

# **RATIONAL USE OF DRUGS**

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# TOPICS

- What is rational use of medicines?
- Examples of irrational use of medicines
- The adverse effects of irrational use of medicines
- The committees responsible for the rational use of medicines
- What is a microbe?
- What are antibiotics?
- What do antibiotics do?
- What an antibiotic is and is not?
- Antimicrobial resistance
- Do you know these facts?
- What should we do?



# What is rational use of medicines?

- Individualized to the disease and the persons;
  - **Appropriate medicine,**
  - **Proper duration,**
  - **Correct dose,**
  - **Least cost**Should be easily accessed.



# Examples of irrational use of medicines



- The use of medicine inattentively  
(The route of administration, duration of use and dose of the drug..)
- Unnecessary and prolonged use of medicines
- The use of multiple medicines without any indications
- The intake of drugs with beverages instead of water
- The use of expired drugs
- Using personalized medicines without therecommendations of the physician

# Examples of irrational use of medicines

- Unnecessary use of parenteral form of the drugs (injections)
- Unnecessary and inappropriate use of vitamins
- Unreasonable use of herbs and food supplements
- Ignorance of drug-drug and drug-food interactions
- **Unnecessary use of antibiotics**



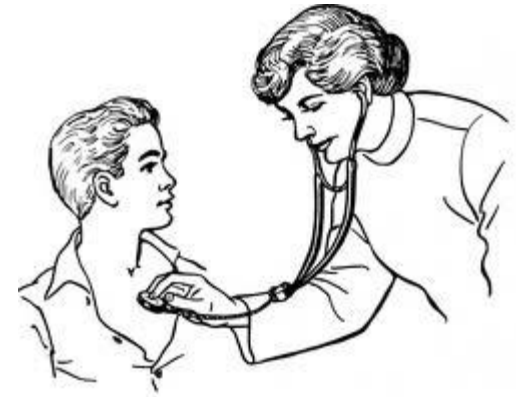
# Results of irrational use of medicines

- Decreased patient's compliance to the therapy
- Adverse results arising from drug interactions
- Emergence of resistance to therapy
- Recurrence or protracted course of the diseases
- Increased incidence of side effects
- Increased cost of the therapy



# The individuals responsible for the correct use of medicines

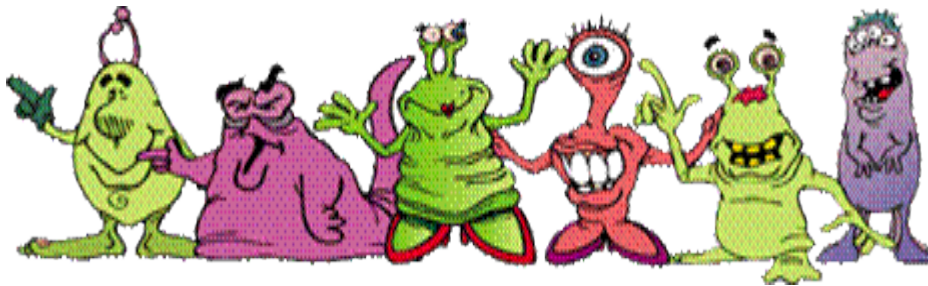
- Physicians
- Pharmacists
- Nurses
- Other members of health care providers
- **Patients and their relatives**
- The manufacturer
- Regulating authority
- Other (Press, Academis etc.)



# What is a microbe ?



- Microbes are disease causing microorganisms not visible to the naked eye.
- Bacterias, viruses, parasites and fungi are microbes causing diseases in human.
- For the treatment of each of these agents the treatment strategy differs. Antibiotics are only indicated in the treatment of bacterial infections.





# What are the benefits of antibiotics?

The use of antibiotics is required for;

- The treatment of infections,
- To increase the quality and longevity of life,
- To prevent complications,
- To prevent the infection from being chronic,
- To decrease the severity and duration of the infections.



# Antibiotics

- Antibiotics are used to treat bacterial infections not viral infections.
- Antibiotics DO NOT decrease fever but do so by treating fever producing infections.



# Antibiotics

- Common cold and flu are most of the time due to viral infections, therefore antibiotics are not needed.
- They DO NOT help you get rid of the flu.



# Antibiotics

- Antibiotics DO NOT relieve pain, alleviate cough or runny nose
- They DO NOT prevent transmission of the common cold from person to person.



**Antibiotics are not intended to treat every disease!**

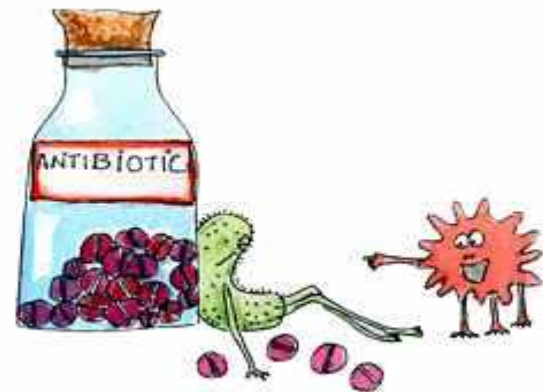


**Let antibiotics do their own job!**



# Resistance to antibiotics

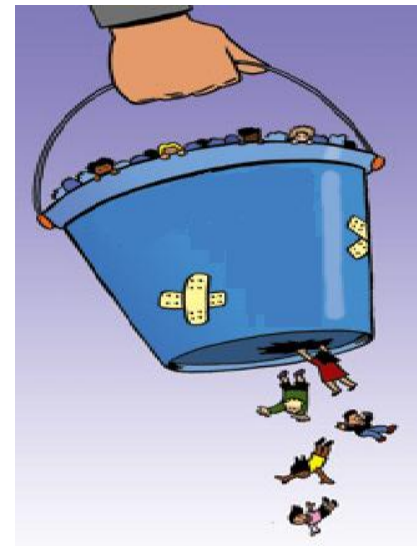
- Resistance to antibiotics may occur if they are used without indications.
- This phenomenon can be described as the continual proliferation of the bacteria and persistence of the infection despite the use of correct antibiotics.





# Resistance to Antibiotics

- When a resistance emerges to a certain antibiotics, it can be no longer used to treat that infection.
- This situation poses risk to not only effected person but also to the other vulnerable persons in the community.





**ACT TODAY BEFORE IT IS TOO  
LATE TOMORROW!**



**DO NOT  
STEAL  
THE FUTURE OF  
OUR CHILDREN  
BY USING ANTIBIOTICS  
IRRETIONALLY!**



# The facts you should know

- Turkey is one of the countries consuming large amounts of antibiotics and antibiotics are of the most commonly prescribed medicines; many of which are without real indications



**DO NOT BE AN ANTIBIOTIC ADDICT!**



# Did you know?

- Insufficient or overt use of antibiotics as well as the use with frequent intervals may give rise to antibiotic resistance.



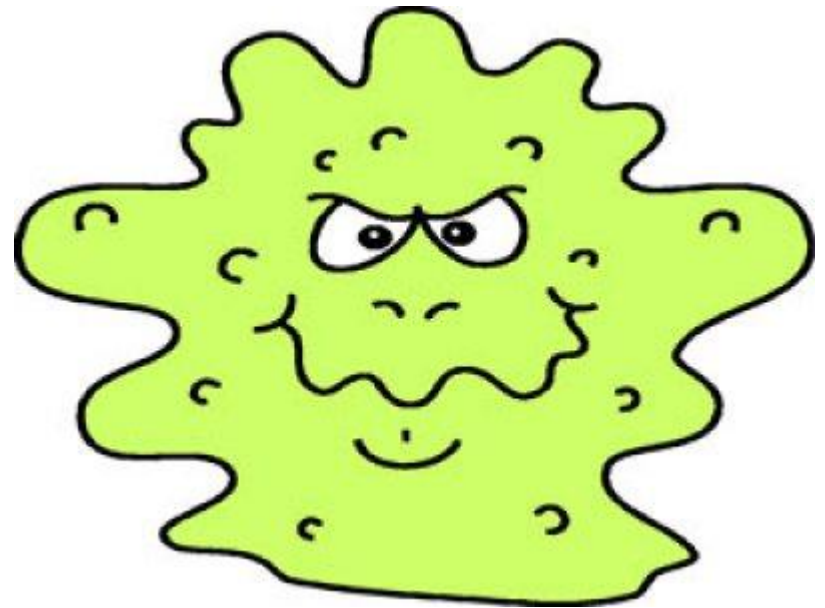
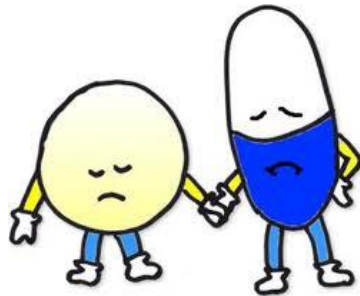
# Did you know?

- The strains of bacteria developing resistance to antibiotics may spread in the community and cause severe life threatening infections.



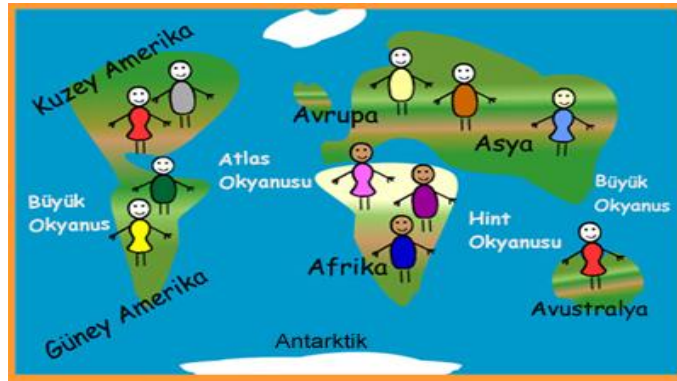
# Did you know?

- New antibiotics are no more developed for a long time.
- Unnecessary use of antibiotic and development of antibiotics resistance may leave us without any other antibiotics to choose.



# Did you know?

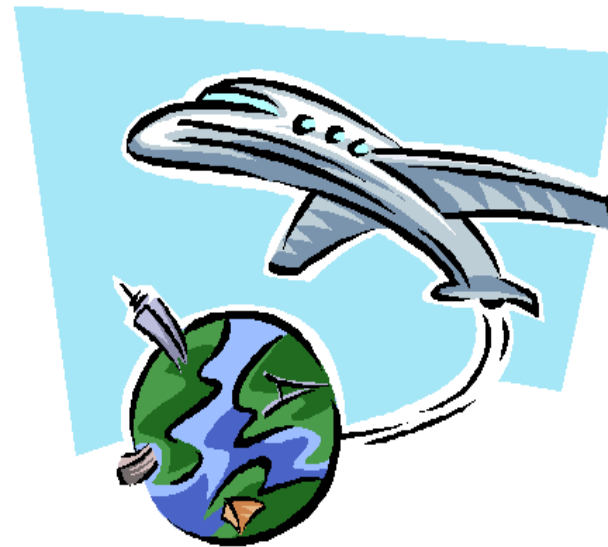
- Antibiotic resistance is a global problem and may cause life-threatening infections.





# Did you know?

- Persons from countries with high incidence of antibiotic resistance may carry these organism to other countries during travel.



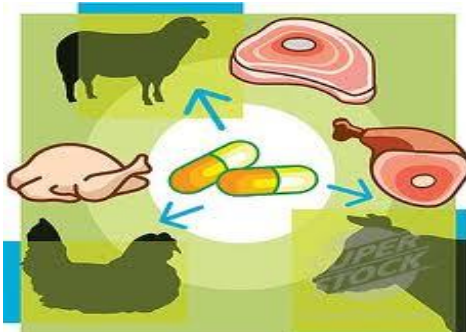
# Did you know?

- It is impossible to do without antibiotics
  - Organ transplantation
  - Cancer chemotherapy
  - Treat new borns in NICU
  - Hip prothesis



# Did you know?

- Antibiotics are also used to treat animal infections.
- Uncontrolled use of antibiotics in the animals and inappropriate disposal may cause antibiotic resistance and human infections.



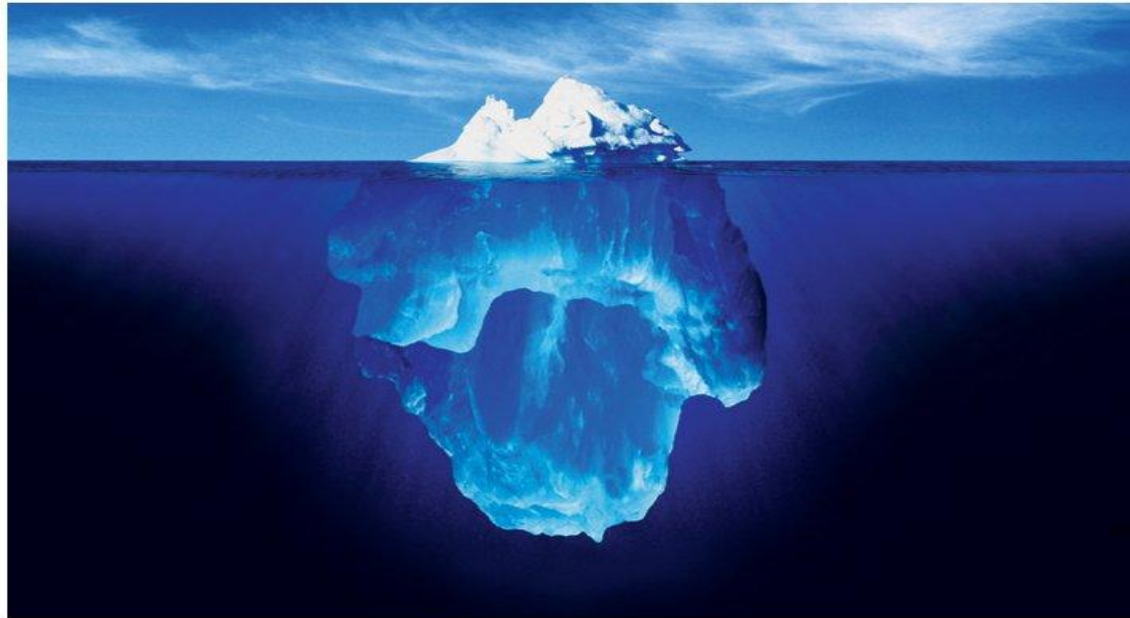


## Did you know?

- The infections that can be treated easily otherwise may be life-threatening if antibiotic resistance emerges.
- World Health Organization declares that antibiotic resistance is a global problem and an threat.



**Antibiotic resistance is much more severe  
than perceived!**



# What should we do?

- Seeing only a part of the picture may not be enough to comment on whole picture like diseases.

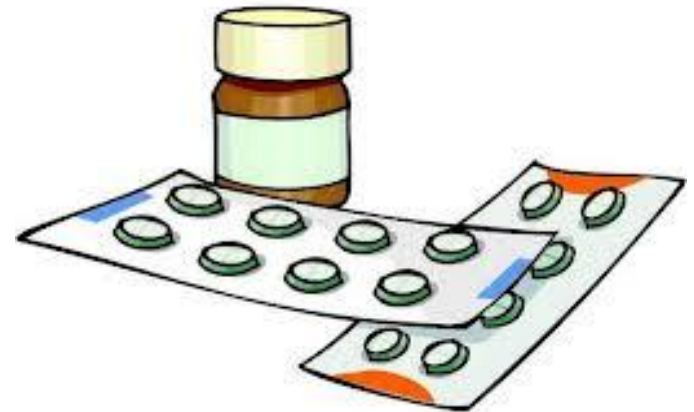


**Antibiotics are not a treat!**



# What should we do?

- Store drugs as instructed.
- If not changing composition may even be harmful to you.





# What should we do?

- Do not use antibiotics for a period longer than needed.
- Do not store antibiotics for a ready to use purpose.



# What should we do?

- Increase the awareness about proper use of antibiotics in the community.



**Lets stop antibiotic resistance we can do it.**





*THANKS*