

All the best

STADA Health Report 2015



A cause for concern?

Germans' health knowledge

1. Editorial



Does a lack of health knowledge have a negative impact on the state of health? Studies have been published, which say it does. At an international level, for several years now

there has been a tendency to focus intensively on health knowledge / health literacy. However, in Germany the scientific debate surrounding so-called health literacy is still in its infancy. The first empirical studies show that health knowledge and level of education are linked. It is high time the debate surrounding this important aspect of our health care was advanced. Because poor health literacy among patients leads to increasing costs within the health care system. People who don't know enough about possible illnesses wait too long to visit the doctor, for example.

Following research in the STADA Health Report 2014 into "Germans' attitudes, desires and behavior towards their health", we are now analyzing their health knowledge. As part of this, market research institute Kantar health conducted a population-representative survey of 2,000 people in all social classes and groups, from East to West, aged between 18 and 70. In order to achieve meaningful results, general medical knowledge of all areas was tested. You will find the surprising results on the following pages. During the study concept development we involved high-ranking support in the form of the renowned doctor and author, Dr. Johannes Wimmer. In an interview he revealed his experience with his patients' health knowledge. Two notable study results to start: Firstly, there is a shockingly large disparity between self-evaluation and actual knowledge. Take the test for yourself: Do you know your blood group? If not then you are in good and – unfortunately – too popular company. This is only one example of something we

have to work on in the future. All players within health care are required to improve knowledge. Secondly: Depending on the subject, there are big gaps in knowledge in many areas and among many social groups. There are some tendencies towards education and gender, and in some cases age, having an influence on health literacy – tendencies, which offer a starting point for targeted information. Because for us it is important not only to deal with misconceptions, but also to offer solutions. The STADA Health Report 2015 reveals a dangerous superficial knowledge, an all too careless approach towards the risks of sometimes life-threatening conditions, such as heart attacks or skin cancer. When chronically ill patients do not know enough about their own condition, then something is fundamentally wrong. The study therefore provides important starting points regarding what information must be provided for which target groups. Furthermore, it also contributes towards education for the whole of society. Germans are prepared to focus on health topics.

As a pharmaceutical company we support the health of people, and contribute towards promoting their wellbeing. Moreover, in future we would like to make a greater contribution towards health education. With reliable information and practical tips we would like to help people to overcome everyday challenges and to take a responsible approach towards their greatest asset – their health.

I hope you enjoy reading the second edition of the STADA Health Report.

Sincerely,

Hartmut Retzlaff
Chief Executive Officer STADA Arzneimittel AG

2. Summary

2.1 Basic data

- Survey period: July 27 – August 10, 2015
- Market research institute: Kantar Health, a sister company of the TNS Infratest group, commissioned by STADA Arzneimittel AG
- Sample: n = 2,000 (online respondents between the ages of 18 and 70, representative of gender, region, age and education).

2.2 Subjective health literacy

Self-evaluation of own health knowledge

- In health issues, women believe that they are more competent than men.
- Factors such as education and age clearly influence the self-evaluation of own health knowledge.
- A large proportion of Germans do not know even basic health parameters, such as their own blood group.

Interest in health topics

- One in five Germans has little interest in health topics.
- People, who live in a household with children, most frequently seek information about health topics.
- The youngest generation (questioned) also sought more information than average.
- Familiarity with (modern) media has a clear influence on the need for information.

2.3 Health and prevention

General

- There is a need for health information across the entire population. No one was able to correctly answer all 26 purely scientific questions. Approximately half of Germans do not seem to have sufficient health knowledge.

- Depending on the subject, there are big gaps in knowledge in many areas and among different social groups. There are however some tendencies towards women being more competent than men, and those with a higher level of education knowing more than those with less education, and older people knowing more than young people.
- Chronic patients tend to be better informed as regards health matters than the rest of the population.

Gaps in basic knowledge

- 24 percent of people incorrectly answered the question about the optimum resting heart rate.
- Regular information about health topics does not prevent ignorance.

Sun protection and skin cancer screening

- Women are far more concerned about skin cancer screening than men.
- Those aged 30 to 39 knew more about skin cancer screening than any other age group.
- Four in ten Germans do not know how to effectively protect themselves against skin cancer.

Chronic and psychological conditions

- Health literacy with chronic conditions increases with a higher level of education.
- A lack of knowledge among chronic patients about their own condition is worryingly high, particularly among diabetics. 72 percent of diabetics do not know what is happening in their body as a result of the condition.
- People with psychological conditions or a higher risk of such a condition tend to have a higher level of health literacy in this area.

Childhood illnesses and their prevention

- Less than half of Germans are aware of typical childhood illnesses.
- A higher level of education tends to mean higher health

literacy as regards childhood illnesses.

- For more than three in ten Germans, the vaccination calendar is a complete mystery.

Age-related illnesses

- Basic knowledge regarding age-related illnesses such as diabetes and arteriosclerosis is rare.
- Chronic patients have a particularly good knowledge of age-related illnesses.
- Women tend to be better informed of age-related illnesses, and thereby better prepared than men.

Heart attack

- Only one in six Germans are properly informed about the causes of heart attacks, and are able to take preventative measures.
- Half of Germans wrongly believe that men are at a greater risk of heart attack than women.
- Half of women underestimate their own risk of heart attack.

Fever

- Over half of people do not know what temperature constitutes fever.
- 38 percent of Germans often trigger a false alarm, believing that a body temperature of below 38.5 degrees already constitutes fever.
- A lower income tends to decrease health literacy regarding fever.

Weight and nutrition

- Participants aged between 18 and 29 tend to have the best knowledge related to weight and nutrition.
- Women were far more likely to know what Body Mass Index (BMI) represents a normal weight.

2.4 Treatment and examinations

Medications and their correct usage

- Almost ten million Germans do not seem to know that you can find information about the medication dosage in the package information leaflet.
- Education and age influence health literacy related to medication.

- Increasing age and a thereby increasing level of treatment also increases health literacy regarding medication.

Painkillers and antibiotics

- Almost half of Germans have no idea what antibiotics are used for, eleven percent believe that they are a universal remedy 'for everything'.
- Three in ten Germans do not know that the antibiotics should be taken until the package is finished.
- When asked about the correct usage of painkillers, most Germans are too careless.

X-rays etc.

- Over half of Germans misjudge the potential dangers of the most common types of radiological examination.
- A higher level of education has a positive impact on radiological health literacy.

A cause for concern?

Germans' health knowledge



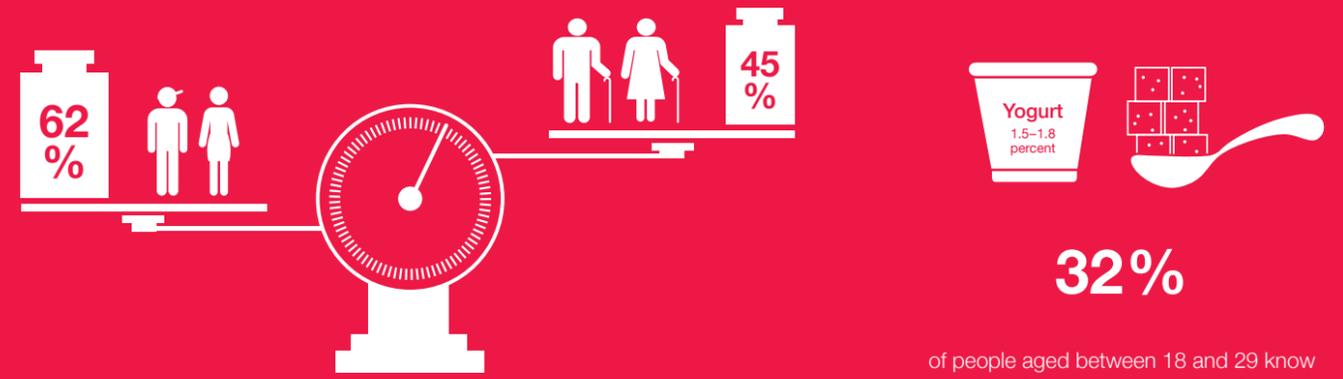
2,000 People in Germany were surveyed.



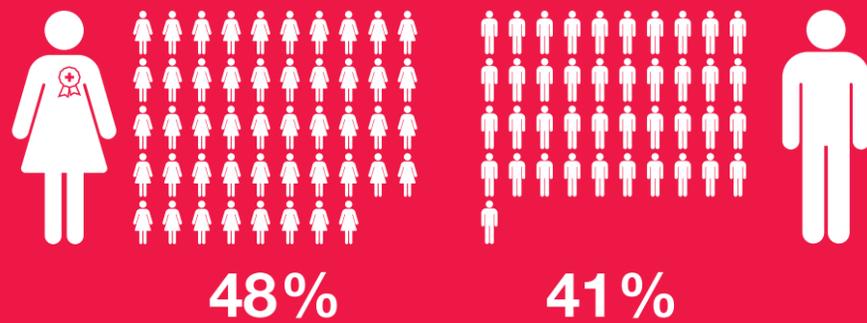
Survey period: July 27 – August 10, 2015



Carried out by STADA Arzneimittel AG with Kantar Health



General

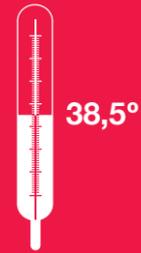


21% of Germans have **little interest in health topics**.

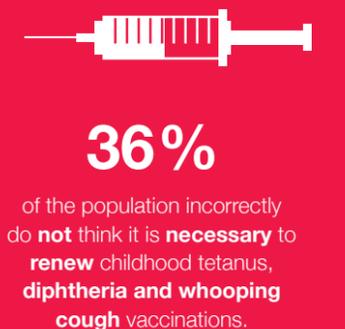
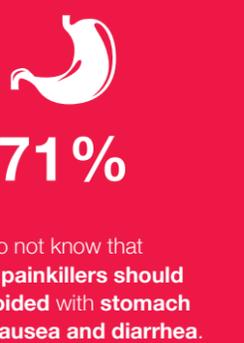
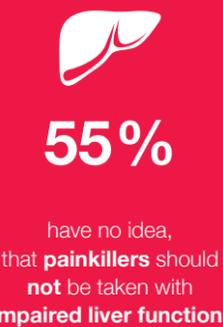
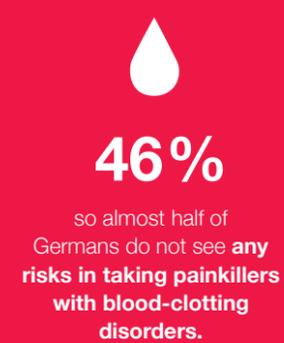
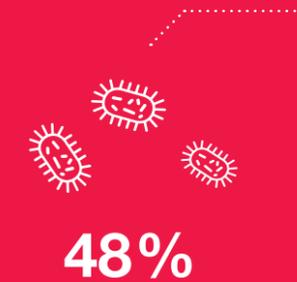
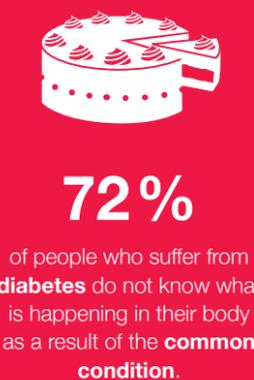
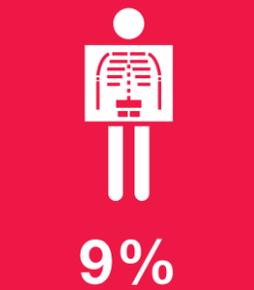
Health knowledge in detail



53% incorrectly believe that **men** are at a greater risk of **heart attack** than women.



53% of the population does not know that a temperature of **38.5 degrees** or above constitutes.



3. A look back at 2014, starting position, objectives and methodology

In the previous year, the STADA Health Report focused on the attitudes, wishes and behavior of Germans in relation to their health. The results were surprising – at least in their clarity. They showed that 85 percent of German citizens are satisfied or very satisfied with their daily lives. This however does not mean that nothing negative was mentioned. Negatives for German citizens in 2014 particularly included stress at work as the number one health risk, a lack of light and exercise as well as sensitivity to weather.

These factors could to some extent be actively influenced, but in some case could not be changed. The determination of what affects us in our daily lives and what does not is subjective and can differ significantly between different social groups. Gender, geographic area origin, age and education can also have an impact. According to the STADA Health Report 2014, people with a higher level of education suffered more from professional stress and from a lack of exercise than those with a lower level of education.

Also noticeable in the previous year: There are two large groups in Germany. On the one hand there are those who care deeply about their health and physical and mental well-being and are willing to invest a lot in it. On the other hand, in the previous year it became clear that one section of the population suffered from a severe lack of exercise and openly admitted that their own laziness was preventing them from living a healthy life.

At the end of 2014 – a few months after the STADA Health Report 2014 was published – the Robert Koch Institute published 'Data and facts: Results of the study of health in Germany in 2012'. The STADA results broadly confirm the official 'Federal Health Monitoring System'. The RKI conducts regular health monitoring for Germany and sticks closely to the recommended question phrasing of

the World Health Organization (WHO) in its assessments of subjective state of health ('How is your general state of health?'). Here too the majority of Germans, over 70 percent, evaluated their own state of health with 'very good' to 'good'; with slightly more men (72 percent) than women (69 percent). In comparison: The STADA Health Report 2014 asked more generally about overall happiness in everyday life, but showed an equally satisfied result: almost 85 percent were content – and that was true for both sexes. The figures show that health is a fundamental part of personal wellbeing, however other factors are also important.

Particularly interesting is the cross-over of the two studies regarding the older generation. Although only half evaluated their own health as 'good' or 'very good' according to RKI data, nine out of ten 60 to 70 year olds are happy or very happy with their everyday lives, according to the STADA Health Report 2014. Calmness and a high amount of life experience clearly compensate for numerous age-related everyday aches and pains.

The STADA Health Report 2015 highlights a new aspect. It looks into how Germans evaluate their own health knowledge and tests how accurate their evaluations are. Is Germans' health knowledge really a cause for concern, or can we sit back and relax?

How often do Germans seek information about health topics? The pharmaceutical company Pfizer Deutschland also conducted a study into part of this diverse topic area in October 2015. And without anticipating too much at this stage, a similar tendency was found as in the STADA Health Report: Among other things, the 'Pfizer Health Monitor' determined that a quarter of Germans have a low level of health knowledge.

For many people it is becoming increasingly difficult to understand doctors, nurses and pharmacists, in order

to be actively involved in medical treatment. Because the information is becoming more complex, while the person working in today's health care system has less time to explain things or to ask questions. Patients are increasingly having to care for themselves. Health literacy is therefore a factor, which is becoming increasingly important for science and politics. According to WHO, health literacy means the 'cognitive and social skills, which motivate and enable individuals to gain access to information, to support their own health and to keep it at a good level'*

The STADA Health Report 2015 was – as in the previous year – created in close cooperation with Kantar Health, a sister company of the TNS Infratest Group. Between July 27 and August 10, 2015 researchers questioned 2,000 Germans aged between 18 and 70 via an online survey. These were selected to be representative of gender, region, age and education, in order to produce reliable results about trends and tendencies for the whole of Germany.

The market survey for the STADA Health Report 2015 comprised a total of 31 questions in three large topic areas:

- The 'subjective health literacy' section tested the need for information about health topics and personal evaluation of the importance of these topics. Trust in the doctor was also part of this section.
- The 'health and prevention' section examined how much Germans know about subjects such as (skin) cancer, chronic and psychological conditions, childhood illnesses and prevention as well as age-related conditions, and which social groups had the best knowledge. Comparisons were also made between actual knowledge and self-evaluation.
- The 'treatments and examination' section discussed medication and its general correct usage, with a particular focus on painkillers and antibiotics. This clearly showed how high knowledge surrounding radiological tests is (X-rays, CT, MRI).

The STADA Health Report 2015 is therefore an interesting continuation of the 'All the best' initiative by STADA

Arzneimittel AG and the previous year's report. The initiative was launched in 2014 in order to clarify which aspects of being and staying healthy Germans are concerned about and what each of us can do to be prepared for the daily challenges.

*<http://www.who.int/healthpromotion/conferences/7gchp/track2/en/>

4. “Communication with doctor and patient on equal footing”

Interview with medical professional Dr. Johannes Wimmer



Dr. Johannes Wimmer is 32 years old, worked for a long time as a doctor in an Emergency Room in Hamburg and is now Head of Digital Patient Communication at the CVderm University Hospital Hamburg-Eppendorf. Dr. Wimmer, author of the guide “Ask Dr. Johannes” has set himself the task of optimally preparing people for their doctor’s visit. His motto: “Medicine is communication!” He operates the online portal “Dr. Johannes”, which provides realistic and entertaining information on health, illness and medicine. He worked on the questions and analyses of the STADA Health Report 2015.

From a doctor’s point of view: Why is it so important to examine Germans’ health knowledge in studies?

Dr. Wimmer: We doctors generally don’t know how much our patients know. In our stressful days, we often do not have time to find out exactly what is wrong. The communication between doctor and patient should ensure exactly that, face to face. Clarification and establishment of health literacy are therefore extremely important. The STADA Health Report 2015 shows where there are gaps.

What was the particular focus during development of the survey?

Dr. Wimmer: During development of the survey it was important to us to ask about as many aspects of health knowledge as possible: What do people in Germany already know, and what don’t they know? And we weren’t just interested in serious illnesses, but also in every day topics such as blood pressure and sun protection. We wanted to find out whether there are differences between different social groups. Because doctors are not free from misjudgments and prejudices. With an academic or a man in a well-fitting suit, we tend to assume that his knowledge

is fairly good. The same is true if a woman – and mother – is sat opposite me: I automatically assume that she knows more, as the ‘family health minister’.

Do the results of the STADA Health Report 2015 match your own experience as a doctor?

Dr. Wimmer: The results confirm what I see every day as a doctor: Most people only think about illness when they themselves are ill. So far the motto has been: “Medical information and images? I don’t need that.” But why? The reasons seems to be simple: Thinking about our own health just isn’t interesting. As a doctor I see it as my duty – in the case of a critical diagnosis – to inform people quickly. In such an emotional situation, I have to provide a detailed explanation. Better health knowledge would make this easier.

How would you evaluate the results of the study?

Dr. Wimmer: Some of the results of the STADA Health Report 2015 shocked me, such as the low level of health literacy among those with chronic conditions: Anyone with a chronic condition should know enough about it. But unfortunately many patients simply pass their problems on to their doctor. They are often not interested, and simply want a quick solution. In conversations with patients it becomes clear that this is not a result of ignorance, but of fear.

What do you think: What should be done to improve health knowledge?

Dr. Wimmer: We need to think about where patients look for help, support or information, and provide them with understandable explanations there. People drown in information. What is the point in a long online article, if I can’t understand it? It is important that information is prepared to fit the target audience. We communicate differently with children than with adults.

5. Analyses and results

5.1 Subjective health literacy

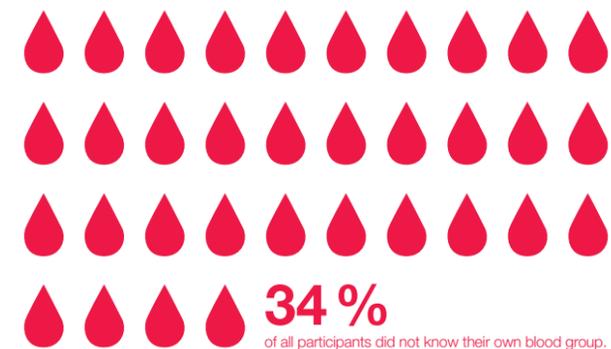
5.1.1 Self-evaluation of own health knowledge

In health issues, women believe that they are more competent than men.

44 percent of Germans, so almost half, believe that they are competent in health issues. Women are more confident (48 percent) than men (41 percent). 47 percent of people who live in a household with one or more children also consider themselves competent: They evaluate their health knowledge as ‘good’ or ‘very good’.

In comparison: Only 42 percent of people who do not live in a household with children gave these responses. Factors such as education or age also have an impact. The difference between those with school level education compared with those who completed higher education was 15 percent among the youngest (18 to 29 year olds) and eight percent among the oldest (60 to 70 year olds). The answers to the question about blood group show to what extent self-evaluation corresponds to actual knowledge. One in three admitted having no idea. But the remaining participants were also not particularly competent

Do Germans know their blood group?



n = 2000

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in this field: because the distribution of blood groups in the survey differed so significantly from the actual figures for Germany, that the answers seem to be based more on guess work than on actual knowledge. This is also true of the standardized values, which do not take the ‘I don’t know’ answers into account.

At a glance:

- In health issues, women believe that they are more competent than men.
- Factors such as education and age clearly influence the self-evaluation of own health knowledge.
- A large proportion of Germans do not know even basic health parameters, such as their own blood group.

5.1.2 Interest in health topics

One in five Germans actively avoid the subject of health.

People who frequently search for information on health topics feel more competent and thereby well prepared for the upcoming doctor’s visit. Six percent of women and just four percent of men search for specific information on health topics every day. This could be via the pharmacy magazine or the Internet.

Overall, there is a large discrepancy between people who regularly (at least once a week) seek information about health, and those who pay less attention to this subject. 44 percent said they were interested, while 21 percent declared themselves not at all interested.

From a regional perspective, the greatest disinterest is in Berlin; more than one in four of those living in the capital stated ‘I do not look for health information at all regularly’. Those in Northern Germany on the other hand were most interested; in the states of Bremen, Hamburg, Lower Saxony and Schleswig-Holstein

25%

of people who work search for information daily or several times a week about health.

21%

admit that they have no interest in 'medicine etc.'.

52%

of the youngest age group questioned seek information about health topics at least once a week.

47 percent said that they look for specific health-related information at least once a week.

What is particularly surprising: People who live in – particularly rural – communities with up to 5,000 inhabitants are more interested in health topics than those in cities with at least 500,000 inhabitants. 43 percent of those in urban areas search for information at least once a week, whilst this figure is 47 percent for those in rural areas. The lack of doctors in rural areas seems to be an important factor. Because when it is so difficult to find medical help, often people's only alternative is to improve their own health knowledge.

There was little difference in the need for information between men and women. However, age plays a very important role: 52 percent of those aged 18 to 29 looked for information on health topics at least once a week.

This figure was only 37 percent among those aged 60 to 70, despite the fact the the STADA Health Report 2014 had promoted the increasing personal importance of health with increasing age. There are several possible interpretations:

On the one hand, the younger generation's confidence in using the Internet may play a part. The access to (modern) media would sustainably influence the need for information on health topics. But one group should not be excluded from this argument: the 'silver surfers'.

More and more older people are active online and use the digital world as a source of information. On the other hand, the older generation questioned perhaps believe that they know enough – that they have reached the peak of their health knowledge. The good news: Eight out of ten Germans say that they have a doctor they regularly see, and who they trust. This figure even stood at 64 percent among those reluctant to seek information.

At a glance:

- One in five Germans has little interest in health topics.
- People who live in a household with children most frequently seek information about health topics.
- The youngest generation (questioned) also sought more information than average.
- Familiarity with (modern) media has a clear influence on the need for information.

5.2 Health and prevention

5.2.1 General

A need for information among all population groups.

How good is Germans' actual health knowledge? Which factors influence it, which population groups are in front and know the most about health topics? Overall there is a need for more health information across all population groups. None of the 2,000 people surveyed were able to correctly answer all of the questions in this representative market survey. Furthermore: 14 of the 26 purely scientific questions were answered correctly by less than 50 percent of respondents.

Questions about some topics, for example the questions about Type 2 diabetes mellitus, were answered incorrectly by up to 84 percent. More than half of the population does not know about common complaints, which almost everyone has to deal with, for example fever. In general, there is a very diverse group across the whole

population, which is well to very well informed, while on the other hand 20 to 30 percent depending on the subject have little to no knowledge.

Depending on the subject, there are big gaps in knowledge in many areas and among different social groups. There are however certain tendencies towards age and gender influencing health literacy: Women tend to fare better than men in 75 percent of all questions. People

"The typical and prehistoric thought is: "Nothing will happen to me." But unfortunately no one is completely protected against illness. People should understand that they can reduce their risk through information and prevention. That should be enough incentive."

Dr. Johannes Wimmer

from small communities, generally from rural areas, and the older generation aged between 60 and 70 also tend to show a higher level of health literacy. But there are anomalies in all groups. For example, men are better informed in questions about heart disease, and 55 percent of over 60s had not idea about Body Mass Index (BMI). Those in cities knew more about age-related conditions such as arteriosclerosis, whilst those in rural areas had a higher level of competence in many areas of basic medical knowledge and prevention.

A further group also proved to be particularly well informed about health: chronic patients (according to the STADA Health Report 2014 around 45 percent of Germans) were generally well informed about mental and physical wellbeing. An interesting result, which perhaps should be more clearly highlighted in future. Because the 'Pfizer Health Monitor', published in October 2015, produced a very different result:

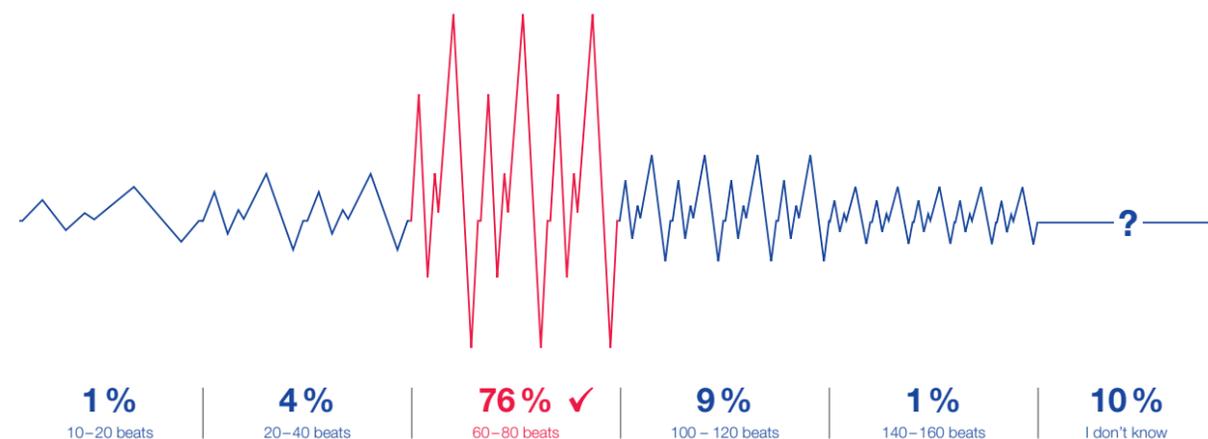
The company's study showed that there was neither a noticeable difference in knowledge between men and

women, nor between those with chronic conditions and healthy people. The different results would seem to be explained by the use of different study designs.

At a glance:

- There is a need for health information across the entire population. No one was able to correctly answer all 26 purely scientific questions. Approximately half of Germans do not seem to have sufficient health knowledge.
- Depending on the subject, there are big gaps in knowledge in many areas and among different social groups. There are however some tendencies towards women being more competent than men, and those with a higher level of education knowing more than those with less education, and older people knowing more than young people.
- Chronic patients tend to be better informed as regards health matters than the rest of the population.

How many beats per minute should your resting heart rate be?



5.2.2. Gaps in basic knowledge

How many Germans know the optimal resting heart rate?

Knowing a healthy pulse and blood pressure is part of basic knowledge, which should be relevant for all age and social groups and for both sexes. Despite this, 24 percent incorrectly answered the question about the medically optimal resting heart rate (60 to 80 beats per minute), and eight percent did not know the healthy blood pressure level (120/80).

One percent believed that 10 to 15 or 140 to 160 beats per minute and a blood pressure of 200/120 was harmless.

Background: A heart rate of less than 30 can lead to loss of consciousness. One part of the population here demonstrated an urgent need for more information – younger people more than older people, and more men than women.

The reasons for this could be explained by the greater life experience of those aged 60 to 70 and by the fact that women visit the doctor more often than men, as shown by numerous studies. There was a discrepancy between rural and urban populations: People in small communities performed much better in the question about resting heart rate (88 percent compared with 72 percent) and in the question about blood pressure (97 percent vs. 89 percent).

Those who do not have children were surprisingly better informed than those who do, although this should be basic knowledge for everyone. Those who regularly search for information about health topics, at least once a day, did not perform any better than average.

At a glance:

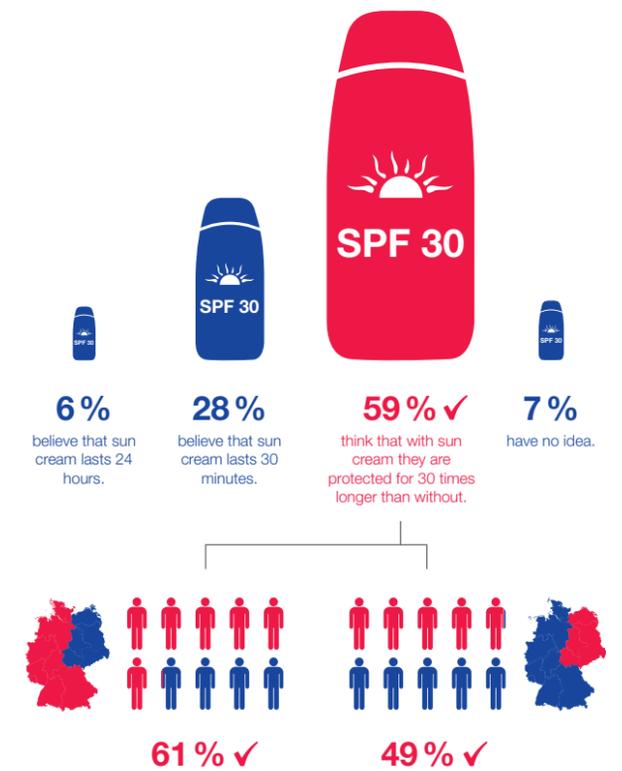
- 24 percent of people incorrectly answered the question about the optimum resting heart rate.
- Regular information about health topics does not prevent ignorance.

5.2.3 Sun protection and skin cancer screening

Four in ten Germans are too careless when it comes to skin cancer screening.

From what age should you regularly, i.e. at least every two years, attend skin cancer screening? Only one in three Germans gave the correct answer, 'from 35 years'. Women (42 percent) seem to care more about skin cancer screening than men (30 percent), younger people under 39 years old (47 percent) more than older people over 50 (25 percent) and those in rural areas (43 percent) more than those in urban areas (37 percent).

Do more West Germans than East Germans know what SPF 30 means?



Those with the highest level of knowledge are those aged between 30 and 39, who are in the middle of their professional careers and seek more information than

average about health topics. 56 percent knew the right answer here. People who live in a household with children also know more than those who do not have children. Suncream prevention is one of the most important factors¹ in 'skin protection and skin cancer screening' – and knowledge of this special point is a decisive indicator of general competence in this area.

The right answer to what sun protection factor 30 means, namely 'I am protected against sun burn for 30 times longer than without suncream' was given by six out of ten Germans – those with higher education answered correctly more often than those with school level education.

Conversely, this also means that four in ten Germans know too little about protection against skin cancer and are thereby exposed to unknown risks – a worrying level. A lack of knowledge is particularly high in Eastern German states, in Saxony and Thüringen, where 56 percent did not know the correct answer.

At a glance:

- Women are far more concerned about skin cancer screening than men.
- Those aged 30 to 39 knew more about skin cancer screening than any other age group.
- Four in ten Germans do not know how to effectively protect themselves against skin cancer.

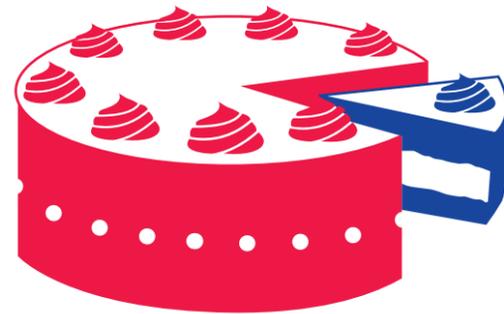
5.2.4 Chronic and psychological conditions

Considerable lack of knowledge among chronic patients about their own condition.

Medical professionals consider chronic conditions to be, among others, diabetes, hypothyroidism, high blood pressure and coronary heart disease (CHD).

Just 57 percent of the population know that diabetes is considered a chronic condition, and just 37 know about CHD – despite the fact that around 1.5 million people in Germany suffer from CHD². According to the German Center for Diabetes Research six million people have diabetes³. Knowledge of chronic conditions increases with education: 62 percent of those with Abitur (German school qualification after

Do diabetics know what is happening in their body as a result of the condition?



72%

of all diabetics **do not know**, that with type 2 diabetes mellitus, the body loses the ability to process glucose in its cells.

n = 2000

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12-13 years of education) but only 49 percent of those who completed Volksschule or Hauptschule (German school qualification after 8-9 years of education) know that diabetes is considered a chronic condition. Particularly worrying:

Only marginally more people with chronic conditions clearly identified the conditions as chronic than the average. 72 percent of people who suffer from diabetes do not know what is happening in their body as a result of the common condition, which shows a lack of basic knowledge of their own condition.

The situation is not much better for chronic patients and the general population for psychological conditions, such as depression. Seven in ten Germans do not know that behavioral therapy is one of the three suitable treatment methods. 40 percent exclude medication and 20 percent exclude psychotherapy.

Here too, education and health literacy go hand in hand. People with psychological conditions or a higher risk of such a condition, for example in single households, have the best knowledge in this area.

A study found that single people were at a higher risk of depression⁴; this is clearly a reason why many single people focus more on psychological conditions, because they scored above average when it came to treating depression: 81 percent (average: 78 percent) know that psychotherapy is a suitable treatment method, and 34 percent (31 percent) know about behavioral therapy.

There is also an interesting result to be observed here: Only three out of four Germans know the word 'therapy' as a correct word to describe the treatment of an illness. Those with Abitur or higher education scored higher than those with Volksschule or Hauptschule qualifications.

At a glance:

- Health literacy with chronic conditions increases with a higher level of education.
- A lack of knowledge among chronic patients about their own condition is worryingly high, particularly among diabetics. 72 percent of diabetics do not know what is happening in their body as a result of the condition.
- People with psychological conditions or a higher risk of such a condition tend to have a higher level of health literacy in this area.

5.2.5 Childhood illnesses and their prevention

High need for information about vaccinations

There is a great deal of uncertainty among the population surrounding vaccinations. "What is dangerous for my child, and what isn't? When should I go to the doctor?"

There are now so-called scarlet fever, chicken pox and measles 'parties', at which parents deliberately bring their unimmunized children into contact with children who have those illnesses. These children should then become infected, ill and thereby immune to these illnesses.

"Luckily there are examination appointments at which the state and doctors take responsibility for children. Children cannot decide for themselves; and the topic of , vaccinations' is a particularly emotional subject. It is something which parents are frightened of. We as doctors must communicate: 'Come on, we'll do it together'."

Dr. Johannes Wimmer

Numerous experts including the Robert Koch Institute Standing Vaccine Commission (STIKO)⁵ warn against the risks and recommend vaccination instead. The 'vaccination calendar for infants, children, young people and adults' gives an overview of the recommended vaccinations.⁶

There is a particularly high need for information about vaccinations: One in three people do not think it is necessary to regularly renew childhood tetanus, diphtheria and whooping cough vaccinations, as recommended by STIKO.⁷ Six in ten Germans believe that vaccinations last a lifetime or do not need to be renewed, thereby putting themselves and other people at greater risk.

This great uncertainty was also reflected in the other results of the STADA Health Report 2015. Just 48 percent, so less than half, know that whooping cough is a typical childhood illness, which is not identified by marks on the skin.

Only 21 percent put mumps in this category, which means that around eight in ten Germans know too little about the signs of the illness. Gender, age and education are influencing factors here. 51 percent of women answered questions about whooping cough and 23 percent about mumps correctly, for men these figures were 44 percent and 19 percent respectively.

Those with Abitur or higher education (54/21 percent) tend to be better informed here than those who completed Volksschule or Hauptschule (42/21 percent).

At a glance:

- Less than half of Germans are aware of typical childhood illnesses.
- A higher level of education tends to mean higher health literacy as regards childhood illnesses.
- For more than three in ten Germans, the vaccination calendar is a complete mystery.

56 %

do not know what the age-related condition arteriosclerosis is.

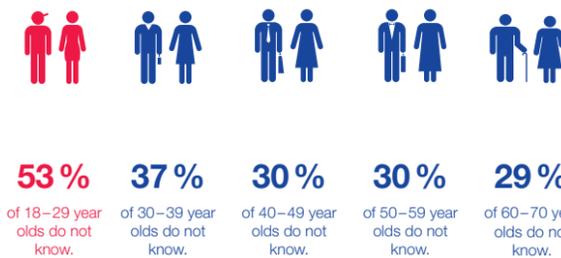
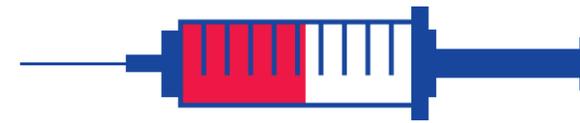
55 %

do not know exactly what an edema is.

63 %

do not know exactly what happens during a heart attack.

Do Germans know that you should renew the triple vaccination for tetanus, diphtheria and whooping cough?



n = 2000

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5.2.6 Age-related illness

Women are better prepared for age-related illness than men.

STADA asked 2,000 Germans “What is arteriosclerosis”; 56 percent do not know that it is a systematic disease of the arteries, which causes blood fats, thrombi, connective tissue and calcium to be stored in the vascular walls.

Knowledge of this issue increases with age: 31 percent of 18 to 29 year olds answered correctly, increasing to 61 percent of 60 to 70 year olds. At 50 percent, more chronic patients answered correctly than non-chronic people (37 percent). A further tendency: younger people, who are less often affected, know far less about edemas than older people.

Men also know far less than women in this area. This is not surprising, since many women have to deal with increased water retention (edemas) during pregnancy, particularly in the legs.

At a glance:

- Basic knowledge regarding age-related illnesses such as diabetes and arteriosclerosis is rare.
- Chronic patients have a particularly good knowledge of age-related illnesses.
- Women tend to be better informed of age-related illnesses, and better prepared, than men.

5.2.7 Heart attack

High need for information about the risk of heart attack

According to the German Heart Report 2014, published by the German Heart Foundation, coronary heart disease and heart failure are among the leading causes of death resulting from heart disease⁸ in Germany. The lack of general knowledge about heart attacks is therefore even more shocking.

32 percent of Germans, so almost one third, have no idea that during a heart attack a coronary artery closes. 63 don't know that the heart muscle suffers from a lack of oxygen. A very low number correctly answered both questions, which would be a good indication of being able to take measures to prevent a heart attack.

Several questions about this subject show that the risk is underestimated: Half of people think that men are at a greater risk than women - a dangerous assumption, which could have fatal consequences. According to the German Heart Foundation, “Since 2002 the leading cause of death among women has not been cancer, but heart attacks and strokes.

While the number of deaths due to cardiovascular disease among men continues to decrease, it is decreasing more slowly among women, and has even increased for women aged between 40 and 55, which is due in no small part to the fact that more and more women smoke”.⁹ Half of women believe this misconception, thinking that they are less at risk than men. The need for information is particularly high here because preventative measures can save lives.

At a glance:

- Only one in six Germans are properly informed about the causes of heart attacks, and is able to take preventative measures.
- Half of Germans wrongly believe that men have a greater risk of heart attack than women.
- Half of women underestimate their own risk of heart attack.

did worse here than women (42 percent vs. 52 percent). 38 percent of the population panic too early, because they believe that a temperature below 38.5 degrees constitutes fever.

Medical professionals agree that the condition is first serious above 38.5 degrees. Doctors generally describe a temperature over 37.5 degrees as a 'high temperature'. The greatest confusion in this area was among people whose net monthly household income was below €1,000.

5.2.8 Fever

38 percent trigger a false alarm for fever too early

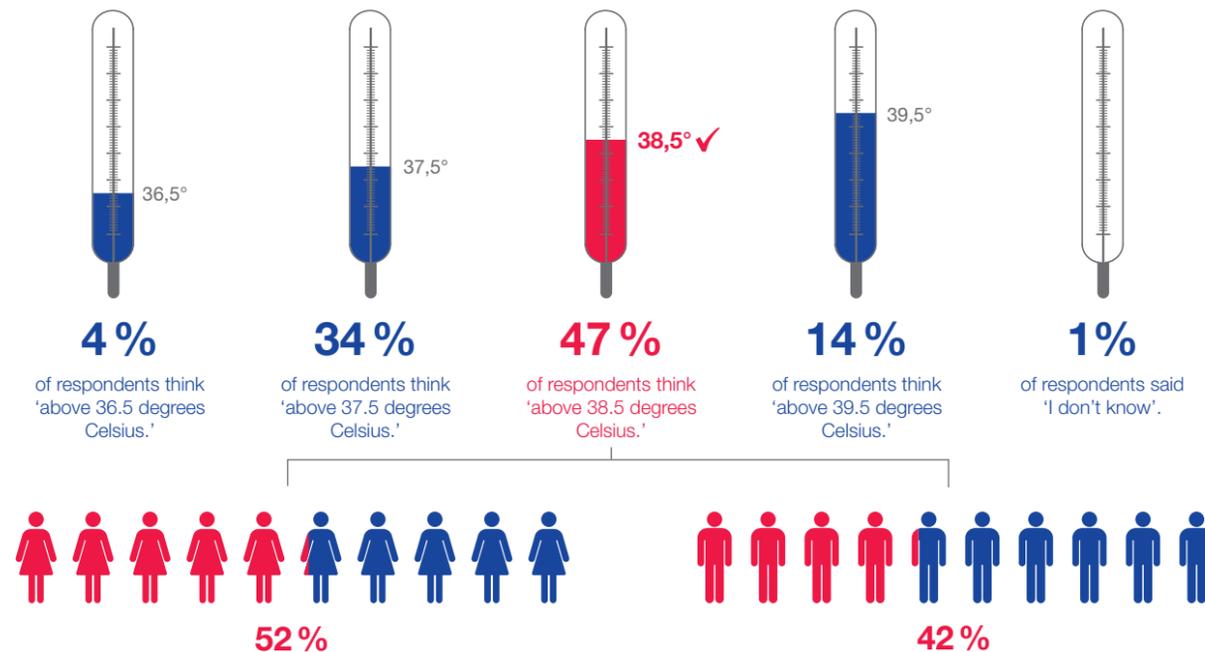
When asked what body temperature constitutes fever – over 36.5 Celsius, over 37.5 Celsius, over 38.5 Celsius or even over 39.5 Celsius – many Germans had no idea.

More than half of Germans do not know the correct answer, namely over 38.5 degrees Celsius (the limit for infants and small children is 38 degrees). Once again, men

At a glance:

- Over half of people do not know what temperature constitutes fever.
- 38 percent of Germans often trigger a false alarm, believing that a body temperature of below 38.5 degrees.
- A lower income tends to decrease health literacy regarding fever.

What temperature is medically considered fever?



n = 2000

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5.2.9 Weight and nutrition

18 to 29 year olds know most about nutrition.

A 150g low fat yogurt with 1.5 to 1.8 percent fat contains six grams of sugar, which is more than one cube of sugar. Only 28 percent of Germans know this. More than seven in ten of those surveyed gave an incorrect answer, or had no idea. The number of correct answers decreases significantly with increasing age.

Those aged 18 to 29 gave most correct answers (32 percent), while only 25 percent of 60 to 70 year olds answered correctly – and this is despite the fact that the tendency is reversed for questions of general health literacy. This shows that this age group on the one hand searches for very specific information, and on the other that the mass of information seems to be read quickly and not all of it is retained.

This was also proven by knowledge of normal weight, according to Body Mass Index (BMI). 62 percent of the youngest generation questioned gave the correct answer (20), whilst only 45 percent of the oldest generation did so.

The STADA Health Report 2014 already found that those aged 18 to 29 are aware of the importance of health, however consider diet to be equally important. Young people seem to take a very responsible approach to their diet, particularly as regards nutrition. This was also reflected by their above average need for information about health topics.

At a glance:

- Participants aged between 18 and 29 tended to have the best knowledge related to weight and nutrition.
- Women were far more likely to know what Body Mass Index (BMI) represents a normal weight.

5.3 Treatment and examinations

5.3.1 Medications and their correct usage

“Does the color influence the dosage of my tablets?”

The source of information about the dosage of medication and their correct usage should undoubtedly be part of basic medical knowledge. For 17 percent of those surveys, so one in six – around 10 million Germans across the entire population – this is not the case. They search in vain and unlike the remaining 83 percent do not – correctly – reach for the package information leaflet to find out the dosage of medication. Those with Abitur or higher education (86 percent) tend to be more competent here than those who completed Volksschule or Hauptschule (77 percent). Two percent believe that there is a link between the dosage and the color of the medication.

“What we’re lacking is the wise old grandmother – our personal health handbook. Because even if young people search for information, it doesn’t mean that what they read is correct. Because the loudest voice on the Internet is not necessarily right.”

Dr. Johannes Wimmer

The STADA Health Report 2015 survey did not, however, ask whether these participants believed that bright red meant ‘particularly strong’ and pale blue represented ‘low dosage’. That over one million Germans seem to believe in such a connection shows a certain naivety and demonstrates a further need for information.

Education and age are the decisive factors, which influence health literacy related to medication. This was shown by the question about what ‘1-0-1’ on a prescription means. Almost one in five have no idea. However, over 80 percent of Germans know that this means they should take one tablet in the morning and one at night. 88 percent of both 50 to 59 and 60 to 70 year olds know the correct answer, but only 73 percent of those aged 18 to 29.

This is easily explained, as medication intake increases with age. Interesting: Only three quarters of people who claim to search for information about health topics daily gave the correct answer. There is also a dangerous lack of knowledge in another area: 45 percent have no idea that drinking grapefruit juice causes the greatest risk of

interaction with medication. 19 percent of 18 to 29 year olds believe that iced tea is 'culprit' among drinks, while one in four Germans admitted: 'I do not know which drink causes this risk.'

At a glance:

- Almost ten million Germans do not seem to know that you can find information about the medication dosage in the package information leaflet.
- Education and age influence health literacy related to medication.
- Increasing age and a thereby increasing level of treatment also increases health literacy regarding medication.

5.3.2 Painkillers and antibiotics

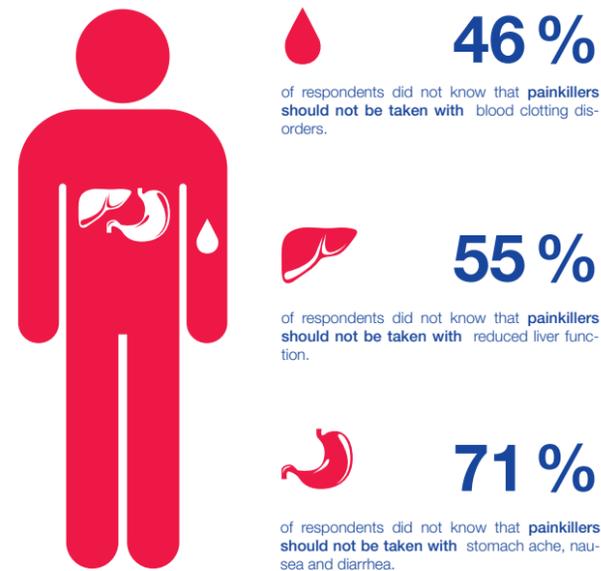
Over six million Germans consider antibiotics universal medication 'for everything'.

Almost half of Germans have no idea what antibiotics are used for. Even more concerning: Eleven percent, more than one in ten, believe that they are a universal remedy 'for everything'. That is around 6.1 million people in Germany.

Higher education also indicates higher health literacy here: Only 46 percent of those with Volksschule or Hauptschule qualifications knew the correct answer, bacteria, whereas this figure was 57 percent for those with Abitur or higher education. There is also a regional anomaly with antibiotics: People from Berlin gave the lowest number of correct answers, 39 percent, in this representative study. The state had the highest number of respondents who admitted to not regularly seeking information about health topics.

The connection between frequency of searching for information and knowledge about antibiotics was also confirmed through cross-comparison: 66 percent of Germans who search for information on health topics daily

When should painkillers be avoided?



n = 2000

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know what this type of medication is used for – the highest level. However, three in ten Germans (31 percent) do not know an important fact about taking antibiotics. They do not know the correct answer 'Take until the package is finished'. 41 percent of men admit to a gap in knowledge here, but only 23 percent of women do.

“People often come to us with a viral infection and ask for antibiotics. In fact, they only really have a mild cold, and in any case antibiotics are only effective against bacterial infections.”

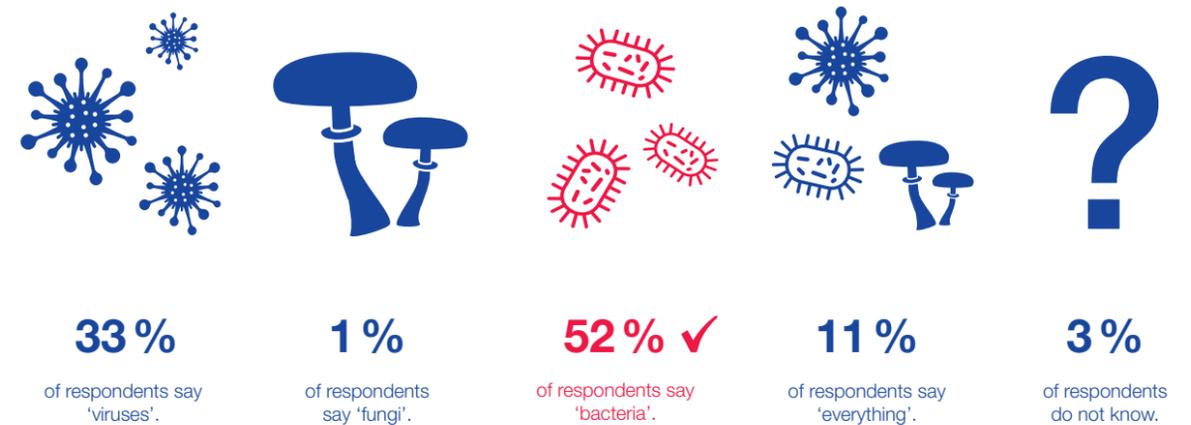
Dr. Johannes Wimmer

Health literacy regarding the use of painkillers such as ibuprofen and aspirin is just as worrying as that regarding antibiotics. 46 percent, almost half of Germans, do not see any risks in taking painkillers with blood-clotting disorders.

55 percent have no idea that they should avoid certain painkillers in the case of reduced liver function, and even more (71 percent) do not know that they should avoid them with stomach ache, nausea and diarrhea

– carelessness which is not without risk. Women are more aware here than men.

Do Germans know what antibiotics are used for?



n = 2000

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At a glance:

- Almost half of Germans have no idea what antibiotics are used for, eleven percent believe that they are a universal remedy 'for everything'.
- Three in ten Germans do not know that antibiotics should be taken until the package is finished.
- When asked about the correct usage of painkillers, most Germans are too careless.

5.3.3 X-rays etc.

Many Germans lack basic radiological knowledge.

Hand on heart: Who, as a non-medical professional, can concisely explain the difference in potential risks of a CT scan and an MRI scan? The STADA Health Report 2015 reveals: many Germans cannot. For example, 44 percent of Germans believe that an MRI scan involves radiation, although no x-rays are used. 56 percent of Germans – more than half – do not know that CT scans do use radiation. However, three in four respondents still know that radiation is used in x-rays. Questions were also asked about harmless ultra sound examinations, which as is well known, are also used for pregnant women. This diagnostic technology is considered dangerous by around 20 percent of Germans, which is not the case. As with the correct us-

age of medication, the percentage of correct answers was lowest among those with a Volksschule or Hauptschule qualification. A higher level of education seems to have a positive influence on health literacy regarding treatments and applications.

At a glance:

- Over half of Germans misjudge the potential dangers of the most common types of radiological examination.
- A higher level of education has a positive impact on radiological health literacy.

¹<https://www.krebsinformationsdienst.de/vorbeugung/risiken/hautkrebs-vorbeugung.php>

²<http://www.herzstiftung.de/KHK.html> (Abruf 13.10.2015)

³<http://www.dzd-ev.de/diabetes-die-krankheit/volkskrankheit-diabetes/index.html>

⁴<http://www.biomedcentral.com/1471-2458/12/236>

⁵http://www.rki.de/DE/Content/Kommissionen/STIKO/stiko_node.html

⁶https://www.rki.de/DE/Content/Kommissionen/STIKO/Empfehlungen/Aktuelles/Impfkalender.pdf?__blob=publicationFile

⁷https://www.rki.de/DE/Content/Kommissionen/STIKO/Empfehlungen/Aktuelles/Impfkalender.pdf?__blob=publicationFile

⁸http://www.herzstiftung.de/pressemeldungen_artikel.php?articles_ID=659

⁹<http://www.herzstiftung.de/Herzinfarkt-bei-Frauen.html>

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