

15 YEARS

Science in the
Service of Humanity

German Federal Institute for Risk Assessment

Do nanoparticles promote the development of allergies?

Does apple juice contain too much aluminium?

The German Federal Institute for Risk Assessment – BfR for short – is responsible for answering questions on all aspects of the health assessment of foods and feeds, consumer products and chemicals. Through its work, the Institute makes a decisive contribution towards ensuring that foods, products and the use of chemicals become safer in Germany.

Dear Readers,



Protecting its citizens against health risks is an important duty of any country. In our globalised world, with its diverse channels for conducting trade and commerce, cutting-edge production technology and a constant flow of new products and materials, this poses a real challenge. It is therefore all the more important for policymakers to have the support of experts whose specialist knowledge can always be relied upon. The Federal Institute for Risk Assessment (BfR) is an agency whose expertise in dealing with many scientific issues concerning consumer health protection has proven indispensable over the past 15 years, and this will remain the case in future. The BfR is integral to preventive consumer health protection in Germany and its work is recognised not only in its home country but also throughout Europe and further afield. The fact that the BfR is independent of economic, political and social interests means that its risk assessments are guaranteed to be objective and based purely on scientific facts. I would like to take this opportunity to express my sincere thanks to the committed and competent staff and congratulate the senior management on the Institute reaching its 15th anniversary.

Very best wishes,
Christian Schmidt
Federal Minister of Food and Agriculture

Dear Readers,



Back in 2002, when the German Federal Institute for Risk Assessment (BfR) was founded, no one suspected mineral oil residues in chocolate or pyrrolizidine alkaloids in herbal teas. Today, 15 years after its establishment, we can look back on various occurrences concerning food, feed and consumer products. The BfR has made an important contribution over the years by uncovering and assessing risks and by supporting the government in taking far reaching decisions. Novel developments, such as the targeted modification of genetic material known as “genome editing”, will continue to raise questions about possible health risks which will have to be answered.

The establishment of the BfR as an institute which assesses health risks independently of political, economic or social interests proved to be the right step at the right time where modern consumer protection is concerned. In its expert opinion, the Council of Science and Humanities, Germany's most important scientific-political advisory board, also attests to the BfR's great scientific expertise and performance capability. This expertise is in demand well beyond the borders of Europe. In order to raise global standards in the field of food and product safety and to establish mutual exchanges of knowledge, the BfR actively cooperates with numerous partner institutions on all continents.

I would like to invite you to gain an insight into the work of the BfR over the past 15 years. Perhaps you – just like the Council of Science – will gain the impression that consumer health protection is in good hands at the BfR.

Andreas Hensel

President of the German Federal Institute for Risk Assessment

The protection of human health
is at the centre of our work.





SHORT PORTRAIT OF THE BfR

The German Federal Institute for Risk Assessment (BfR) was established in November 2002 to strengthen consumer health protection. It is the scientific institution of the Federal Republic of Germany that prepares opinions and expertises on questions of food and feed safety, as well as the safety of substances and products. The main tasks of the BfR comprise the evaluation of existing risks and the identification of new ones, the preparation of recommendations on risk limitation and the communication of this process. This work flows into the scientific advice given to political decision-makers.

The BfR performs the duties of the “German Centre for the Protection of Laboratory Animals (Bf3R)” and coordinates all activities throughout Germany with the goals of restricting animal experiments to the essential minimum and guaranteeing laboratory animals the best possible protection.

In our globalised world, it is important that the institutions responsible for consumer health protection form an international network. The BfR is the national focal point of the European Food Safety Authority (EFSA) and a partner of the European Chemicals Agency (ECHA). It cooperates with more than 40 national and international governmental and non-governmental organisations.

A staff of roughly 850, including around 350 scientists, works to protect consumer health at the three BfR locations in Berlin. The Institute is independent in its scientific assessments, research and communication.

The BfR assesses health risks scientifically
and maps out the options for action to
minimise risks.



Through our independent scientific assessment, research and the transparent communication of health risks, we make an impartial contribution to the safety of foods and feeds, products and chemicals.

WORK AREAS OF THE BfR

Food Safety

No matter whether it's the ingredients and additives, residues, contaminants or germs and parasites, the safety of foods and feeds is one of the most urgent tasks of consumer health protection. The BfR assesses foods and feeds in line with toxicological, microbiological and nutritional aspects and prepares opinions on their safety. To characterise the risks, the BfR estimates the intake quantities of potentially dangerous substances.

Product Safety

Consumers have daily contact with products such as cosmetics, toys, clothing and packaging materials and containers for foods. The task of the BfR is to contribute to product safety through its scientific recommendations to politics, trade and industry and the general public. All of this centres around the question of whether these products and/or the substances they contain can endanger human health. The BfR not only examines the ingredients, but also their release into the environment. Whether or not a health risk exists, depends primarily on whether and in what concentrations consumers come into contact with the substances.

Chemical Safety

The field of chemical and pesticide safety affects many areas of consumer and user protection. In Germany, the BfR is one of the main institutions for the health assessment of substances. It assesses the risks of chemicals, plant protection products, biocide products and hazardous goods and documents cases of poisoning and the recipes of chemical products so that undesired effects can be recognised quickly. The BfR also advocates appropriate marking and labelling of substances, safe transport conditions and reliable detection methods.

Risk Communication

“Don't char it, lightly brown it” – to convey its scientific findings in a way that is easy to understand, the BfR makes concrete recommendations for everyday situations. These are only examples of the work that constitutes the real task of the BfR: risk communication. The goal is to explain the health risks and underlying research and assessment work of the BfR to involved and interested groups in an understandable manner and map out the various options for action. Risk communication is not a one-way street, it's a continuous and interactive dialogue with various target groups. To find out which communicative measures are appropriate, one of the many things the BfR does is to conduct social-scientific research projects on the perception of risks.

Alternatives to Animal Experiments

The fundamental idea of completely replacing animal experiments as soon as it is scientifically possible to do so is anchored in German animal welfare law. Against this backdrop, the BfR and its predecessor institutions have been involved for a long time with advising on alternative methods and developing substitute and supplementary methods to animal experiments. In addition to satisfying legal requirements, this includes our own research and the promotion of projects in this area. On top of all of this, the Institute is committed to improving the living and husbandry conditions of laboratory animals. The work on developing alternative methods to animal experiments is conducted at the BfR at the German Centre for the Protection of Laboratory Animals (Bf3R).

We research and advise in order to minimise animal experiments to an essential minimum and to guarantee the best possible protection level for laboratory animals.



WISHES FOR OUR ANNIVERSARY



Recognising, assessing and managing food crises for a high level of consumer health protection – that's what the BfR and BVL have been doing for 15 years, standing side by side and pulling in the same direction at home and abroad, and not only in times of crisis.

Dr. Helmut Tschiersky, President of the Federal Office of Consumer Protection and Food Safety (BfR)



The BfR is valuable to all consumers – if it is absolutely independent of political and economic influences. We wished the BfR on its tenth birthday that there could be no doubt at all about this and that remains our continued wish on its 15th anniversary!

Thilo Bode, CEO of foodwatch e. V.



The BfR is a perfect cooperation partner where the topic of One Health is concerned. We work jointly for healthy humans and animals.

Dr. Dr. h.c. mult. Gerhard Greif, President of the University of Veterinary Medicine Hannover, Foundation



As a scientist, I am pleased with the great commitment the BfR shows in the field of alternative methods to animal experiments and in particular with the cooperation that takes place within the scope of the Berlin-Brandenburg research project BB3R. In addition to this, joint appointments of the FU Berlin and BfR strengthen scientific excellence which is ultimately to the benefit of the consumer.

Prof. Dr. Monika Schäfer-Korting, Chair of the Scientific Advisory Board of the German Federal Institute for Risk Assessment (BfR)



The National Food Institute at DTU along with BfR and ANSES have worked together on many occasions over the years, for example by organising joint, scientific conferences on topics such as botanicals and chemical mixtures.

[Christine Nellermann, Director of the National Food Institute, Technical University of Denmark \(DTU\)](#)



ANSES (France) has strong relations in risk assessment, research and reference activities with BfR, a renowned and reliable partner at the European and international levels.

[Dr. Roger Genet, Director General of the French Agency for Food, Environment and Occupational Health & Safety \(ANSES\)](#)



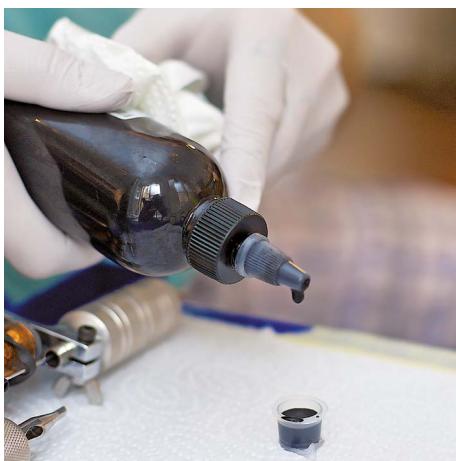
I like to tease: BfR = Federal Institute for Playing Down Risks, as in the statements it made about glyphosate. But their work is usually better than that.

[Jürgen Stellplug, Editor-in-Chief and CEO of ÖKO-TEST magazine](#)



BfR is a trusted and valued partner, playing a pivotal role in food safety risk assessment, in and beyond Europe, delivering highly qualified scientific contributions. Being of the same age, EFSA together with BfR feel ready for the future, and will continue the well-established and fruitful cooperation in working together for a common cause: safe food.

[Dr. Bernhard Url, Executive Director of the European Food Safety Authority \(EFSA\)](#)



15 Years
15 Examples

Science in the Service of Humanity



Detective work during the EHEC outbreak in 2011

In the early summer of 2011, there was a sharp increase in Germany in the number of cases of haemolytic-uraemic syndrome and bloody diarrhoea in conjunction with an infection with enterohaemorrhagic *Escherichia coli* (EHEC) of serotype O104:H4. All federal states were affected, especially the ones in the north of Germany. Roughly 4,000 cases of disease were attributed to the EHEC outbreak in 2011, the largest outbreak of disease in Germany to date through EHEC infections, as a result of which 53 people died. Together with national and international health and consumer protection authorities, the BfR set about investigating the disease outbreak. They identified fenugreek seed imported from Egypt and used for sprout production as the probable cause of the EHEC outbreak. In order to draw the right conclusions quickly from the abundance of available data, the BfR programmed a databank-based software to visualise the flow of goods even while the investigations were still in progress. Ever since, this freely available software, FoodChainLab, has supported the search for the causes of various foodborne disease outbreaks.

i Find out more:

[> Food Safety](http://www.bfr.bund.de/en)
[> Microbial risks](http://www.bfr.bund.de/en)



MOSH, MOAH, Mineral Oil

Mineral oil contains potentially health-damaging hydrocarbons which can find their way into foods from the printing inks used in packaging materials. Together with food they then become ingested. Mineral oil is also used in cosmetics such as lip care products and others. The topic has become a part of public conception ever since mineral oil residues were discovered in the chocolate of advent calendars. The BfR has been involved in the assessment of potential risks associated with mineral oils in foods and cosmetics. Further, appropriate analysis methods have been developed by BfR reference laboratories, ever since the first findings were made. Based on its experiences in the research and assessment of mineral oil residues, the BfR recommends that levels in foods and cosmetics should be reduced to levels as low as reasonably achievable.

i Find out more:

[> A-Z Index: mineral oil](http://www.bfr.bund.de/en)



More animal welfare: the German Centre for the Protection of Laboratory Animals

The BfR carries out the tasks of the German Centre for the Protection of Laboratory Animals (Bf3R) since 2015. The Centre coordinates all activities throughout Germany with the goals of limiting animal experiments to the essential minimum and guaranteeing the best possible protection for laboratory animals. In addition to this, the Centre's work is intended to encourage national and international research activities and promote scientific dialogue. One example of the work of Bf3R is the publication of the "AnimalTestInfo" database by means of which detailed information on approved animal testing projects in Germany can be accessed. It is unique throughout the world and guarantees the highest possible level of transparency.

i Find out more:

[www.bfr.bund.de/en > German Centre for the Protection of Laboratory Animals \(Bf3R\)](http://www.bfr.bund.de/en > German Centre for the Protection of Laboratory Animals (Bf3R))

Analysing what's in our food

The assessment work of the BfR comprises the identification and characterisation of microbial and chemical risks. Determining exposure to substances potentially harmful to human health is one of the most important tasks. Answers have to be found to questions such as: How many undesired substances do we ingest on average with our food? Are some foods more severely contaminated than others? What effects on health do preparation methods have? To find answers to these questions, the BfR started the BfR MEAL Study (Meals for exposure estimation and analysis of food) in 2015. It is based on the concept of a Total Diet Study – a scientific method which establishes the average concentration of substances in prepared, ready-to-eat foods. The BfR MEAL Study, which is scheduled to run for seven years, is the first Total Diet Study in Germany and one of the most comprehensive in the world with regard to the number of foods prepared and substances analysed. One of the main purposes of the study is to collect data on levels of substances in foods which are representative for German eating habits so that possible food risks can be recognised and quantified more comprehensively.

i Find out more:

www.bfr.bund.de/en > A-Z Index: BfR MEAL Study





Tracking down the risks of consumer chemicals

Paints, cleaning agents and other substances can conceal risks. To protect consumers, the BfR documents poisoning cases and data on hazardous products in a poison information database which is unique throughout the world. By evaluating almost 90,000 cases up to now, the BfR has been able to track down products and chemicals whose hazard potential has been underestimated until recently. The EU-wide ban on coloured lamp oils, for example, or the strict constraints on the packaging of laundry detergent gel capsules are supported by the reporting of corresponding cases of poisoning evaluated by the BfR.

i Find out more:

www.bfr.bund.de/en > A-Z Index: intoxication / poisoning

Minimising resistance to antibiotics

Bacteria that are resistant to antibiotics are often detected among livestock. These bacteria can also be transferred to humans via food, thus making the treatment of infections more difficult. Resistance to antibiotics is therefore a central topic in the debate about the safety of food. Where do these resistances come from, how do they spread and what risk do they pose to consumers? Within the scope of the federal government's German Antimicrobial Resistance Strategy, DART, the BfR focuses its research on the spread of zoonotic pathogens and commensal bacteria that are resistant to antibiotics and the related risk for humans. Within the framework of the national resistance monitoring, the National Reference Laboratory for Antimicrobial Resistance at the BfR examines the resistance profiles of isolates submitted by the regional laboratories of the Länder. The BfR is also involved in various collaborative scientific research projects to identify and characterise bacteria with antimicrobial resistance.

i Find out more:

www.bfr.bund.de/en > A-Z Index: antimicrobial resistance



Hot and greasy conceals health risks

Keeping an eye on dioxins

Dioxins are very stable, long-lived chemical compounds which occur everywhere in the environment, albeit in extremely low concentrations. Due to their chronic toxicity, legislators have taken various activities over the last 25 years to reduce human exposure to dioxins. In order to protect consumer health, this will be necessary in the future too: indeed nowadays we ingest significantly less dioxins with our food, however the intake is still permanent and in small quantities. The BfR regularly assesses the health risk that is incurred when dioxins pass over from feed into livestock and thereby into foods of animal origin, such as milk, eggs, meat and seafood. In most cases, the BfR could give the all-clear. Even when the legal maximum levels were exceeded – often only slightly – a health risk at consumption of such products over a short period of time was mostly unlikely from a scientific point of view.

i Find out more:

www.bfr.bund.de/en > A-Z-Index: dioxin

Foods often only become palatable and digestible through boiling, baking or deep-frying. However, substances that are harmful to health may also occur during the heating process. One of these compounds is 3-Mono-Chloro-Propan-Diol (3-MCPD), which occurs in free form and bonded to fatty acids. 3-MCPD esters can occur above all during the industrial refining of vegetable fats (mainly palm oil), which then become the basis of infant formula, for example. Ever since they were first detected in 2007, the BfR has been assessing and researching aspects of the toxicology and quantitative intake of this substance; the world's first risk assessment of these substances in foods was made by the BfR. It was the research results produced by the BfR that show that these esters split up into free 3-MCPD in the human intestine and may therefore negatively alter metabolic processes in the liver, kidneys and testicles. On the basis of these findings, the BfR was the first institution in Europe to demand that levels should be minimised in vegetable fats and oils used in foods. The European Food Safety Authority (EFSA) concurs with this demand. On this basis, the European Commission is consulting for the first time about introducing maximum levels for ester-bonded 3-MCPD in foods.

i Find out more:

www.bfr.bund.de/en > FAQ > 3-MCPD, 2-MCPD and glycidyl fatty acid esters



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Plant ingredients – between healthy and harmful

Many people tend to see plant products as “natural” and “healthy”, but depending on the quantities ingested, these substances can also have a health-damaging effect. Pyrrolizidine alkaloids are an example of natural plant substances which occur in many plant species all over the world and which can find their way as contaminants into cereals, lettuce or tea during harvest, or be collected by bees with pollen. They are undesired in foods as they can damage the liver and because several compounds can alter the genetic material (induce mutations) and cause cancer in laboratory animals. The BfR first detected high levels of pyrrolizidine alkaloids in teas and herbal teas in 2013. From its assessments, the BfR derived health risks for high consumers of teas and honey and challenged all economic operators to take measures to reduce levels. The BfR has abided by this demand ever since it evaluated all of the data on the damaging effects and occurrence of pyrrolizidine alkaloids and consumption of contaminated foods in 2016. The BfR is also conducting research on questions surrounding the intake of pyrrolizidine alkaloids and the mechanism of liver damage.

i Find out more:

www.bfr.bund.de/en > A-Z Index: pyrrolizidine alkaloids



Assessing risks under the skin

Although the safety assessment, analysis and regulation of tattooing agents are still at the beginning, almost one in ten Germans has a tattoo. Skin infections and allergic reactions are by far the biggest problems, but little is known about the distribution and enrichment of tattoo inks in the body. The BfR is conducting research to identify the tattooing agents used and their degradation products. In addition, new chemical analysis methods will be developed for monitoring authorities and also for the assessing of hygienic risks of tattooing. Scientists at the BfR have proven, for example, that carcinogenic and toxic substances such as benzene and prussic acid can be released from certain organic dye pigments during the removal of tattoos with a laser.

i Find out more:

www.bfr.bund.de/en > A-Z Index: tattoo

Poly- and perfluoroalkyl substances: functional but a risk to health

Whether in water-repellent outdoor jackets or in frying pans with non-stick properties, chemicals alter the properties of everyday articles in a targeted way. Poly- and perfluoroalkyl substances, or PFAS for short, are used in numerous industrial processes, for example, in order to make products water, dirt and grease-repellent. The downside of the widespread use and high stability of these substances is that PFAS can be found everywhere in the environment nowadays – and ultimately in foods too. Although we only ingest small quantities of the substances every day from various sources, some can accumulate in the body. The long-term effects are presumed to be liver damage and reproductive disorders. Numerous BfR research projects deal with questions regarding migration from packaging material, the mechanisms of toxic effects and the toxicokinetics of and exposure to the substances. The result of feeding studies with farm animals, for instance, is that relevant quantities of PFAS transfer from feeds via livestock into meat, milk and eggs. From this data, the BfR has developed digital tools for the calculation of transfer for use by state monitoring authorities. The algorithms contained in these tools derive the levels expected in foods from the PFAS levels in contaminated animal feed.

i Find out more:

[**www.bfr.bund.de/en > A-Z Index: poly- and perfluoroalkyl substances \(PFAS/PFC\)**](http://www.bfr.bund.de/en > A-Z Index: poly- and perfluoroalkyl substances (PFAS/PFC))



12

What health risks concern the general public?

Food in Germany is safe – the majority of consumers would agree on that. On the other hand though, there are certain topics closely related to the general theme of food safety which are rather unsettling, such as plant protection product residues. In order to guide and adapt its risk communication activities in a specific manner, the BfR has to rely on such information on risk perception. An important work area is therefore the research of corresponding issues using social scientific methods. Accordingly, the BfR conducts representative surveys at six-month intervals which are published as “BfR Consumer Monitors”, and examines the presentation of selected topics in the media. In the public debate about the authorisation of the plant protection product glyphosate, for example, the BfR received indications through its surveys as to how to deal with the divergence between media reporting and scientific assessment. These findings led the BfR to communicate even more extensively the fundamentals and results of the scientific risk assessment of plant protection products and the determination and function of limit values.

i Find out more:

[**www.bfr.bund.de > Risk communication**](http://www.bfr.bund.de > Risk communication)



A question of the combination: residues of plant protection products

Headlines about pesticide residues lead again and again to concerns in public perception about residues of single or multiple substances. Maximum residue levels have been derived for the toxicologically well-examined individual substances which do not pose a human health risk. European law contains as many as 150,000 maximum residue levels. In reality, however, consumers usually ingest several residues, be it through different foods or because of foods that simultaneously contain several residues. What effect does a mixture of various active substances have? For many years now, the BfR has been working on national and international level to develop concepts for assessing so-called multiple residues of this kind, while bringing the relevant stakeholders together and issuing recommendations for action to authorities, politics and science. The BfR conducts its own experimental research on modes of action and possible interactions of the substances. From the latest consumption data and results of German food monitoring, the BfR concludes that foods containing residues of several plant protection products are safe if the legal provisions are complied with.

i Find out more:

www.bfr.bund.de > A-Z Index: *multiple residues*

More safety for users of plant protection products

Plant protection products are not allowed to have any damaging effects on human health, otherwise they will not be authorised. This entitlement to protection also applies to people who work with plant protection products or live close to areas that have been treated with them. Whether the health of these groups is sufficiently protected along with that of consumers is checked prior to every approval of a plant protection product. To do so, the assessment authorities – the BfR in Germany – estimate the maximum expected intake quantity by means of model calculations. Until a few years ago, different models and obsolete concepts were used for these so-called exposure estimates in Europe. Diverging protection levels in the various countries and a complicated mutual recognition system for products were the result. A work group around the BfR examined the existing concepts for users of plant protection products and developed a suitable model. As part of a technical guideline issued by the European Food Safety Authority (EFSA), the model has had to be used since 2016 for all authorisation applications for plant protection products. It is a milestone for harmonised risk assessment in Europe.

- i** Find out more:
www.bfr.bund.de/en > Chemical safety > Plant protection products > Application safety



15

Challenging issues ahead with the smallest particles

How do you assess the health risks of particles that are completely new – and tiny as well? Ever since nanoparticles have been used in dyes, clothing and cosmetics, this has been a question for consumer health protection. Not much was known about the health risks of nanoparticles, which could theoretically pose a health problem due to their small size and high mobility. The BfR has supported consumer protection in this area right from the beginning by conducting studies to detect nanomaterials in the complex matrices of foods, cosmetics and commodities, for example. The development of test strategies that do not involve laboratory animals and toxicological research with the help of molecular biological methods are other work areas. The BfR pieces together the results of this research like a mosaic and is able to at least make provisional risk assessments in this way.

- i** Find out more:
www.bfr.bund.de > A-Z Index: nanotechnology

15 YEARS OF THE BfR – PART OF A LONG STORY

The BfR was established in 2002 as Germany's main scientific institution for the assessment of the health risks posed by foods and feeds, consumer articles, products, plant protection products and chemicals within the portfolio of the former Federal Ministry of Consumer Protection, Food and Agriculture. Consumer health protection has a much longer tradition, however, extending back well beyond the 15 years that the BfR has existed.

1876

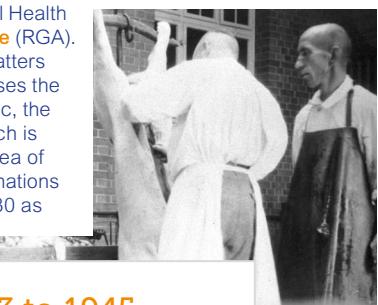


1876: Although industrialisation and new findings in food chemistry are stabilising supply, ever more cunning food adulterations as well as technical novelties are threatening the health of the population. The calls for an institutionalised public health care system get louder and the **Imperial Health Office** (KGA) is established. The office conducts research and collects and evaluates data on foods and consumer products among other things.



1919

1919: After the collapse of the empire, the Imperial Health Office is officially renamed the **Reich Health Office** (RGA). It develops into the most important institution in matters of bacteriology and health care and as such, advises the ministries of the Reich. During the Weimar Republic, the state perceives health care as a public affair which is carried over into society after World War I. The idea of health care finds its way into law, confusing designations are prohibited and the Milk Law is decreed in 1930 as the "mother of all hygiene regulations".



1933 to 1945

1933 to 1945: During the period of National Socialism, the health system is dominated by the criminal racist ideology of the Nazis. All health institutions are placed on equal footing. A "racial hygiene and population biology research institute" is set up with the official remit of delivering a pseudo-scientific basis to justify the killing and forced sterilisation of thousands of Sinti and Roma.

1945: After the war ends, consumer health care lies in ruins. In the western occupied zones of Germany, the local communities perform the tasks of health care and food supervision. The institutes of the **Reich Health Office** are initially placed under the supervision of the magistrate, then the Senate of Berlin.



1952: The **Federal Health Agency** (BGA) is founded in the Federal Republic of Germany as the central research institution in the field of public health. It approves drugs, assesses chemicals and the active substances of plant protection products, conducts research on the spread of disease pathogens and examines articles of daily use. In the German Democratic Republic with its socialist structure, the district hygiene and veterinary hygiene inspection offices assume the tasks of consumer health protection. Ministries and committees stipulate maximum residue levels; the scientific basis for doing so is provided by various state and academic institutes.

1952

1994

2002

1994: The Federal Health Agency is disbanded in connection with HIV infections caused by blood and blood products and the information deficits and coordination problems that this revealed. The **Federal Institute for Health Protection of Consumers and Veterinary Medicine** (BgVV) is founded as the successor institute responsible for consumer health protection within the portfolio of the Federal Health Ministry.

Find out more:

The BfR has compiled the history of consumer health protection in Germany from the 16th century to the present into a separate exhibition. In addition to the historical chapter about the roots of the BfR, the main work areas of the BfR are illustrated in four additional modules. The permanent exhibition can be visited at the BfR location in Berlin-Marienfelde and the individual modules borrowed on request.

The results of our work promote a factual and social discourse, thus providing decision-makers with a scientifically well-founded basis.



THE BfR – THEN AND NOW

2002

59,149,000

OPINIONS



2,200



PRESS RELEASES



24

STAKEHOLDER EVENTS



13

MOST CLICKED OPINION
Health Risks of Tattoos
and Permanent Make-Up

494,981

WEBSITE VISITORS



LOCATIONS

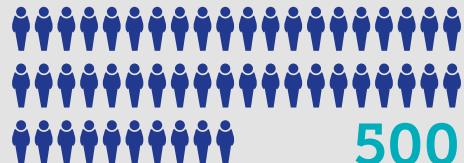


Berlin-Dahlem

Berlin-Marienfelde

Dessau (130 km)

EMPLOYEES



297

INVOLVEMENT IN NATIONAL AND
INTERNATIONAL COMMITTEES

7 SPECIALISED AREAS

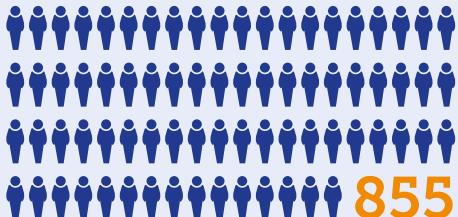
- Central Administration
- Toxicology of Foods and Consumer Products, Nutritional Medicine
- Chemistry and Technology of Foods and Consumer Products
- Hygiene of Foods and Consumer Products
- Diagnostics and Epidemiology
- Plant Protection and Pest Control Products
- Assessment of Chemicals

2016

LOCATIONS



EMPLOYEES



424

INVOLVEMENT IN NATIONAL AND INTERNATIONAL COMMITTEES

9 DEPARTMENTS

- Administration
- Risk Communication
- Exposure
- Biological Safety
- Food Safety
- Pesticides Safety
- Chemical and Product Safety
- Safety in the Food Chain
- Experimental Toxicology and ZEBET

BUDGET



86,554,000

OPINIONS



MOST CLICKED OPINION

Beverages containing quinine

3,000



PRESS RELEASES



51

3,761,537

WEBSITE VISITORS



STAKEHOLDER EVENTS



19



Our work is characterised by an open and respectful approach. Tolerance, reliability and mutual appreciation form our common foundations.



RESEARCH FOR DEALING SAFELY WITH RISKS

Interview with BfR President Professor Dr. Dr. Andreas Hensel on risk perception research and risk communication at the BfR

Professor Hensel, what health risks are the public concerned about?

Climate change, environmental contamination and smoking are seen as the greatest health risks in unprompted surveys, followed by unhealthy or wrong diets and alcohol. If you ask about selected topics, however, genetically modified foods and plant protection product residues in foods regularly top the worry scale. This estimation stands contrary to the scientific results of risk assessment.

How do you find out what the public is interested in?

To find out how social groups assess a set of circumstances, we use various methods from empirical social research, such as focus group and population surveys, as well as media analysis. We focus on the one hand on topics that get a lot of attention in the media while dealing on the other with topics which are not quite the focus of attention even though they are of great relevance, such as veganism and kitchen hygiene. Because we assume that opinions, perceptions and trends can change quickly due among other things to the growing influence of new media, we regularly survey the opinions and views of the population.

Why are risks perceived in so many different ways?

How great a risk appears to be depends on many factors. There can in particular be differences between the perceptions of laymen and experts. Through research on risk perception, for example, we have known for a long time that worries about synthetically manufactured substances are much greater than concerns about things that occur naturally. Moreover, our perception of our own control has a decisive influence on how great a risk is estimated to be. Adequate risk communication should therefore always mark out options for action which allow us to minimise risks by ourselves.

What do you do to convey risks to the public in the appropriate manner?

To avoid false estimations to reduce the potential of conflicts, professionally and reliably conducted scientific studies and the correct and accurate communication of results, including any uncertainty that may exist, are absolutely essential. We explain science in a way that is easy to understand by using simple comparisons, for instance, through the precise classification of numerical information and with the help of graphical presentations.

WHAT HEALTH RISKS REQUIRE RISK COMMUNICATION?

People perceive health risks in different ways. Whether and to what extent the estimations of the general public differ from scientific estimations is the object of risk perception research at the BfR. A selection of results is listed below showing how people think about health risks and what conclusions the BfR has drawn for its risk communication.

Consumers' view



"Foods produced with plant protection products are poisonous, cheap and don't taste good. Residues of plant protection products are not allowed in food."

Recommendations for risk communication



Residues of authorised plant protection products are allowed in food up to the permitted maximum level. Comprehensive information should therefore be given on the legal and scientific principles of the risk assessment of plant protection products.



"I know that a vegan diet can lead to a nutrient deficiency and that's why I take supplements. I wouldn't abandon my ethical principles during pregnancy either and I would bring up my children as vegans too."



Parents of infants and children brought up on a vegan diet should be given specific information on vegan diet alternatives and supplements in order to avoid a deficiency of vitamin B₁₂, iodine and zinc, iron, calcium and Omega-3 fatty acids. The recommendations promise the most success if the vegan diet can be maintained.



"Widespread use of antibiotics in livestock farming is the cause of resistant bacteria. I am unlikely to come in contact with resistant pathogens in my own home."



The general public is aware of the topic of antimicrobial resistance, but resistant pathogens are not presumed to be in people's own kitchens. Conveying concrete rules for kitchen hygiene can help to contain the spread of resistant germs. As a basic principle, the use of antibiotics in humans and animals should be kept to the essential minimum necessary for successful treatment.

BfR population survey in 2015 with more than 1,000 participants and a BfR media analysis for the reporting period 2008 to 2013

On this basis, we set scientific standards in consumer health protection so that the world becomes a safer place for people to live.



WISHES FOR OUR ANNIVERSARY



Providing political consultancy in the field of conflict between social requirements, scientific findings and possible courses of political action is a challenge we face with joint responsibility!

Dr. Georg F. Backhaus, President of the Julius Kühn Institute, Federal Research Centre for Cultivated Plants



The BfR's independent scientific risk assessment is an indispensable foundation of objective decision-making in politics.

Christoph Minhoff, CEO of the German Federation for Food Law and Food Science (BLL)



The sound independent scientific expertise provided by the BfR is essential for ensuring that consumers, companies, authorities and political bodies are able to estimate health risks accurately. We will need the BfR in the future too and greatly appreciate their untiring efforts!

Alois Gerig MdB, Chair of the German Parliamentary Committee for Food and Agriculture



15 years of BfR: perceived risks, fuelled anxieties and underestimated dangers have been brought back down on to the floor of scientific facts! Congratulations, keep it up!

Bernhard Krüsken, General Secretary of the German Farmers' Association (DBV)



The BfR is Stiftung Warentest's competent partner where the health assessment and safety of substances are concerned.

Hubertus Primus, Chairman of Stiftung Warentest magazine



The vzbv offers its congratulations. For 15 years, the BfR has played a successful and pivotal role in risk assessment. With the MEAL Study, it is now undertaking another important project – we wish you every success!

Klaus Müller, Chairman of the Federation of German Consumer Organisations (vzbv)



BfR and Fraunhofer: a trustworthy and open cooperation for the wellbeing of consumers and to the benefit of society. Congratulations.

Dr. Hans-Otto Feldhüter, Head of the Main Department for Business Models at the Fraunhofer Society



The BfR takes up a clear position and has the facts available, thus laying the foundation for professional and reliable consumer protection policy. My thanks and appreciation to Berlin!

Dr. Andreas Zapf, President of the Bavarian State Office for Health and Food Safety (LGL)

Imprint

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