Chemotherapy , antiviral agent & vaccines.

Chemotherapy

As obligate intracellular parasites, the replication of viruses depends on synthetic processes of the host cell. Antiviral drugs can exert their actions at several stages of viral replication including viral entry, nucleic acid synthesis, late protein synthesis and processing, and in the final stages of viral packaging and virion release.

Antivirals

Antiviral medications help the body fight off harmful viruses. The drugs can ease symptoms and shorten the length of a viral infection. Antivirals also lower the risk of getting or spreading viruses that cause herpes and HIV. One approved antiviral treats the coronavirus that causes COVID-19.

How do antiviral medications work?

1. Block receptors so viruses can't bind to and enter healthy cells.
2. Boost the immune system, helping it fight off a viral infection.
3. Lower the viral load (amount of active virus) in the body.

vaccines

Vaccines are made using several processes. They may contain live viruses that have been attenuated (weakened or altered to not cause illness); inactivated or killed organisms or viruses; inactivated toxins (for bacterial diseases where toxins generated by the bacteria, and not the bacteria themselves, cause illness); or merely segments of the pathogen (this includes both subunit and conjugate vaccines). Live, attenuated vaccines currently recommended as part of the U.S. Childhood Immunization Schedule include those against measles, mumps, and rubella (via the combined MMR vaccine), varicella (chickenpox), and influenza (in the nasal spray version of the seasonal flu vaccine). In addition to live, attenuated vaccines, the immunization schedule includes vaccines of every major type.

The different vaccine types each require different development techniques. Each section below addresses one of the vaccine types

1. **Live, Attenuated Vaccines**
2. **Killed or Inactivated Vaccines**
3. **Toxoids**
4. **Subunit and Conjugate Vaccines**
5. **mRNA Vaccines**
6. **Viral Vector**