

UNIVERSITY "GOCE DELCEV", ŠTIP
FACULTY OF MEDICAL SCIENCES
DENTAL MEDICINE*

UNIVERSITY "St. Kiril and Metodij" Skopje
FACULTY OF DENTISTRY **



ASSESSMENT IN ANTIBIOTICS SELF-MEDICATION IN DENTAL PATIENTS



The Danger of Antibiotic Overuse

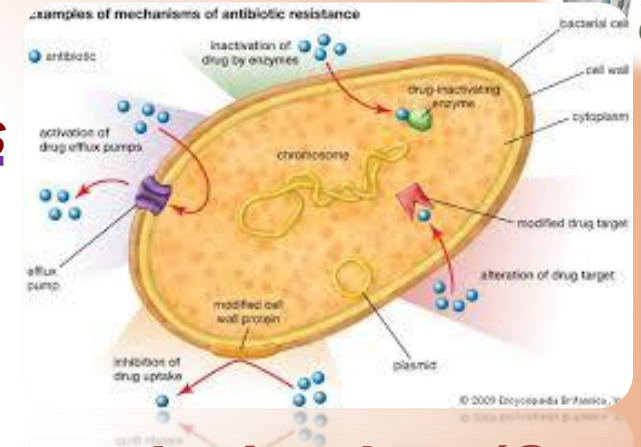


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Kovačevski I.I.*****

ASSESSMENT IN ANTIBIOTICS SELF-MEDICATION ...

ANTIBIOTICS

- chemical substances with antimicrobial effects
- prevention and reduction of the infection
- killing microbes without damage in the body
- stop the growth and multiplication of some forms of microbes (G +, G-)

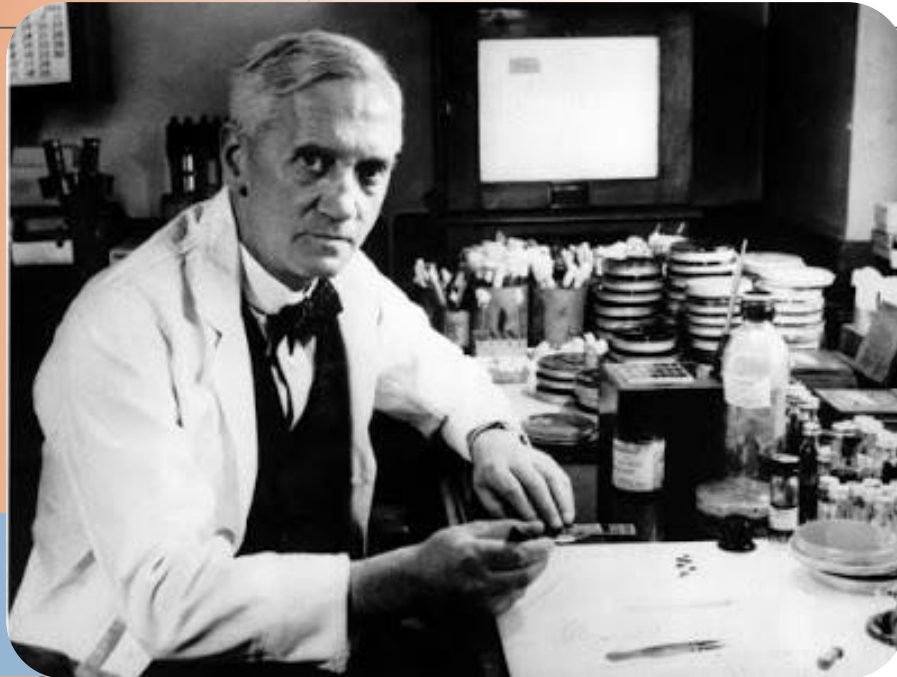


ASSESSMENT IN ANTIBIOTICS SELF-MEDICATION ...

ANTIBIOTICS



Alexander Fleming – 28.09.1928



**Penicillium – mold
Penicilin - antibiotics**



At least 150 million antibiotics are prescribed each year by family doctors in USA and the highest percentage is prescribed for children.

Thanks to PENICILLIN
...He Will Come Home!

FROM ORDINARY MOLD—
the Greatest Healing Agent of this War!

When the douchonous berries of this war have subsided to pages of silent pain in a history book, the greatest news event of World War II may well be the discovery and development — not of some vicious secret weapon that *destroys* — but of a weapon that *saves* lives. That weapon, of course, is penicillin.

Every day, penicillin is performing some unbelievable act of healing on some far battlefield. Thousands of men will return home who otherwise would not have had a chance. Better still, more and more of this precious drug is now available for civilian use... to save the lives of patients of every age.

A year ago, production of penicillin was difficult, costly. Today, due to specially-developed methods of mass-production, in use by Schenley Laboratories, Inc. and the 20 other firms designated by the government to make penicillin, it is available in ever-increasing quantities at progressively lower cost.

Look for "THE DOCTOR RIDES" by Bruce R. VANNO, HARVEY, London, England.
© 1944. See your doctor for use and advice.

SCHENLEY LABORATORIES, INC.
Producers of PENICILLIN-Schenley



CLASSIFICATION OF ANTIBIOTICS

Classification of antibiotics :

- Antibiotics are classified several ways.
- **On the basis of mechanism of action**
- **On the basis of spectrum of activity**
- **On the basis of mode of action**



According to the structure:

- **natural,**
- **synthetic,**
- **semisynthetic**

According to the effects on a bacteria:

- ✓ **bactericidal**
- ✓ **bacteriostatic**

According to the type of bacteria (spectrum of activity):

G +, G -, wide spectrum

ASSESSMENT IN ANTIBIOTICS SELF-MEDICATION ...

ANTIBIOTICS



SIDE EFFECTS

TOXIC EFFECTS
RESISTANCE
ALLERGIC REACTION



INCOMPATIBILITY
LIMITED EFFECT

• **DON'T KILL VIRUSES**



**RECOMMENDED ANTIBIOTICS FOR ODONTOGENIC INFECTION**

Antibiotic	Usual adult dosage	Usual pediatric dosage
Penicillin V	600 mg every 6 h	25–50 mg/kg/day divided into 4 doses
Amoxicillin	500 mg every 8 h	25–50 mg/kg/day divided into 4 doses
Cephalexin	500 mg every 6 h 2 g 1 h pre-op (joint prophylaxis)	25–50 mg/kg/day divided into 4 doses
Metronidazole	500 mg twice daily	15–30 mg/kg/day divided into 3 doses
Clindamycin	300–450 mg every 6 h	10–30 mg/kg/day divided into 3 or 4 doses
Moxifloxacin	400 mg daily	Not established
Erythromycin	500 mg enteric coated every 8 h 333 mg enteric coated every 6 h 250 mg (base) every 6 h	30–50 mg/kg/day divided into 2–4 doses



Table 1. Empiric Antibiotics of Choice for Odontogenic Infections.

Type of Infection	Antibiotic of Choice
Early (first 3 days of infection)	Penicillin VK, amoxicillin Clindamycin Cephalexin (or other first-generation cephalosporin) ¹
No improvement in 24-36 hours	Beta-lactamase-stable antibiotic: Clindamycin or amoxicillin/clavulanic acid (Augmentin®)
Penicillin allergy	Clindamycin Cephalexin (if penicillin allergy is not anaphylactoid type) Clarithromycin (Biaxin®) ²
Late (>3 days)	Clindamycin Penicillin VK-metronidazole, amoxicillin-metronidazole
Penicillin allergy	Clindamycin

¹ For better patient compliance, second-generation cephalosporins (cefactor; cefuroxime) at twice daily dosing has been used.

² A macrolide useful in patients allergic to penicillin, given as twice daily dosing for better patient compliance.

Adapted from Drug Information handbook for Dentistry; Richard Wynn, Timothy Meiller, Harold Crossley, 12th Edition

Steven Schwartz, Commonly Prescribed Medications in Pediatric Dentistry

Self Medication



Self-medication is defined as use of medicines by individuals (or a member of the individuals family) to treat self-recognized or self-diagnosed disease or symptoms, without consultation and supervision of a doctor or any other medical person.



Self Medication



~~8~~

1	0.000.00.000	2
A REMPLIR PAR LE PRESCRIPTEUR: nom et prénom du bénéficiaire: 3		
Réserve à la vignette du conditionnement 4		
5	6	7
PRESCRIPTION DE MEDICAMENTS		

World Health Organization (WHO) defines self-medication as a key in the success of a treatment and is one of the important elements in the formulation of national health strategies.

The WHO determined the objective criteria for self-medication that guarantee health :

- ❖ **List of drugs without a prescription (Over the Counter products)**
- ❖ **individual health care, by taking personal responsibility for healthy feeding, avoiding diet, quitting smoking, eating a small amount of alcohol, avoidance of drug abuse and drug**
- ❖ **despite the takeover of the above measures, it comes to symptoms, indicating minimal disruption of health status, SO the self-medication is justified**

ASSESSMENT IN ANTIBIOTICS SELF-MEDICATION ...

Self Medication



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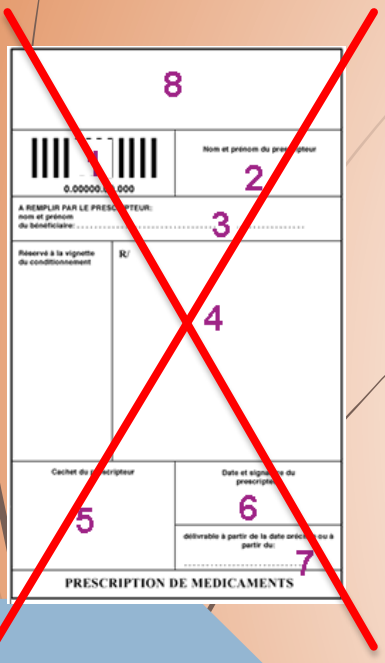
1 0.000.000.000	2 Nom et prénom du prescripteur
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5 Cachet du prescripteur	6 Date et signature du prescripteur
7 délivrable à partir de la date indiquée ou à partir de	

PRESCRIPTION DE MEDICAMENTS

Self-medication is strictly related to drugs without prescription, so-called Over the Counter products; drugs that are not related to:

- **danger to the health, even we use them incorrectly**
- **parenteral administration**
- **active substances that must be investigate in further studies**

Self Medication




RISKS of self-medication - OTC drugs:

- ***basis risk is that the patient can't properly estimate the health disorder,***
- ***put wrong diagnosis and that will slow the process of effective therapy,***
- ***the possibility of partially or completely masking the symptoms and the results of that is not to diagnose the early stage of the illness and because of that longer treatment***

Self Medication



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 0.00000.000	Non et prénom du prescripteur 2
A REMPLIR PAR LE PRESCRIPTEUR: nom et prénom du bénéficiaire:..... 3	
Révisé à la vignette de conditionnement 4	
Cachet du prescripteur 5	Date et signature du prescripteur 6
délivrée à partir de la date onctuelle à partir de:..... 7	

PRESCRIPTION DE MEDICAMENTS

self-medication - the patient doesn't read the instruction of use

- **doesn't know about proper dosing**
- **incorrect dose during the day and night**
- **doesn't know and have any information about the risk factors and precautions**

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Self Medication

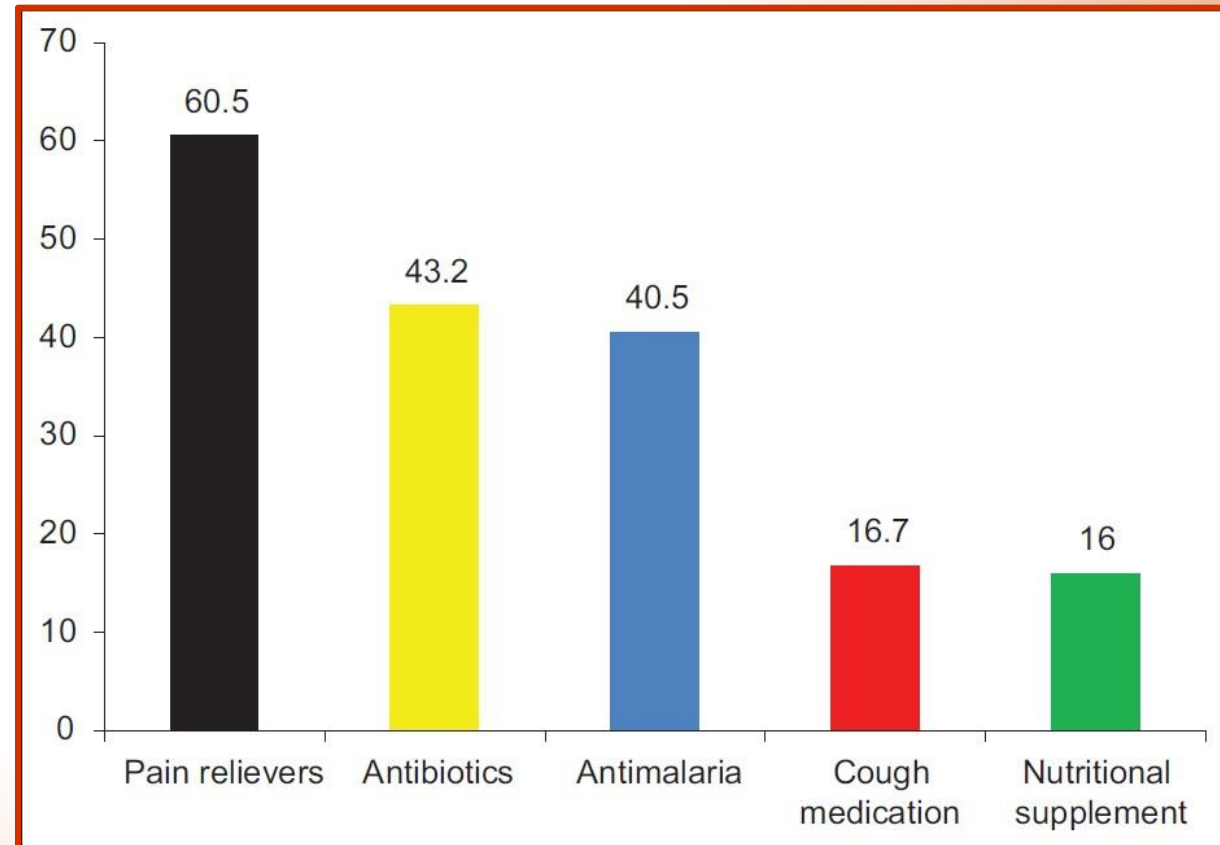


Self care – what it isn't

- Self care doesn't mean no care
- It doesn't mean diverting people away from healthcare services
- It doesn't mean individuals are left to look after themselves
- Self care is not what individuals do instead of going to the doctor, it's what they do between visits.



Association consumer health through responsible self care



ASSESSMENT IN ANTIBIOTICS SELF-MEDICATION ...

Self Medication

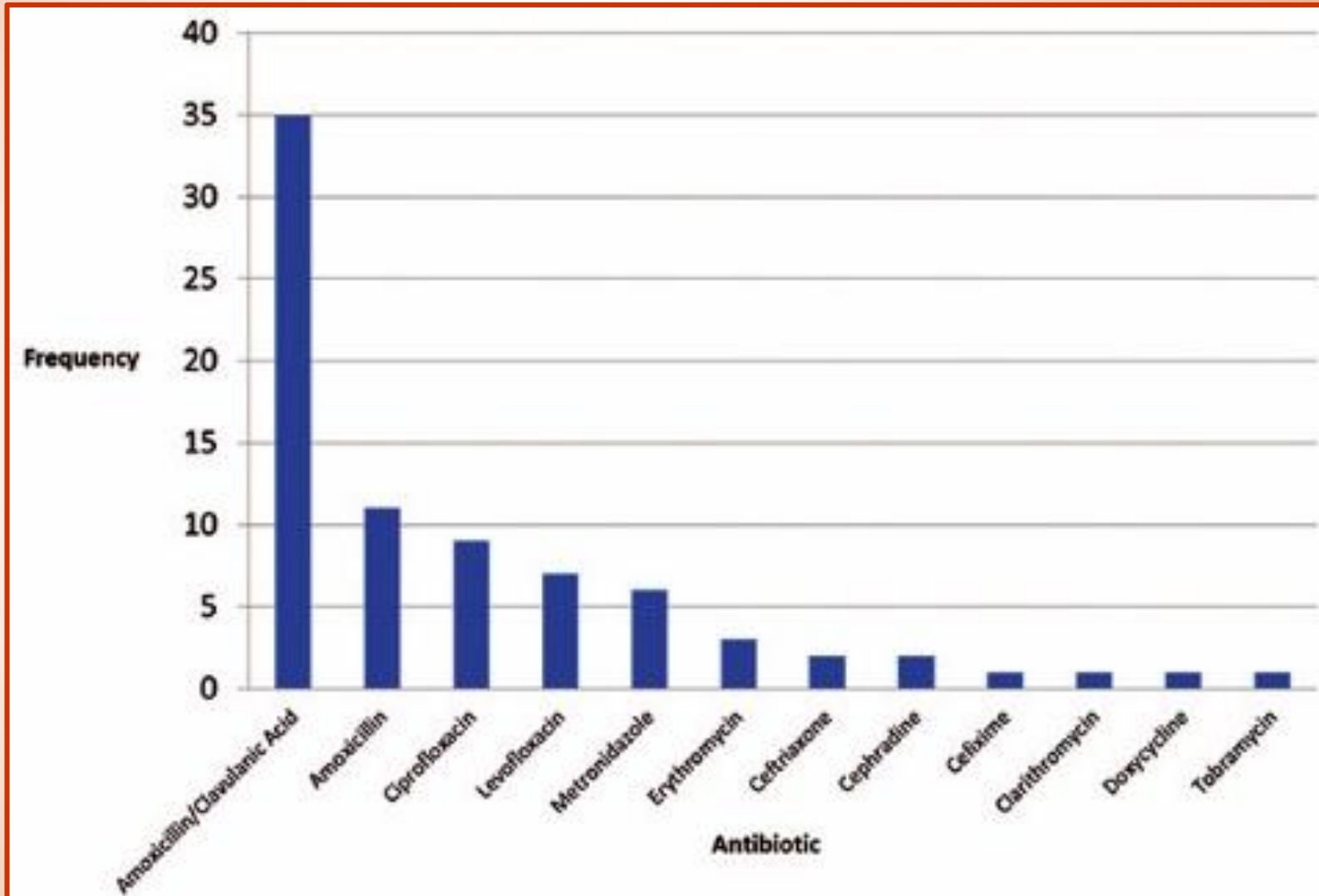
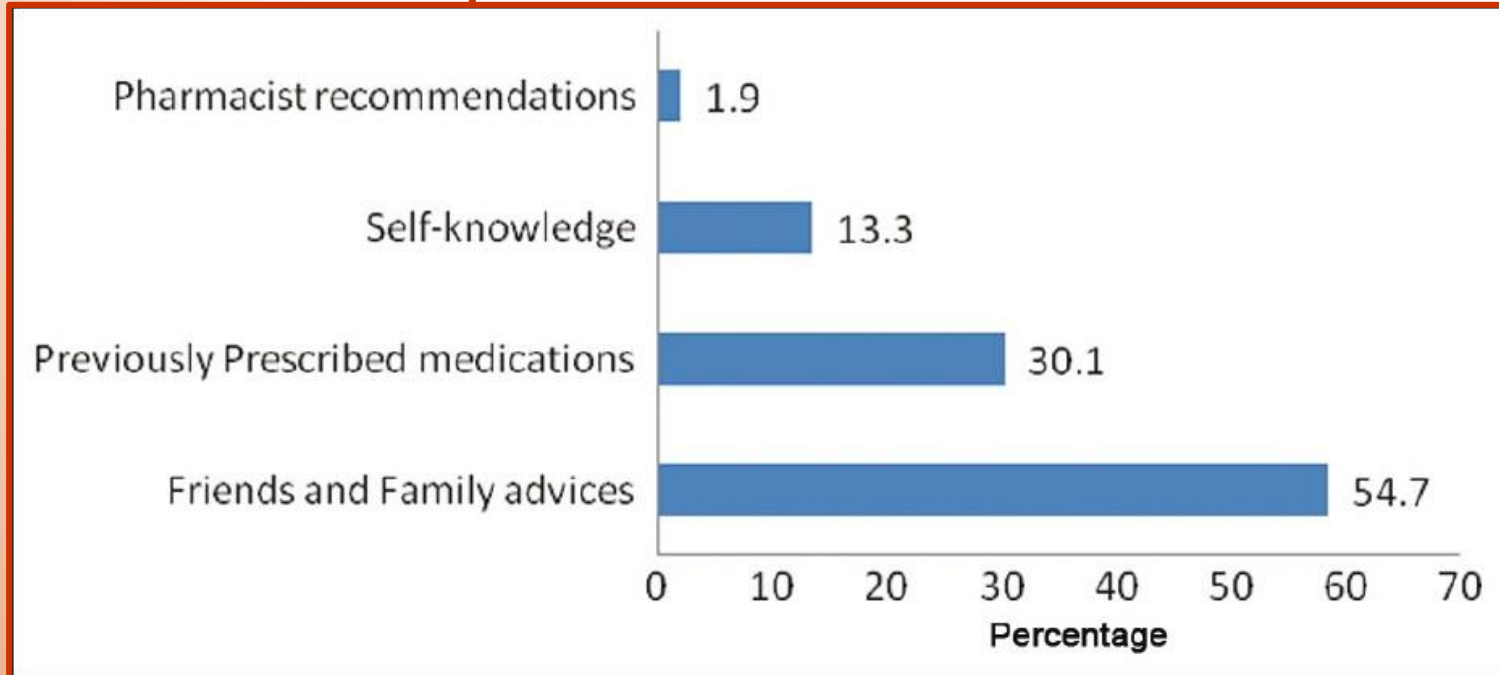
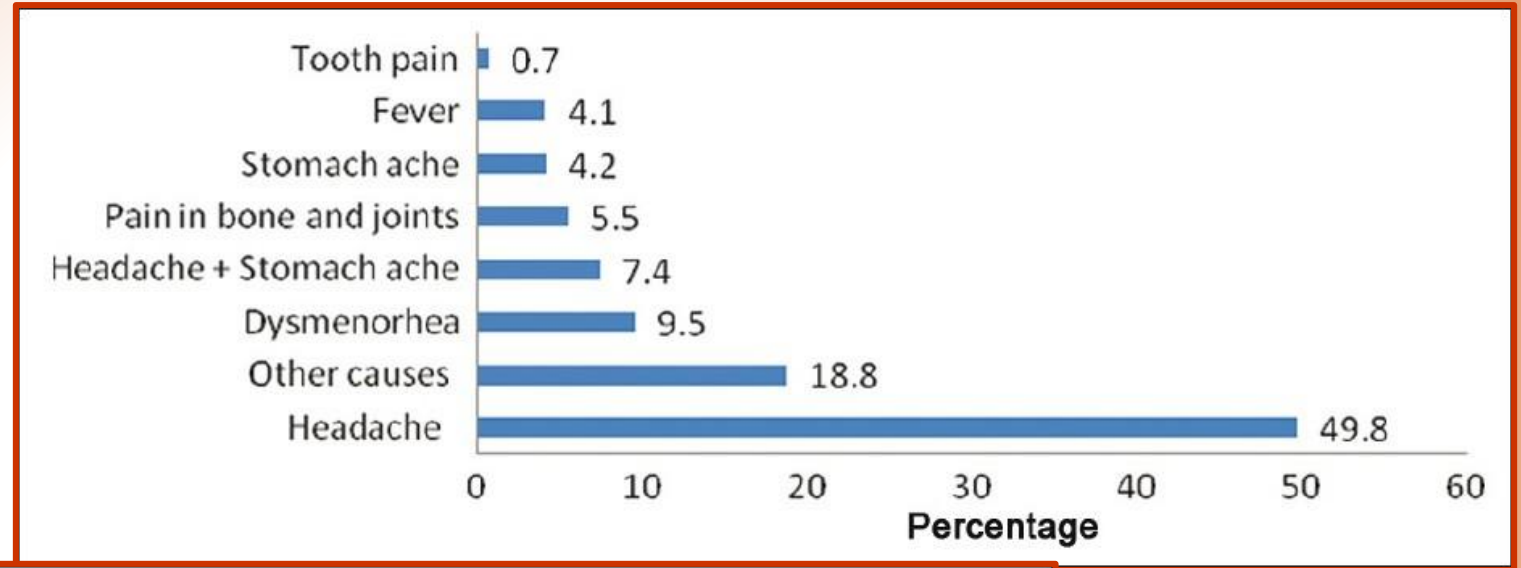


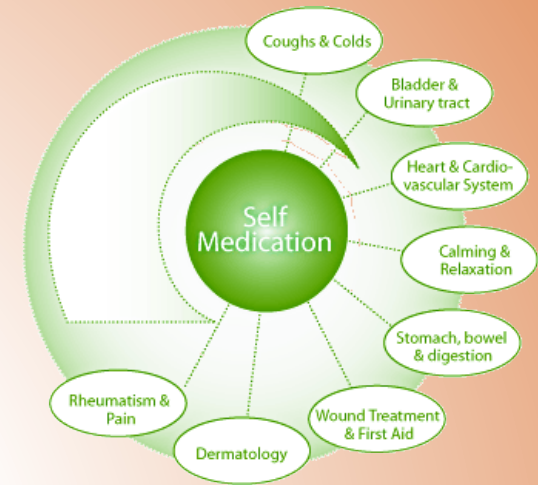
Figure: Frequency of antibiotics used for self-medication practices.

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Self Medication



ASSESSMENT IN ANTIBIOTICS SELF-MEDICATION ...



The aim of this study was to evaluate self-medication of antibiotics in patients who need dental services.

Also, to verify the most common antibiotics used as self-medication.

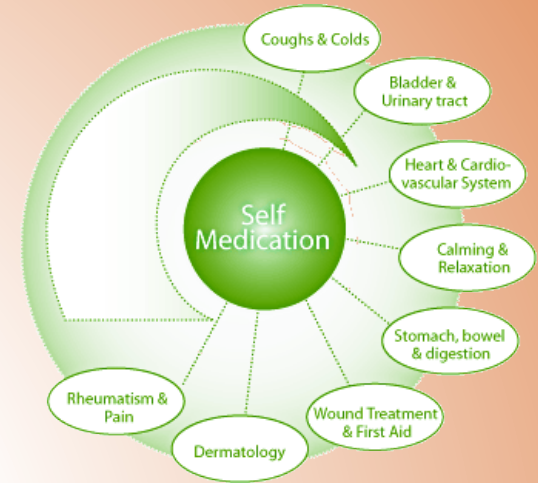
A graphic with the text 'Self Medication' in large, white, bold letters with a black outline. The background is orange with a pattern of small, colorful pills.

**Self
Medication**



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MATERIALS & METHODS



The study included 255 participants, of both sexes, from 4 cities in Macedonia. Everyone was given an anonymous questionnaire, which contained basic questions for respondents, groups of questions regarding self-medication with antibiotics and which are the most commonly used antibiotic drugs.

Self Medication



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Self Medication

CITY	PATIENTS
ŠTIP	100 – 24/ 76
BITOLA	37
STRUMICA	44
KUMANOVO	74
TOTAL	255 / 231

	ŠTIP	BITOLA	STRUMICA	KUMANOVO	TOTAL
<i>dentist</i>	23	4	36	0	63 <u>27,2%</u>
<i>home self-help</i>	53	33	8	74	192 <u>83,1%</u>



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Self Medication

CHOISE	ŠTIP	BITOLA	STRUMICA	KUMANOVO	TOTAL
<i>suggestion of a patient</i>	23	31	40	54	148 <u>64,0%</u>
<i>suggestion of a dentist</i>	53	6	4	20	107 <u>46,3%</u>



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SYMPTOMS	ŠTIP	BITOLA	STRUMICA	KUMANOVO
<i>toothache</i>	31	1	7	53
<i>pain in the mount</i>	2	6	3	0
<i>headache</i>	21	25	0	4
<i>abscess</i>	10	0	4	8
<i>erythema</i>	0	0	6	1
<i>fetor ex ore</i>	0	0	3	0
<i>oral pus collection</i>	11	4	21	5
<i>tooth eruption</i>	3	7	0	3
<i>oral lesions</i>	4	0	0	0
<i>other</i>	0	0	0	0

ASSESSMENT IN ANTIBIOTICS SELF-MEDICATION ...



ANTIBIOTICS	ŠTIP	BITOLA	STRUMICA	KUMANOVO
<i>Amoxicillin + Clavulanic acid</i>	39	37	39	13
<i>Cephalexin</i>	24	0	3	57
<i>Erythromycin</i>	1	0	1	0
<i>Doxycycline</i>	10	0	0	4
<i>others</i>	2	0	0	0

ANTIBIOTICS	TOTAL	%
<i>Amoxicillin + Clavulanic acid</i>	128	50,1%
<i>Cephalexin</i>	84	32,9 %
<i>Erythromycin</i>	2	0,78 %
<i>Doxycycline</i>	4	5,49%
<i>others</i>	10	3,92 %

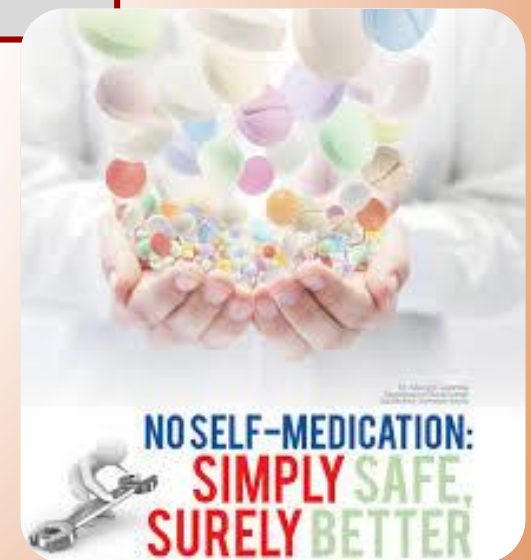
Self Medication

ASSESSMENT IN ANTIBIOTICS SELF-MEDICATION ...

Self Medication



Prevention
Education
Rational use of antibiotics
Protocols to prevent antibiotics side effects
Attention of children use





Self Medication

Impact of Antibiotic Resistance

- Increased rates of treatment failure
- Poor patient outcomes
- Increased mortality
- Increased need for combination therapy
- Increased cost of treatment



Help Your Antibiotics Do Their Job

- Take as directed
- Finish the full prescription even if you are feeling better
- Help prevent antibiotic resistance

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THANK YOU FOR YOUR ATTENTION



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