



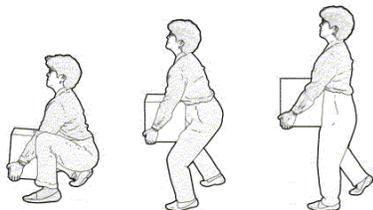
SHE Mail

ZERO Accident, Illness and Pollution

SHE Mail No. 66

October, 2010

MANUAL MATERIAL HANDLING SAFETY TIPS



Work may cause a back injury or it may aggravate a pre-existing back problem. In either case, the resultant

low back pain can be extremely disabling. In this SHEMAIL, we have listed some good principles on manual material handling.

Some of the important principles are:

- 1) Activate your core muscles.
 - To protect your spine, tighten your abdominal muscles. This will generally activate the rest of your core muscles.
- 2) Maintain the natural inward curve of your low back.
 - This curve has a tendency to flatten when you bend or sit, increasing the strain on the low back.
 - Looking forward (not down) during a lift helps to maintain this curve.
- 3) Keep objects that you are lifting or carrying close to your body.
 - The farther the object is from your body, the greater the strain will be.
 - Slide objects close to you before lifting them.
 - When squatting to lift, do not let your knees get between yourself and the load? If the load is not too wide, spread your knees apart so you can bring the load close to your belly.
- 4) Work with your upper body as close to upright as possible.
 - Leaning forwards or sideways puts extra strain on your back. Wherever possible:
 - ✦ Position items that you handle so that your hands are in the safe lifting zone (between mid-thigh and shoulder height).
 - ✦ Keep loads that you must handle manually off of the floor (unless their handles are in the safe lifting zone).

- ✦ For low-level work, bend your knees, squat or kneel. Consider a longer handled tool.
 - If you can't work upright, resting a hand or elbow on your knee or another object will take some of the load off of your back. Other objects that you could lean on:
 - ✦ A nearby table or chair.
 - ✦ The top of a deep container into which you must reach.
 - ✦ Any surface within a comfortable reach.
- 5) Minimize twisting of your spine.
 - Move your feet or swivel your chair instead of twisting at the waist or neck, so that your hips and shoulders are facing in the same direction.
 - 6) Push, don't pull, whenever possible.
 - Pulling an object you are facing puts more strain on back muscles than pushing it. Exceptions:
 - ✦ Some objects don't move as easily when pushed, especially when terrain is bumpy or rough.
 - ✦ Pushing may not be safe if the object you are pushing obstructs your vision and you can't see where you are going.
 - ✦ If you must pull something, try to use 2 hands to avoid twisting.
 - 7) Use sudden quick movements with care.
 - If not performed carefully, sudden quick movements will put more strain on your back than moving more slowly (e.g., avoid jumping from loading docks or high vehicles).
 - Unexpected movements are more likely to cause injuries than deliberate movements.
 - ✦ Wear shoes with good traction and support and keep-walking surfaces clear to avoid slips, trips or falls.
 - ✦ Make sure objects you are moving do not shift during transport.
 - ✦ Proper storage will minimize injuries related to sudden movements to catch falling objects.
 - 8) Use a footrest for prolonged standing.
 - A footrest can be used to help avoid static postures.
 - Vary standing postures by shifting body weight from both to one or the other leg.



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A (H1N1) (Swine flu)



Here is a brief introduction to the latest pandemic disease SWINE FLU, which is a kind of *joint venture* between the regular Human flu, Bird flu and the Swine flu of pigs. But it is generally called Swine flu and its correct name is A (H1N1). There is nothing to panic about it as already 30% of world population developed immunity against it. Swine Flu vaccine is now available and it offers about 90% protection from developing this disease for about 1 year. This vaccine has no major side effects, like *reaction*. Some minor side effects like sneezes, headache or running nose are occasionally experienced, easily tackled with Crocin etc.

SWINE FLU

An influenza virus first recognized in the year April - 2009, causes the respiratory infection popularly known as swine flu.

The new virus, 2009 H1N1, spreads quickly and easily. A few months after the first cases were reported, rates of confirmed H1N1-related illness were increasing in almost all parts of the world. As a result, the World Health Organization declared the infection a global pandemic.

Technically, the term "swine flu" refers to influenza in pigs. Occasionally, pigs transmit influenza viruses

to people; mainly hog farm workers and veterinarians. Less often, someone infected occupationally passes the infection to others. You can't catch swine flu from eating pork.

SYMPTOMS

Swine flu symptoms in humans are similar to those of infection with other flu strains:

- Fever
- Cough
- Sore throat
- Body aches
- Headache
- Chills
- Fatigue
- Diarrhea
- Vomiting

Swine flu symptoms develop three to five days after you're exposed to the virus and continue for about eight days, starting one day before you get sick and continuing until you've recovered.

When to see a doctor?

It's not necessary to see a doctor if you're generally healthy and you develop swine flu symptoms, such as fever, cough and body aches.

Do call your doctor, however, if you have flu symptoms and you're pregnant *or* you have a chronic disease, such as emphysema or a heart condition or diabetes.

How the VIRUS causes disease?

Influenza viruses infect the cells lining your nose, throat and lungs. The virus enters your body when you inhale contaminated droplets or transfer live



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virus from a contaminated surface to your eyes, nose or mouth on your hand.

RISK FACTORS

If you've traveled to an area where lots of people are affected by swine flu H1N1, you may have been exposed to the virus, particularly if you spent time in large crowds.

Swine farmers and veterinarians have the highest risk of true swine flu because of their exposure to pigs.

HOME REMEDIES FOR SWINE FLU

If you come down with any type of flu, these measures may help ease your symptoms:

- Drink plenty of liquids. Choose water, juice and warm soups to prevent dehydration. Drink enough so that your urine is clear or pale yellow.
- Rest. Get more sleep to help your immune system fight infection.
- Consider pain relievers. Use an over-the-counter pain reliever such as acetaminophen (Dolo 650, Tylenol, others) or ibuprofen (Imol, Brufen, others) cautiously, as needed. Don't give aspirin to children or teens.

Remember, pain relievers may make you more comfortable, but they won't make your symptoms go away any faster and may have side effects.

PREVENTION

These measures also help prevent flu and limit its spread:

- Stay home if you're sick. If you do have swine flu, you can give it to others starting about 24 hours before you develop

symptoms and ending about seven days later.

- Wash your hands thoroughly and frequently. Use soap and water, or if they're unavailable, use an alcohol-based hand sanitizer. Flu viruses can survive for two hours or longer on surfaces, such as doorknobs and countertops.
- Contain your coughs and sneezes. Cover your mouth and nose when you sneeze or cough. To avoid contaminating your hands, cough or sneeze into a tissue.
- Avoid contact. Stay away from crowds if possible.
- Reduce exposure within your household. If a member of your household has swine flu, designate one other household member to be responsible for the ill person's close personal care.

THE VACCINE

Ministry of Health & Family Welfare, Government of India has imported 1.5 million doses of vaccine to vaccinate selected population among the high-risk group.

The vaccine developed to prevent infection with the 2009 H1N1 virus is one component of the seasonal flu shot for 2010-2011. The flu shot also protects against two other influenza viruses that are expected to be the most common during the 2010-2011 flu season.

The vaccine will be available as an injection or a nasal spray. Nasal spray is better, as it attacks the virus at the *entry point* itself.

For further reading please visit

<http://pib.nic.in/h1n1/h1n1.asp>



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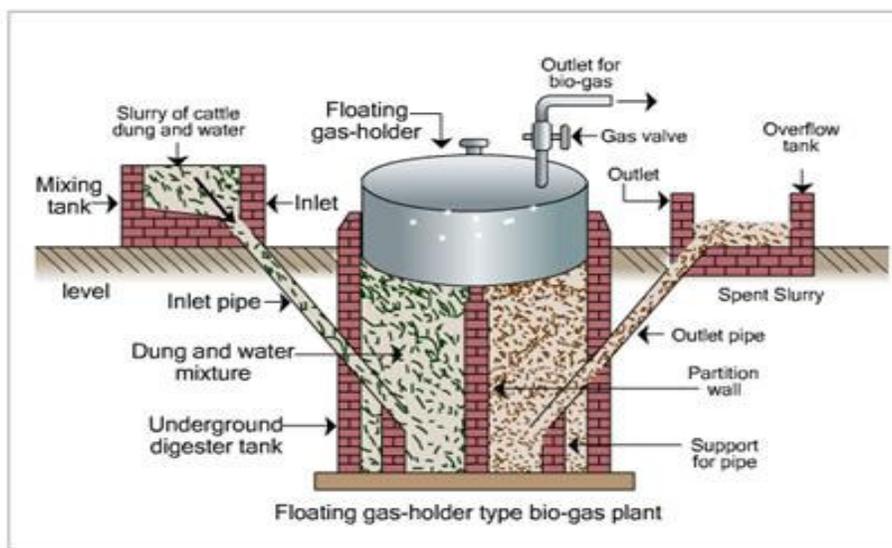
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BIO-GAS

Biofuels: how Bio Gas is Generated.

Floating gas holder type of plant: The diagram below shows the details of a floating gas holder type of bio gas plant.



Biogas typically refers to a gas produced by the biological breakdown of organic matter in the absence of oxygen. Biogas originates from biogenic material and is a type of biofuel.

Production

Biogas is produced by anaerobic digestion or fermentation of biodegradable materials such as manure, sewage, food waste, municipal waste, green waste and plant material.

➤ Typical composition of biogas

Compound	Chem	%
Methane	CH ₄	50–75
Carbon dioxide	CO ₂	25–50
Nitrogen	N ₂	0–10
Hydrogen	H ₂	0–1
Hydrogen sulfide	H ₂ S	0–3
Oxygen	O ₂	0–2

The gases methane, hydrogen and carbon monoxide can be combusted or oxidized with

oxygen. This energy release allows biogas to be used as a fuel.

Applications

Generation of fairly good amount of fuel gas, which will definitely support the dwindling energy resources. Generation of high quality manure, which would be weed less and an excellent soil conditioner. This is very important for replenishing fast decreasing resources of productive soils.

Benefits

By using biogas, many advantages arise. Environment friendly disposal of wastes which is need of hour considering mass pollution everywhere. Biogas could potentially help reduce global warming. Normally, manure that is left to decompose releases two main gases that cause global warming: nitrous dioxide and methane.

Nitrous oxide warms the atmosphere 310 times more than carbon dioxide and methane 21 times more than carbon dioxide.