

The Garbage Problem: Crisis in the Making



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Garbage pileup in Lebanon has been going on since July of this year. Citizens from around the country are constantly concerned about the health issues involved with piled up trash in their neighborhoods and around the country.

Here is a summary of what to expect from piled trash:

- 1- Indirectly: **trash can clog water and sewage passage.** This is exaggerated when there is rainfall. Blockage of sewage to the sea will result in its backflow towards the streets and into nearby water wells if any. Sewage presence in open air, without movement, results in the growth of certain dangerous bacteria such as *Salmonella typhi* (cause of Typhoid fever), and *Vibrio cholera* (cause of Cholera). Both are epidemic causing germs, and spread quickly. Viruses present in human waste such as Hepatitis A Virus (HAV) can also be present in such dirty water. Although our country may have the necessary doctors and available treatment(s) for these germs, the possible panic by people and exaggerated media coverage may overwhelm the health sector seriously.
- 2- Directly: **Garbage piles wherever they are bring about flies and cockroaches within hours.** The smell



produced is due mostly to the organic leftovers and the bacteria and fungi acting on them. The smell itself is not harmful, but extremely annoying. In developed countries, the organic waste is already separated by people before disposal into separate containers. Recycling therefore can easily proceed with this type of waste without losing time. If left untended, this waste attracts flies, cockroaches and pests like rats. Flies multiply fast, and soon can be present in the whole area, carrying on their bodies the germs they touched on the garbage. Thus a clean sandwich where a fly sits may carry with it many germs from a nearby dump. Cockroach numbers also increase quickly, and they soon become present in and around nearby houses. Other than carrying germs with them, they are also causes of respiratory allergies.

- 3- Rats are present everywhere, especially in urban cities. However, they are mostly present in dark and underground areas, and in low numbers. This has been the case with Lebanon also. However, **with the presence of a buffet of “food” for rats now, their numbers may increase to “unmanageable” levels.** This increases the chances of getting bitten by nearby human beings. Rats are known carriers for the Rabies virus, which if un-attended after a bite, gets into our nervous system eventually reaching the brain and causing death. Rats also bring with them small fleas which feed on the rat’s blood. These fleas may also cross over to nearby cats and dogs. Fleas carry bacteria with them, and upon biting an animal or human being, spread these bacteria. One very dangerous bacterium is the *Yersinia pestis*, the cause of the famous Plague, or Black Death, which wiped out 1/3 of Europe’s population in the 1300’s. Rat fleas also cause Typhus fever by another bacterium: *Rickettsia*.

What to do if the trash issue is not solved by our government in the near future?

Burning trash is not a solution. Burning releases heavy metals and other hazardous material from inside trash items like plastic, and releases them into nature. Heavy metals seep into the water system, whether it is nearby rivers, the sea, or wells. Heavy metals are not usually tested for in water analyses, and although some filters may capture them, some may not. Other burnt pollutants are gaseous, and cause a variety of illnesses from allergies to cancer.

Easy-to-follow steps to stay healthy are:

- Be clean. Wash hands with soap. This is especially true in public places, such as malls and restaurants and toilets.
- Eat in places that you know are clean (by previous experience), or which undergo constant cleanliness surveillance.
- When throwing away trash, make sure the bag is closed tightly. It is enough that our bins here have no lids, so let’s not add to the problem.
- Keep away from sewage water if it comes out with rainwater from under streets. Contact local municipality personnel to clear any blockages.
- Use bottled water if possible. Boil tap water and drink it later if bottled water is unavailable.
- Prevent flies from entering the house: nets on windows help. Don’t leave food out in the open.
- Prevent cockroaches from entering the house: special gels and anti-insect repellants help (keep away from children). Again, don’t give them reason to come to you; don’t keep food out in the open.
- Hepatitis A has a vaccine. It is suggested to vaccinate food handlers in general in some developed countries. It is a virus that is transmitted orally, and whose symptoms show 10-15 days later. IF you eat a lot via deliveries, maybe it’s good to test if you are immune, and thus get a vaccine if necessary.
- Both cholera and typhoid come from bacteria, and with proper simple care (proper diet, plenty of fluids with cholera), they can be self-limited and not deadly. However, they do spread quickly if unsanitary care is given, and can kill a person quickly without care. Antibiotics help reduce illness time.
- Rabies virus has a vaccine. Given as 5-6 injections to those who get bitten by bats or rats. It must be given immediately after the bite. Hospital stay is unnecessary.
- Newly tapped water wells need to be tested for germs and heavy metals before installing the proper filter. Avoid fish caught near major seaside dumps.

Given the helpful geography of Lebanon, where rainwater flows directly to the sea, and with local efforts by citizens (maintaining good hygiene, more trash management), we should avoid any epidemic-style medical disasters. Hopefully though, the root cause of all this trouble can be solved soon.