

# A Survey on Antibiotic Resistance in Human Body

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## ABSTRACT

A Drug is any substance that, when put into the body, alters its normal working or body chemistry. Natural body hormones, such as insulin, can act as drugs when taken in concentrated form. Some, such as cough suppressant, may relieve symptoms; while others, such as analgesics, deaden pain; while others, including antibiotics, treat the cause of the disease. Drugs maybe also taken for non-medical reasons, such as steroids to enhance sports performance etc. The abuse of such drugs may be illegal and can also cause physical harm.

**Keywords :** Drugs, Physical Harm, Swelling, Anti-Pyretic, Hygienic Habits Antibiotics, Survey, Control, Effects

## I. INTRODUCTION

Drugs can be grouped by their medical uses or effects, for example, antibiotics kill bacteria, analgesics deaden pain, anti-inflammatory reduce swelling, anti-pyretic lower body temperatures and anti-coagulants help to prevent unwanted blood clots.

**Antibiotic:** These drugs kill or disable germs known as bacteria. Most come from chemicals made either by fungi or by other bacteria.

**Analgesic:** Painkillers come in two types- narcotics such as morphine etc and non- narcotics such as paracetamol.

**Cytotoxic:** These drugs are designed to affect only the out of control cells in tumours and malignancies, while leaving the normal body cells unharmed.

**How do drugs work?**

Drugs change the processes within the cells of the body. Their effectiveness depends on the dose and method of administration. The drugs usually enter the body thru:

- Absorption through the skin from a cream or a skin patch
- Injections into a muscle, vein, or under the skin
- Inhalation
- Eye or ear drops
- Oral route where the medication is swallowed as tablets, pills, capsules or liquid.

**What is Antibiotic Resistance**

Antibiotics are medicines that are used to prevent and treat bacterial infections. Antibiotic resistance occurs when bacteria change in response to the use of these medicines. Bacteria, not humans or animals, become antibiotic resistant. These bacteria may infect humans and animals, and the infections they cause are harder to treat than those caused by non-resistant bacteria.

**Increase in the level of Antibiotic Resistance**

Antibiotic resistant is rising to dangerously high levels in all parts of the world. A growing list of infections- such as pneumonia, tuberculosis, blood poisoning etc are becoming hard to treat as the antibiotics become less effective. With the excessive use of antimicrobial solutions, continuous evolution in the form of antibiotic resistant strains of microorganisms. As the strength and efficiency of

these antibiotics evolves, the infectious organisms too evolve and adapt to overcome these substances. Where antibiotics can be brought for humans or animals use without prescription, the spread of resistance is made worse.

Antibiotic resistance is accelerated by the misuse and overuse of antibiotics, as well as poor infection prevention and control. To prevent and control the spread of antibiotic resistance, individuals must

- Only use antibiotics when prescribed by a certified health professional
- Never share or use leftover antibiotics
- prevent infections with good hygienic habits.

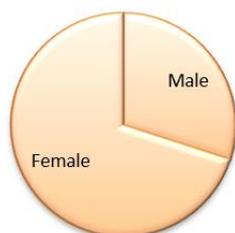
To curb this evolution, newer mechanisms and pathways have to be researched to prevent infections by these organisms. Also, targeted drugs have to be developed that halt the organism’s internal processes, thereby rendering it unable to infect.

## II. METHODOLOGY

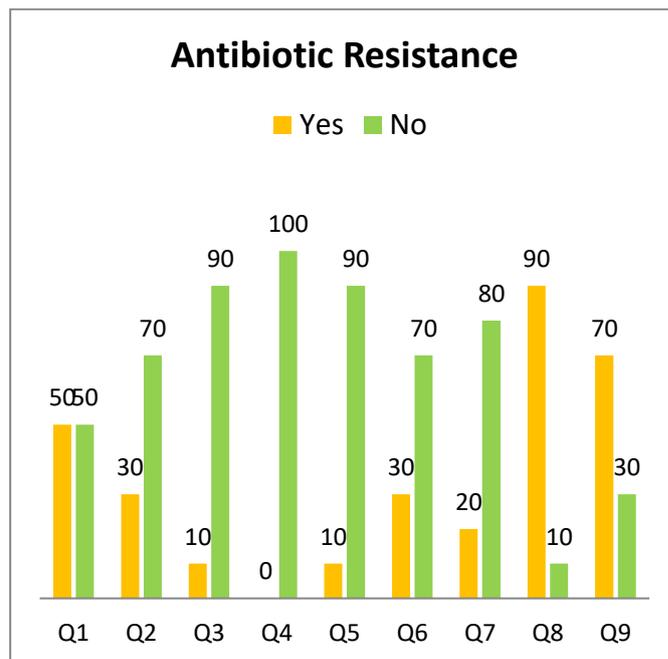
A questionnaire survey was undertaken. The questionnaire was distributed to 100 people belonging to ages of 15-90. They were given 10 minutes to fill out the questions, options which were based on YES/NO basis. The results were represented by bar graph.

## III. RESULTS AND DISCUSSION

### Results



The above pie chart shows the percentage of male (30%) and female (70%) who have participated in the above survey.



### Discussion

From the above results ,

- 50% of the respondents agreed that they have used medicines without doctors consultation for common health problems but on the other hand , the other 50% has asked the doctor before using it.
- 30% of the respondents agreed that they have faced side effects when using prescribed antibiotics , mainly headaches , nausea, drowsiness, tiredness and dizziness.
- 10% of the respondents agreed that they have used antibiotics for common cold , flu etc, but the other 90% have used but only when it was prescribed by the doctor.
- 100% of the respondents agreed that they have never given the leftover antibiotics because antibiotics are given for a specific set of time for which they only bought it for that .
- 90% of the respondents said that they continued to take the prescribed antibiotic for the full course time but only 10 % has stopped using it when they felt better.

- 30% of the respondents agreed that they have recommended an antibiotic to a friend who fell sick.
- 20% of the respondents agreed that they have bought antibiotics without the prescriptions but the other 80% of the respondents have said no.
- 90% of the respondents agreed that they do consult a doctor, mainly a family doctor before using an antibiotic.
- 70% of the respondents agreed that humans will become anti-resistant to antibiotics and medicines over time due to over usage but 30% of the respondents have said that medicines are a necessary to treat or prevent any type of infection.
- Infants, as they still have a developing immune system
- Older people, as they may have a weakened immune system due to illness or extended antibiotic use.

#### IV. CONCLUSION

Antibiotic resistance has increased worldwide in bacterial pathogens leading to treatment failures in humans and animal infectious diseases. Resistance against antibiotics by pathogenic bacteria is a major concern in the anti-infective therapy. We are dependent on antibiotics for the treatment of infectious diseases so it is important and necessary that we do not overuse medicines and also only use it when prescribed by a certified doctor.

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With this research it is clear that people above the age 50+ has always consulted doctors before using a medicine to prevent any side effects or discomfort. Researchers found that 5 percent of patients surveyed reported using antibiotics without prescriptions during the previous 12 months. However, 25 percent of the respondents said they were willing to use antibiotics if possible without contacting a medical professional. Fourteen percent stored antibiotics at home, most of which were left over from previous prescriptions. Those who stored antibiotics were 4.2 times more likely to indicate that they would use antibiotics without prescriptions

Negative effects of antibiotic resistance -

Antibiotic resistance results in decreased ability to treat infections and illnesses in people. This can lead to the following problems:

- Increased human illness, suffering and death,
- Increased cost and length of treatments and
- Increased side effects from the use of multiple and more powerful medications.

In general, certain groups of people have an increased risk for getting infections. This means they are also at an increased risk of antibiotic resistance and they mainly include-

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