

EDITORIAL

WHO Warning: Antibiotic resistance – one of the biggest threats to global health

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As the World Health Organization (WHO) warns us, **antibiotic resistance is a phenomenon encountered worldwide and may affect any person, regardless of age or country of origin.** The resistance can be naturally acquired, but the most frequent cause is represented by *the excessive use of antibiotics*, as well as *their misuse*. The use of *antibiotics in animal feed* is another noteworthy aspect when we talk about the emergence of antibiotic resistance in people.

Thus, in a report published in November 2015, WHO warned against the increase in antibiotic resistance, an issue becoming more prevalent worldwide. Beginning with May 2015, a global public awareness and information plan has been established, whereas between 16 and 22 November 2015, during the first “World Antibiotic Awareness Week”, the campaign “Antibiotics: Handle with care” was launched.

During September-October 2015, WHO conducted a survey on approximately 10,000 people in 12 countries (Barbados, China, Egypt, India, Indonesia, Mexico, Nigeria, the Russian Federation, Serbia, South Africa, Sudan, Viet Nam). The participants answered to a set of 14 questions regarding the knowledge about antibiotics, their use and antibiotic resistance.

The survey results showed that 65% of those interviewed had undergone antibiotic treatment in the past six months, more than 35% of them even the previous month. The highest antibiotic consumption was recorded in underdeveloped countries (42%), compared with developed countries (29%). Furthermore, the youth population used antibiotic therapy most frequently (37%, between 16-24 years old, versus 24%, over 65 years old).

Many of those who participated in this survey (81%) took antibiotics prescribed by a doctor. Nevertheless, 93% reported having obtained the antibiotic directly

from the pharmacy, without seeking the advice of a physician in advance. Although in smaller proportions, 25% of the participants admitted having borrowed the antibiotic from a family member or an acquaintance that had used it for the same disease, while 43% used an antibiotic prescribed by a doctor for a previous crisis of the respective disease. WHO warns that this behaviour can contribute to increased antibiotic resistance.

The same effect of developing resistance may also be obtained if the patient has the habit of stopping a treatment when they notice an improvement in symptoms, without complying with the period indicated by the doctor. A plea for the correct duration of an antibiotic treatment is the difference between clinical efficacy (represented by the improvement or disappearance of symptoms) and the bacterial one (represented by the bacterial eradication). This difference may be 5 - 6 days, which explains the improvement in patient's health condition, but also the total duration, of up to 14 days, of a correctly recommended antibiotic treatment. The survey revealed that 32% of the respondents were doing or had done this. WHO recommends to the patients to undergo a treatment exactly as it was prescribed by the doctor, referring to both the dose and the period, all the more so as there is an antibiotic in the therapeutic scheme.

Nevertheless, it is very worrying that many of those who participated in this survey (64%) believe that viral infections, such as colds and viroses, can be treated with antibiotics, which is false. **Only bacterial infections benefit from antibiotic treatment.**

Regarding the knowledge about antibiotic resistance, the survey revealed that people recognize the existence of this issue, but they do not understand the causes and, especially, they do not know what they can

do to stop or minimize this phenomenon. 76% of those interviewed believe, incorrectly, that the resistance to an antibiotic appears because their organism becomes resistant. False... **bacteria are those that change their structure and become resistant to the antibiotics** used, not the human body.

44% of the respondents think that antibiotic resistance develops only in people who regularly take antibiotics.

Fortunately, over 85% of those who participated in this survey recognize that there may be solutions to this problem, *measures* also *recommended* by *WHO*:

- To resort to **antibiotic treatment ONLY** when it is **recommended by a specialist**
- Treatment should be taken **during the entire period of prescription** and it **should NOT be interrupted** when symptom improvement appears

- Proper hygiene and nutrition
- **NOT** to borrow antibiotics from another person or use antibiotics prescribed for another disorder.

Since Romania is one of the countries with worrying percentages of antibiotic resistance, and rhinosinusal disorders are the biggest “consumers” of antibiotics in the daily practice of the ENT physician, we consider appropriate raising awareness of the medical staff to be able to take an appropriate attitude in this regard.

I conclude with the statement of Keiji Fukuda, Assistant Director-General for Health Security, WHO, who alerts each one of us: “*Antimicrobial resistance has become one of the most serious global health threats of the modern times.*”