset of fever, headache, and muscle aches followed by hemorrhaging in the bowels, urine, nose, and gums; mortality rate is approximately 30%.

Rift Valley Fever - viral disease affecting domesticated animals and humans; transmission is by mosquito and other biting insects; infection may also occur through handling of infected meat or contact with blood; geographic distribution includes eastern and southern Africa where cattle and sheep are raised; symptoms are generally mild with fever and some liver abnormalities, but the disease may progress to hemorrhagic fever, encephalitis, or ocular disease; fatality rates are low at about 1% of cases.

Chikungunya - mosquito-borne (*Aedes aegypti*) viral disease associated with urban environments, similar to Dengue Fever; characterized by sudden onset of fever, rash, and severe joint pain usually lasting 3-7 days, some cases result in persistent arthritis.

Water contact diseases acquired through swimming or wading in freshwater lakes, streams, and rivers:

Leptospirosis - bacterial disease that affects animals and humans; infection occurs through contact with water, food, or soil contaminated by animal urine; symptoms include high fever, severe headache, vomiting, jaundice, and diarrhea; untreated, the disease can result in kidney damage, liver failure, meningitis, or respiratory distress; fatality rates are low but left untreated recovery can take months.

Schistosomiasis - caused by parasitic trematode flatworm *Schistosoma*; fresh water snails act as intermediate host and release larval form of parasite that penetrates the skin of people exposed to contaminated water; worms mature and reproduce in the blood vessels, liver, kidneys, and intestines releasing eggs, which become trapped in tissues triggering an immune response; may manifest as either

urinary or intestinal disease resulting in decreased work or learning capacity; mortality, while generally low, may occur in advanced cases usually due to bladder cancer; endemic in 74 developing countries with 80% of infected people living in sub-Saharan Africa; humans act as the reservoir for this parasite.

Aerosolized dust or soil contact disease acquired through inhalation of aerosols contaminated with rodent urine:

Lassa Fever - viral disease carried by rats of the genus *Mastomys*; endemic in portions of West Africa; infection occurs through direct contact with or consumption of food contaminated by rodent urine or fecal matter containing virus particles; fatality rate can reach 50% in epidemic outbreaks.

Respiratory Disease acquired through close contact with an infectious person:

Meningococcal Meningitis - bacterial disease causing an inflammation of the lining of the brain and spinal cord; one of the most important bacterial pathogens is *Neisseria meningitidis* because of its potential to cause epidemics; symptoms include stiff neck, high fever, headaches, and vomiting; bacteria are transmitted from person to person by respiratory droplets and facilitated by close and prolonged contact resulting from crowded living conditions, often with a seasonal distribution; death occurs in 5-15% of cases, typically within 24-48 hours of onset of symptoms; highest burden of meningococcal disease occurs in the hyper endemic region of sub-Saharan Africa known as the "Meningitis Belt" which stretches from Senegal east to Ethiopia.

Animal Contact Disease acquired through direct contact with local animals:

Rabies - viral disease of mammals usually transmitted through the bite of an infected animal, most commonly dogs; virus affects the central nervous system causing brain alteration and death; symptoms initially are non-specific fever and headache progressing to neurological symptoms; death occurs within days of the onset of symptoms.

Source: CIA World Factbook - Unless otherwise noted, information in this page is accurate as of January 9, 2012

http://www.indexmundi.com/india/major_infectious_diseases.html

7. State-wise Summary of Influenza A H1N1: 2009, 2010 and 2011

S. No.	State	Cases	Deaths	Cases	Deaths	Cases	Deaths
		May,2009-Dec,2009		Jan,2010-Dec,2010		Jan,2011-Dec,2011	
1	A P	777	52	733	49	11	1
2	Assam	47	1	5	1	0	0
3	Bihar	7	0	0	0	1	0
4	Chandigarh	257	8	75	0	0	0
5	Chhattisgarh	46	2	50	12	0	0
6	Delhi	8439	72	2725	77	25	2
7	Goa	63	5	68	1	7	0
8	Gujarat	697	125	1682	363	7	4
9	Haryana	1888	34	216	16	6	4

10	H P	14	7	10	3	14	3
11	Jammu & Kashmir	93	2	20	2	13	1
12	Jharkhand	1	0	1	0	0	0
13	Karnataka	1872	138	2575	116	100	12
14	Kerala	1579	32	1533	89	210	10
15	M P	20	8	395	110	9	4
16	Maharashtra	4594	270	6814	669	26	5
17	Orissa	26	3	92	29	0	0
18	Puducherry	87	6	50	6	1	0
19	Punjab	114	33	139	14	46	14
20	Rajasthan	3032	150	1710	153	36	11
21	Tamil Nadu	2062	7	1184	13	34	4
22	Uttarakhand	129	10	25	7	0	0
23	Uttar Pradesh	1215	14	376	29	57	0
24	West Bengal	135	0	121	4	0	0
Cumulative Total		27236	981	20604	1763	603	75

Office of the Director, Emergency Medical Relief, Directorate General of Health Services, GoI, New Delhi.

8. 30 Percent Cancer Deaths in India due to Tobacco Use – 2010

Tobacco use one of the major reasons for death in India. Here are some facts about Tobacco use in India and its effect. According to Tobacco Altas brought out by World lung foundation 390,000 hectares of land is used to grow tobacco.

- Lancet reports 1.2 lakh deaths due to tobacco related cancer deaths in 2010.

- More than one-third of adults (35%) use tobacco in India, or 274.9 million

- 163.7 million use only smokeless tobacco; 68.9 million are only smokers and 42.3 million users of both smoking and smokeless tobacco.

- 14.1% children in the age group of 13-15 years are consuming tobacco in some form

- Bidis, along with smokeless tobacco, account for 81% of the Indian tobacco market.

- India is also the second largest consumer and second largest producer of tobacco in the world, second only to China.

- The prevalence of overall tobacco use among males is 48% and among females is 20%.

- Nearly two in five adults (38%) in rural areas and one in four adults (25%) in urban areas use tobacco in some form

- The extent of use of smokeless tobacco products among males (33%) is higher than among females (18%)

- Globally 6 million people die each year due tobacco consumption-related diseases

- The death toll is estimated to rise to eight million by 2030.

- It is estimated that more than 80% of these deaths occur in the developing countries.

- Tobacco has also been identified as the risk factor for 6 of the 8 leading causes of death.

- Nearly 30% of cancers in males in India, and more than 80% of all oral cancer are related to tobacco use.

Source: timesofindia.com and worldlungfoundation.org.

http://indiafacts.in/facts/30-cancer-deaths-in-india-due-to-tobacco-use/

9. Eating Habits of Urban Indians

Do you want to know what Indians eat? A new study has revealed the eating habits of urban Indians. The wellness group of Apollo Hospital Group, under Prof. Adrian Kennedy, has been monitoring the health data of urban Indians over the last decades. The result of this year's health study analysed the eating habits of 40,000 urban Indians across eight cities who came to Apollo for their medical checkups.

These are some of the findings about **what Indians eat and their health conditions**:

- **48% eat oily fried foods**
- **51% do not eat fresh fruits, uncooked vegetables or fresh salad on a daily basis.**
- **49% have low protein intake, eat meat, dal or beans less than 3 days a week.**
- **54% have high sugar intake, gorge on sweets.**
- **47% indulge in untimely snacking.**
- **31% have insufficient calcium intake, consume few dairy products.**
- **72% eat meat, mainly chicken and fish, 2-3 days a week.**
- **36% eat out at Fast food outlets regularly.**
- **As a result**
- **48% are overweight**
- **34% do not exercise**
- **51% are physically unfit**
- **33% are on daily medication**
- **26% have high BP**

- **30% have bad teeth.**
- **17% have diabetes.**
- **31% face digestive disorders.**

Source: India Today Magazine June 4 2012.

http://indiafacts.in/health/what-urban-indians-are-eating/

10. Swine Flu Deaths in 2009 Topped Quarter Million

Featured Article
Academic Journal
Main Category: Swine Flu
Also Included In: Immune System / Vaccines; Flu / Cold / SARS
Article Date: 26 Jun 2012 - 2:00 PDT

Deaths worldwide from the 2009 influenza H1N1 "swine flu" pandemic are likely to be nearer 280,000, some 15 times more than the 18,500 reported from confirmed lab tests, suggests a new study published in *The Lancet Infectious Diseases* this week.

For the study, led by the US Centers for Disease Control and Prevention, researchers developed a new model using flu data from 12 low, middle, and high income countries.

The figures they used were based on flu diagnosed from patients' symptoms and not from lab tests.

In their model they assumed that the risk of death from flu is higher in some countries than in others, and they calculated respiratory deaths associated with the 2009 H1N1 virus differently to the cardiovascular deaths linked to the pandemic.

They estimate that globally there were 201,200 respiratory deaths (ranging from 105,700 to 395,000), and 83,300 cardiovascular deaths (46,000 to 179,900) associated with 2009 pandemic H1N1 flu virus.

These figures are some 15 times higher than reported laboratory-confirmed deaths, write the authors.

"80% of the respiratory and cardiovascular deaths were in people younger than 65 years and 59% occurred in south-east Asia and Africa," they note.

The researchers suggest some problems with availability of data in the low income countries may affect the accuracy of these estimates.

However, despite these shortcomings, they conclude that a disproportionate number of estimated pandemic deaths may have occurred in lower income countries, and called for more effort to target vaccine production and supply to them in future pandemics.

In an accompanying editorial, Cecile Viboud of the National Institutes of Health and Lone Simonsen of George Washington University, suggest these estimates highlight the **difficult problem of trying to keep track of a pandemic as it runs its course**.

Lab-confirmed deaths hugely under-estimate the real number of deaths because there is a lack of routine testing and problems with identifying flu-related deaths, they note.

Another study in the same issue of the journal highlights the success of Scotland's vaccination campaign during the H1N1 pandemic.

In that study, researchers estimated vaccine effectiveness in a nationally representative sample of the Scottish population.

In their paper they describe how the pandemic H1N1 vaccination program started in the third week of October 2009, and by the end of January 2010, just over 38,000 people (15%) were vaccinated, leaving 85% unvaccinated.

They calculate that the effectiveness of the vaccine in preventing emergency hospital admissions from flu-related disorders was 19.5%, and the vaccine's effectiveness in preventing lab-confirmed flu was 77%.

In their conclusion they write:

"Pandemic H1N1 2009 influenza vaccination was associated with protection against pandemic influenza and a reduction in hospital admissions from influenza-related disorders in Scotland during the 2009-10 pandemic.

In August 2010, after it had been reported in over 200 countries, the World Health Organization (WHO) announced that the world is in a "post-pandemic" period with respect to H1N1 swine flu, but the virus is still circulating.

H1N1 was included in the 2011-2012 seasonal flu vaccines in the US, the UK and many other countries.

Seasonal flu kills between 250,000 and 500,000 people worldwide every year, according to WHO.

Written by Catharine Paddock

Copyright: Medical News Today

Visit our swine flu section for the latest news on this subject.

"Estimated global mortality associated with the first 12 months of 2009 pandemic influenza A H1N1 virus circulation: a modelling study"; Fatimah S Dawood, A Danielle Iuliano, Carrie Reed, Martin I Meltzer, David K Shay, Po-Yung Cheng, Don Bandaranayake, Robert F Breiman, W Abdullah Brooks, Philippe Buchy, Daniel R Feikin, Karen B Fowler, Aubree Gordon, Nguyen Tran Hien, Peter Horby, Q Sue Huang, Mark A Katz, Anand Krishnan, Renu Lal, Joel M Montgomery, Kåre Mølbak, Richard Pebody, Anne M Presanis, Hugo Razuri, Anneke Steens, Yeny O Tinoco, Jacco Wallinga, Hongjie Yu, Sirenda Vong, Joseph Bresee, Marc-Alain Widdowson; *The Lancet Infectious Diseases*, Early Online Publication, 26 June 2012; DOI:10.1016/S1473-3099(12)70121-4; Link to Abstract

"Effectiveness of H1N1 vaccine for the prevention of pandemic influenza in Scotland, UK: a retrospective observational cohort study"; Colin R Simpson, Lewis D Ritchie, Chris Robertson, Aziz Sheikh, Jim McMenamin; *The Lancet Infectious Diseases*, Early Online Publication, 26 June 2012; DOI:10.1016/S1473-3099(12)70133-0; Link to Abstract.
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APA

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http://www.medicalnewstoday.com/articles/247042.php

11. One Maternal Death Every 10 Minutes in India: UN

New Delhi: India is likely to miss the Millennium Development Goal (MDG) related to maternal health as one maternal death is being reported every 10 minutes in the country now.

India recorded around 57,000 maternal deaths in 2010, which translate into a whopping six every hour and one every 10 minutes, UN data in this regard says.

The current Maternal Mortality Rate (MMR) of India is 212 per one lakh live births, whereas the country`s MDG in this respect is 109 per one lakh live births by 2015.

The MMR challenge for India was highlighted today at the launch of the Millennium Development Goals Report of the UN Secretary General. The 2012 report, which assesses the regional progress on eight MDGs the world promised to meet, states that although progress has been made on improvements in maternal health, actual targets remain far from sight.

"India is moving well on MMR. We have made progress in this regard. The MMR recorded a 38 per cent decline in maternal deaths between 1999 and 2009. There has been progress but we are not there just yet. The Government needs to ensure the availability of Auxiliary Nurses and Midwives closer to the homes of women who are delivering", Frederika Meijer, India Representative for United Nations Population Fund said.

Meijer said almost 150 women were dying daily in India, as per 2010 data on maternal deaths. "This means one woman is dying every minute. The Government must work to address the issue of unmet need for contraception of women. They need to be counseled to space their children better," Meijer said.

Maternal deaths are defined as the number of women who die during pregnancy or within 42 days of the termination of pregnancy.

India has reduced MMR significantly from 437 per one lakh live births in 1999 to 212 now, but needs to hasten the pace under National Rural Health Mission to achieve related MDG.

The MDG Report 2012 points out that an estimated 2,87,000 maternal deaths occurred in 2010 worldwide. This represents a decline of 47 per cent from 1990 when the MDGs were set.

"Of the total maternal death burden worldwide, the sub- Saharan Africa accounts for 56 per cent and South Asia accounts for 29 per cent. Together the two regions made up for 85 per cent of the global

maternal death burden in 2010", states the Report released by noted economist Jayati Ghosh of Jawaharlal Nehru University.

Ghosh flagged another important issue on the health front saying poor child nutrition remained a massive challenge for India where 42 per cent children under five years of age were underweight.

"This is the largest proportion of underweight children anywhere in the world. Nutrition deprivation is a huge issue which the Government must address because it affects a child`s ability to study and lead a productive life later, Together with food insecurity and employment insecurity, nutrition deprivation to me is a big problem for India. The situation is alarming", she said.

As many as 237 million Indians are still living in hunger though India has managed to meet the first MDG of reducing people in extreme poverty by half between 1990 and 2015. Poverty has declined in India from 51 per cent in 1990 to 37 per cent now, but hunger remains a challenge, especially when it affects child nutrition.

On infant health, though, India has done much better and is well within reaching the MDG of reducing IMR to 42 per 1000 live births. As per the latest estimates, India`s IMR stands at 47. It is a little higher for rural areas.

India`s progress on the MDG of combating HIV/AIDS, malaria and TB is also satisfactory, said UN officials.

They said it was heartening that India had managed to do well on the health MDGs despite the fact that food insecurity in the country was growing.

Meijer, however, warned "At the current pace, India is unlikely to meet the MDG on maternal health. It needs to focus on such huge pockets where the mother mortality rate is still high. The states where MMR is still high are Assam, Bihar, Madhya Pradesh, Uttar Pradesh and Rajasthan, besides others".

To achieve this MDG 5 (on maternal health) India needed to reduce maternal mortality (MMR) from 437 deaths per 100,000 live births in 1991 to 109 by 2015. It has only reached the 212 mark just yet.

The UN MDG Report 2012 points out that overall, three important targets on poverty, slums and water have been met three years ahead of the 2015 deadline. The share of people living on less than 1.25 USD a day has reduced to less than half as compared to 1990.

The proportion of people with improved access to drinking water has risen from 76 per cent in 1990 to 89 per cent in 2010.

The world has also achieved parity in primary education between girls and boys. There were 97 girls enrolled per 100 boys in 2010 - up from 91 girls per 100 boys in 1999.

The UN MDG Report warns Governments against allowing the current economic crisis to reverse the progress in reducing poverty.

12. India likely to miss MDG on Maternal Health: U.N.

With one maternal death reported every 10 minutes, India is likely to miss the Millennium Development Goal (MDG) related to maternal health, a latest United Nations report says. While there is an improvement from maternal death in every six minutes in 2010 to 10 minutes now, the MDG target in this respect is unlikely to be met, the report said.

At present, the Maternal Mortality Rate (MMR) of India is 212 per one lakh live births, whereas the country's target is 109 per one lakh live births by 2015.

The United Nation's Millennium Development Goals Report of the U.N. Secretary-General, 2012, which assesses the regional progress on eight MDGs the world promised to meet, suggests that although progress has been made on improvements in maternal health, actual targets remain far from achieving the desired rate.

Maternal deaths are defined as the number of women who die during pregnancy or within 42 days of the termination of pregnancy. India has reduced MMR significantly from 437 per one lakh live births in 1999 to 212 now, but needs to hasten the pace under the National Rural Health Mission to achieve the related MDG.

The MDG Report 2012 points out that an estimated 2,87,000 maternal deaths occurred in 2010 worldwide. This represents a decline of 47 per cent from 1990 when the MDGs were set.

"Of the total maternal death burden worldwide, sub-Saharan Africa accounts for 56 per cent and South Asia accounts for 29 per cent. Together the two regions made up for 85 per cent of the global maternal death burden in 2010," states the report released by noted economist Jayati Ghosh of Jawaharlal Nehru University.

India has done better on infant health, and is well within reaching the MDG of reducing IMR to 42 per 1000 live births. As per the latest estimates, India's IMR stands at 47. India's progress on the MDG of combating HIV/AIDS, malaria and TB is also satisfactory.

India needs to focus on Assam, Bihar, MP, UP and Rajasthan, where the MMR is still high.

To achieve this, MDG 5 (on maternal health) India needs to reduce maternal mortality (MMR) from 437 deaths per 100,000 live births in 1991 to 109 by 2015. It has only reached the 212 mark.

The UN MDG Report 2012 points out that overall, three important targets on poverty, slums and water have been met three years ahead of the 2015 deadline. The share of people living on less than $1.25 a day has reduced to less than half as compared to 1990.

The proportion of people with improved access to drinking water has risen from 76 per cent in 1990 to 89 per cent in 2010.

As many as 237 million Indians are still living in hunger though India has managed to meet the first MDG of reducing people in extreme poverty by half between 1990 and 2015.

13. National Institute of Communicable Diseases (NICD)

The National Institute of Communicable Diseases (NICD) had its origin as Central Malaria Bureau, established at Kasauli (Himachal Pradesh) in 1909 and following expansion was renamed in 1927 as the Malaria Survey of India. The organization was shifted to Delhi in 1938 and called as the Malaria Institute of India (MII). In view of the drastic reduction achieved in the incidence of malaria under National Malaria Eradication Programme (NMEP), Government of India decided to reorganize and expand the activities of the institute to cover other communicable diseases. Thus, on July 30, 1963 the erstwhile MII was renamed as NICD to shoulder these additional responsibilities.

The institute was established to function as a national centre of excellence for control of communicable diseases. The function of the institute also included various areas of training and research using multi-disciplinary integrated approach. The institute was, in addition, expected to provide expertise to the States and Union Territories (UTs) on rapid health assessment and laboratory based diagnostic services. Surveillance of communicable diseases and outbreak investigation also formed an indispensable part of its activities.

The NICD campus at Delhi covers an approximate areas of 15.35 acres which includes the former official residence of Commander in Chief of the Indian Army and now houses the administrative block, library, divisions of epidemiology and parasitic diseases. The Institute is one of its unique kind in the city of Delhi having so much of green area with about 80% as open area. The Institute has got three large sprawling lawns with well maintained plants as well as a number of smaller garden islands. The headquarters of the directorate of National Anti Malaria Programme (NAMP), now named as National Vector Borne Disease Control Programme (NVBDCP) is also located in the NCDC campus. The facilities available in the campus include research laboratories, a large lecture hall, well equipped conference and seminar rooms, animal house, fish hatcheries and two hostels with a total capacity to accommodate about 125 trainees and a well maintained canteen. The campus has the facilities of play grounds for volleyball, badminton etc. as well as for indoor facilities like carom, gymnasium etc.

The Institute is under administrative control of the Director General of Health Services, Ministry of Health and Family Welfare, Govt. of India. The Director, an officer of the Public Health sub-cadre of Central Health Service, is the administrative and technical head of the Institute.

The Institute has its headquarters in Delhi and has 8 out-station branches located at Alwar (Rajasthan), Bengaluru (Karnataka), Kozikode (Kerela), Coonoor (Tamil Nadu), Jagdalpur (Chattisgarh), Patna (Bihar), Rajahmundry (Andhra Pradesh) and Varanasi (Uttar Pradesh).

There are several technical Divisions at the headquarters of the institute i.e. Centre for Epidemiology and Parasitic Diseases (Dept. of Epidemiology, Dept. Parasitic Disease) Division of Microbiology, Division of Zoonosis, Centre for HIV/AIDS and related diseases, Centre for Medical Entomology and Vector Management, Division of Malariology and Coordination, Division of Biochemistry and Biotechnology.

In each division there are several sections and laboratories dealing with different communicable diseases. The divisions have well equipped laboratories with modern equipments capable of undertaking tests using latest technology. The activities of each division are supervised by an officer in-charge, supported by medical and non-medical scientists, research officers and other technical and paramedical staff. Every Division is equipped with its own independent Seminar Room. The institute has a 24 x 7 Disease Monitoring Cell operating round the clock to respond to enquiries related to disease outbreak along-with video-conferencing facility to interact with the network of disease surveillance centres in the states and districts. The branches are also well equipped and staffed to carry out field studies, training activities and research.

14. Malaria Plasmodium falciparum (Pf) Rapid Test

INTENDED USE:

This Malaria *Plasmodium falciparum* (*P.f.*) Rapid Test is a qualitative test for the detection of histidine-rich protein 2 antigen (HRP-2) of *P.f.* in human whole blood. This test is for In-Vitro Diagnostic use only.

INTRODUCTION:

Malaria is one of the world's most prevalent parasitic diseases and ranks third in the world among major infectious diseases in terms of mortality. The protozoal parasites that cause malaria are from the *Plasmodium* genus. Four species of *Plasmodium* protozoa cause malaria: *Plasmo-dium falciparum, Plasmodium vivax, Plasmodium malariae* and *Plasmodium orale*. Transmitted principally by the Anopheles mosquito, malaria infections may also occur from contacting infected blood, such as from blood transfusions.

P. falciparum accounts for the majority of infections and is the most lethal. *P. vivax, P. malariae* and *P. orale* cause a less severe form of malaria with intermittent fever which is usually neither debilitating nor fatal. Classic symptoms of malaria include fever, headaches, chills, vomiting, shiver-ing and convulsions. In some rare forms of falciparum malaria, chills and fever may be absent and the patient may present with delirium or coma. Remission periods can last from a few weeks to several months.

Severe anemia is often attributed to the cause of death from a malaria infection.

Malaria is a curable disease with a host of drugs that can be used in both its treatment and prevention. Two of the best known and most commonly used are chloroquinine and quinine. The early detection of *P falciparum* malaria is of great importance due to rising levels of drug resistance now being associated with this disease.

TEST PRINCIPLE

This *Plasmodium falciparum* (*P.f.*) malaria test is a rapid, *in-vitro* immunodiagnostic test for the detection of circulating *P.f.* antigen in whole blood. The test uses antibodies that are specific for the histidine-rich protein 2 antigen (HRP-2) of *P.f.* \Whole blood (5 uL) is applied to the sample pad where the red blood cells are lysed with a specially formulated solution. The label pad that is next to the sample pad on the strip is impregnated with blue latex that has an anti- HRP-2 antibody coupled to it. The label pad is also impregnated with purple latex that is coupled to a control antibody. A second anti-HRP-2 antibody is immobilized on the test strip at the test line region. A control material is immobilized on the strip at the control line region.

When a positive sample is applied to the sample pad, *P.f.* antigen in the sample contacts the latex-labeled antibody and binds to it. A washing reagent is then added to a test vial, and the strip is placed in the vial. As the liquid flows along the length of the strip, any antigen-latex complexes also migrate with the liquid. These complexes are captured by their respective antibodies at the test and control line regions. If a sample contains *P.f.* antigen, a blue line will form in the test region. If no *P.f.* antigen is present, a blue line will not form in the test region. A purple control line will always appear in the control region if the test has been properly performed.

KIT CONTENTS:

Each kit contains the following components in sufficient quantities to perform the number of tests indicated on the package label:
• 25 test devices packaged in individual foil pouches.
• 25 sample collection capillaries
• 1 bottle of Lysing/Wash reagent
• 1 product insert

MATERIALS REQUIRED BUT NOT SUPPLIED:

• Lancets
• Disinfecting, sterile wipe
• Timer capable of timing from 0 to 60 minutes

PRECAUTIONS:

1. Specimens should be handled as being potentially infectious. The Centers for Disease Control (CDC) and the National Institutes of Health (NIH) recommend that all potentially infectious agents be handled at a Biosafety Level 2.
2. Biological decontamination procedures should be followed for all equipment, containers, surfaces, etc. that come in contact with potentially infectious specimens. All disposables that come in contact with these samples should be dispose of as infectious waste.
3. For best results, strict adherence to these instructions is required. Be careful not to touch the tip of the wash bottle to the sample well when adding buffer to the device. This will greatly minimize the likelihood of contaminating the wash reagent.
4. The wash solution contains a low concentration of sodium azide as a preservative (less than 0.1 %). Sodium azide is toxic. Do not drink this buffer. Sodium azide may also react with lead and copper in plumbing to form explosive compounds. If you dis- pose of this buffer down a drain, flush the drain with excess amounts of water to minimize the accumulation of potentially explosive metal-azide compounds.
5. Do not use the test devices or Lysing/Wash reagent beyond the stated expiration date marked on the package label.
6. Store the test kits and buffer according to temperature and humidity conditions stated on the package label.
7. All test devices, buffers and specimens must be at room temperature (15-30°C) before running the assay.
8. Do not re-use the test devices.

STORAGE AND SHELF LIFE OF REAGENTS:

Store the kit between 2°C and 30°C. Do not store the kit in direct sunlight. Be sure to use the device immediately after re- moving it from its foil pouch. The test kit may be used until its expiration date, which can be found on the package label.

SPECIMEN COLLECTION:

1. Handle all specimens as capable of transmitting infectious diseases. Dispose of all materials that come in contact with the specimen as infectious waste.
2. Specimens should be collected aseptically by fingerstick or venipuncture according to standard methods such as those specified by the National Committee for Clinical Laboratory Standards (NCCLS). The use of grossly lipemic or turbid samples should be avoided.

3. Whole blood samples should be used immediately, if possible. NCCLS provides recommendations for storing blood specimens (Approved Standard - Procedures for the Handling and Processing of Blood Specimens, H1SA. 1990).
4. **Use the collection capillary provided to deliver a 5 uL sample or collect venous blood into EDTA tubes.** To obtain capillary blood, puncture a finger, heel or other appropriate site. First cleanse the area with a disinfecting sterile wipe. Use a lancet to puncture the skin. Allow a blood droplet to form.

Touch the collection capillary to the blood droplet and transfer to the test strip immediately. To collect venous blood, use the standard venipuncture procedure and collect blood into an EDTA tube. If the test cannot be performed immediately, the blood may be stored for up to three days at 2°C to 8°C.

TEST PROCEDURE:

1. Just prior to use, remove a device from its foil pouch. Lay the test device flat on the work surface.
2. Using a sterile lancet and clean sample capillary, collect blood by puncturing an accessible site (e.g., finger or heel). Allow a blood droplet to form at the puncture site and touch the tip of the capillary to the blood droplet. Allow blood to fill about 3/4 of the capillary. Alternatively, 5 uL of EDTA venous blood may be used. Ensure that the blood sample warms to room temperature prior to use.
3. Transfer the blood sample from the capillary tube to the test device by holding the capillary vertically and gently touching the full end against the pad within the sample addition port until all of the blood has been transferred. Discard the capillary properly. If using a micro-pipetter, slowly apply 5 uL of blood to the sample pad
4. Immediately add one drop of the Lysing/ Wash reagent to the sample port on top of the whole blood
5. Add five drops of the Lysing/Wash reagent to the buffer well
6. Using a timer, allow the reaction to proceed for 15 minutes. Do not pick up the device during this time.
7. When the 15-minute period is over, read the results. If there is still a reddish background, lay the device flat on the work surface and wait an additional 15 minutes. The results may be read from 15 to 30 minutes. Do not read results after 60 minutes.

Negative results must be confirmed at 30 minutes

IMPORTANT NOTICE:

This test only detects malaria infections caused by *Plasmodium falciparum*.
Occasionally, residual malaria antigen may be detected for several days following elimination of the parasite by anti-malarial treatment. The diagnosis of Malaria should be made using the results of this test together with the other clinical and laboratory findings.

INTERPRETATION OF THE RESULTS:

A positive result is indicated when any visible line forms in the result window next to the test zone together with a line in the C zone. The test is positive even if the line in the test zone appears lighter or darker than the line in the C zone.
1. The test is not valid if the control line does not appear, regardless of the presence of line in the test line region. Repeat the test with a new device.
2. Positive results may appear as early as 5 minutes. Negative results must be confirmed after at 30 minutes.
3. The background of the strip should be pinkish-white, not red, prior to confirming a negative result.
4. Results should not be read after 60 minutes.

Positive Test Result

A visible blue test line on the strip located in the test zone indicates a positive test result for *Plasmodium falciparum*. The purple control line must also be present.

Negative Test Result

The test is negative if only the control line appears

Invalid Test Result

The test is invalid if a purple line does not appear in the control zone. If this occurs, the test should be repeated using a new test device.

Histidine Rich Protein 2 (HRP-2) is secreted by the *Plasmodium falciparum* species. Its presence usually indicates a malaria *P.f.* infection. Occasionally, residual HRP-2 may be detected for several days following elimination of the parasite by anti-malarial treatment. The diagnosis of *P.f.* Malaria should be made using the results of this test together with the other clinical and laboratory findings.

QUALITY CONTROL:

1. For the assay to be considered valid, the control line must appear. If it does not appear, the test results are not valid and the test must be repeated.
2. In addition to your laboratory's standard quality control procedures, the NCCLS recommends that a positive and negative external control be tested at least once within each 25- test kit and by each operator performing testing within a kit. This will verify that the reagents and test strips are working properly and the operator is able to correctly perform the test procedure. Please refer to this NCCLS publication C24- A for recommendations on appropriate Quality Control practices.

LIMITATIONS OF THE TEST:

1. This HPR-2 based Malaria *P.f.* tests may give positive malaria results for up to 2 weeks following chemotherapy and parasite clearance as confirmed by microscopy.
2. As with all diagnostic tests, the result must be correlated with clinical findings. If the test result is negative and malaria infection suspicion still exists, additional follow-up testing using other clinical methods is recommended.
3. A negative result at any time does not preclude the possibility of an early malaria infection.
4. Strict adherence to the test procedure is required. Do not re-use negative devices. Do not adulterate the Lysing/Wash reagent.
5. This test cannot be used to monitor therapy or to estimate the titer of the infection.
6. A final diagnosis should be based on these test results in conjunction with other clinical and laboratory findings.

SENSITIVITY AND SPECIFICITY:

A clinical study using a total 370 whole blood samples was con- ducted at various sites in 3 countries. The results of the Merlin
Labs malaria combo test were compared with the blood smear / microscopy method. The sensitivity and specificity of the *Pf* test
results are given below:
P.f. Test Results smear (+) Blood smear (-)
Rapid Test (+) 44 8
Rapid Test (-) 0 318
Sensitivity = >99% Specificity = 98%

STABILITY:

This Malaria *P.f.* test has been found to be stable for up to 14 months from the date of manufacture when stored between 2 to 30°C. The expiration date of each test can be found on the Kit box label. No component or reagent of the test should be used beyond its printed expiration date.

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http://www.rapidtest.com/Malaria_172103P-25-web.pdf

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Tel: (818) 591-3030 Fax: (818) 591-8383
E-mail: onestep@rapidtest.com
Web site: www.rapidtest.com
See external label, Σ=25 or 50 tests Cat. #172103P-25
2°C-30°C for test card and 2°C-8°C for Sample tube
For the convenience of storage, test cards and sample tubes can be stored separately

15. Medecins Sans Frontieres (MSF) battles Kala Azar in Bihar

July 17, 2012

Patna: Medecins Sans Frontieres (MSF), which provides medical humanitarian aid worldwide, is waging a war against kala azar in Bihar.

Hundreds have benefited since MSF started its project in Vaishali in 2007. In March 2012, the Switzerland-headquartered body formally joined hands with the Bihar government.

A disease transmitted by the sand fly, kala azar has killed in the past few decades many hundreds in Bihar, the state worst hit by it. Over 70 people died last year.

Since 1988, MSF has treated more than 100,000 kala azar patients in Sudan, Ethiopia, Kenya, Somalia, Uganda and Bangladesh besides India. Its doctors provide liposomal amphotericin B, a safe and effective drug.

MSF says that it has treated more than 10,000 patients with an initial cure rate of over 98 percent in the last five years in Vaishali as well as neighbouring districts.

All treatment is free of cost, says MSF project coordinator Delphine Altwegg. It says it cured around 2,000 patients each year in the last five years.

Winner of the Nobel Peace Prize in 1999, MSF has set up a treatment centre in Hajipur Sadar Hospital and in the primary health centres of Vaishali.

"MSF has been providing the best medical services to kala azar patients," Altwegg said.

Jonathan Jennings, country director of MSF in India, said MSF teamed up with the Bihar government this year to launch a campaign to eradicate the disease.

MSF says it has proved that it is possible to diagnose and treat the patients with a high cure rate even in remote settings.

According to C.P. Thakur, a former central minister and chairman of the Kala Azar Task Force, the disease, a recurring epidemic, affects thousands in Bihar each year.

Over 23,000 cases were reported in 31 of Bihar`s 38 districts in 2011.

Over 750 people died of kala azar in the past five years. Authorities in Bihar have vowed to stamp it out by 2015.

Kala azar, medically called visceral leishmaniasis, is known as the poor man`s disease because it affects the poorest.

The sand fly, which transmits the disease, multiplies in the cow dung that villagers use to plaster their shanties or as cakes for fuel.

The flies survive on the sap in banana and bamboo groves and on decomposed cow dung heaps.

The disease is characterised by fever, weight loss, swelling of the spleen and liver and can lead to cardiovascular complications, resulting in death.

Experts say poor living standards and unhygienic conditions make members of the Mushahar community, who are Dalits, easy prey.

Around 90 percent of the world`s kala azar cases are found in India, Bangladesh, Nepal and Sudan.

http://zeenews.india.com/news/health/exclusive/scared-hiv-ve-women-opting-for-abortion_17912.html

16. Fight against HIV a Success in Poor Countries: UN

Washington: A push to get more AIDS treatment to the world's poorest, hardest-hit countries is paying off as deaths inch down — and new infections are dropping a bit, too, the United Nations reported on Wednesday.

"I personally believe it is a new era, new era for treatment, new era for prevention," said Michel Sidibe, executive director of UNAIDS, the Joint United Nations Program on HIV and AIDS.

Some 34.2 million people worldwide were living with the AIDS virus at the end last year, a slight rise from the previous year as better treatment helps patients live longer.

Most of them live in low- and middle-income countries, where a record 8 million people received life-saving drugs last year, the report found. That's up from 6.6 million in 2010, and puts the world on track to meet a UN goal of having 15 million people in those hard-hit regions on treatment by 2015.

The report comes days before the world's largest AIDS conference opens in the nation's capital with the goal of finally "turning the tide" on the epidemic and stemming the spread of the HIV virus.

Treatment is one of the keys to doing that because it doesn't just save the lives of people living with HIV. Recent research shows early treatment, so patients stay healthy, also makes them far less likely to infect others.

"We need to get that number up as rapidly as possible," said Chris Collins of amFAR, the Foundation for AIDS Research, who called the 2011 increase in treatment higher than expected. "If we can get to scale with AIDS treatment, we're not only saving lives but we're preventing infection and beginning to end this epidemic."

UNAIDS report found there were 1.7 million deaths from the virus last year, down from 1.8 million.

Better, the new data show 2.5 million people became infected with HIV last year — 100,000 fewer than in 2010. New infections have fallen by nearly 20 percent worldwide in the past decade.

Perhaps most encouraging is the steady drop in new infections in children, mostly due to treating HIV-infected pregnant women so they don't pass the virus to their babies. About 330,000 children became infected in 2011, almost half the number that were being infected at the epidemic's peak in 2003.

The world spent $16.8 billion battling AIDS in the hard-hit countries last year. Sidibe said an important reason for the progress is that affected countries are paying more of their share — for the first time, totaling a bit more than wealthier donor nations paid — as they see the fruits of the investment.

South Africa alone spent nearly $2 billion last year.

But, "we are still short $7 billion" of the yearly total it will take to get to the 2015 treatment goal, Sidibe warned, urging increased spending despite the global financial crisis.

Other Challenges:

—**Young people ages 15 to 24 account for 40 percent of new infections — twice as many young women as men, the report found.**
—**Nearly 60 percent of the 1.5 million pregnant women living with HIV in poor countries received effective anti-AIDS medications. Another international goal is to nearly eliminate infections at birth.**
—**New infections continue to rise in some parts of the world, including Eastern Europe and central Asia. Even in the United States, they're holding steady.**

—And dozens of countries have laws that fuel HIV spread in such ways as criminalizing same-sex sexual activity, so that populations at high-risk are too scared to be tested or treated.

Some countries are scaling up treatment at a dramatic pace — including Botswana and Namibia that have the majority of their residents who qualify for AIDS drugs now on them, said World Health Organization AIDS director Dr Gottfried Hirnschall. A key is to shift away from providing the drugs only through expensive doctors and clinics, and instead through community programs that also offer peer counseling and other services that encourage people to keep taking the medicine.

A WHO study shows that resistance to the drugs is growing slowly in poor countries despite the rapid increase in medication use.

Now the WHO is urging poor countries to use the medicines in ways that maximize their chances of preventing new infections. While the U.S. advises people with HIV to start treatment as early as possible, that's not financially possible in poor countries, where the WHO advises starting once a person's immune system weakens to a certain degree.

But Hirnschall cited important exceptions. Up to half of HIV-infected people in ongoing relationships have partners who still are free of the virus, and those people need treatment regardless of their immune strength, he said. Rwanda and Zambia have begun implementing that policy, and more than a dozen other countries are considering it.

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http://www.firstpost.com/living/fight-against-hiv-a-success-in-poor-countries-un-382864.html