

Special Edition of "die BG" for the anniversary "A Century of BG Research", May 2005

Content abstracts

The German institutions for statutory accident insurance and prevention (BGs) are celebrating their anniversary year in 2005 with "A Century of BG Research". The May edition of the magazine "die BG" is thus dedicated to this theme. The BGs use targeted research to support their prevention and rehabilitation activities effectively and efficiently. Along with interesting information on the historical progress of their research, this issue focuses on practical and current examples to show the questions the BGs are currently exploring, what research strategy they are pursuing and how the targeted results are put into practice.

Editorial

J. Breuer

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A Century of BG Research – History and Future Prospects

Team of Authors

This article provides an overview of BG research from its beginnings a century ago until today, highlighting the new challenges confronting accident insurance. On the one hand, the shift and ongoing change that the subjects and emphasis in research have undergone due to the technological developments and evolution in the world of work have become very clear. On the other hand, the tight interplay of nearly all BG research activities in occupational health and safety and in rehabilitation is also quite pronounced. Because it is impossible to describe all the areas of research and the subject areas in their historical developments in this article, important topics of an exemplary character are selected and explored at their roots, in terms of their fundamental results, and in the future challenges they pose.

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Characteristics and Cornerstones of BG Research

K. Meffert, M. Rentrop

Research is explained in terms of the statutory mission and the fields of influence of the BGs in their autonomous system of self-government. In addition, research and occupational safety projects in particular are illustrated from various policy angles. The article also reports on the current state of development of BG guidelines for prevention research. Component parts of these guidelines include the aims and peculiarities of BG research, along with focal points and priorities.

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The BG Institute for Occupational Safety and Health – BGIA

K. Meffert, et al.

This article traces the developments of BGIA from its inception to the present. The authors use several examples to illustrate the field of research and the procedures used by BGIA to investigate research topics. Several research projects are presented to provide practical examples: respiratory pollutants found in hairdressing trades, ergonomics at sewing workplaces, high-tech applications for machine safety, noise pollution at construction workplaces and improvements in working conditions at call centres.

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BG Institute for Labour and Health – BGAG

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B. Pfeiffer, et al.

The article provides an overview of the research focal points and duties of the BGAG along with the institute's historical development. The interdisciplinary approach the institute employs to investigate questions is illustrated using a specific research project. The example described is the current project "Quality in Prevention – Effectiveness and Efficiency in Prevention Services Offered by the BGs." The article discusses the phases of the project, the research objectives and the scope of the research along with the methods used.

The BG Research Institute for Occupational Medicine – Institute at the Ruhr University in Bochum – BGFA

Page 255

T. Brüning, et al.

The article discusses the BGFA's historical development and its position as a BG institute and as an Institute of the Ruhr University in Bochum. It depicts both the five competency centres of the BGFA created in 2003 and their research focal points. The discussion uses concrete examples to illustrate the tasks and the research projects of the institute, including the prevention of latex allergies, adenoid carcinomas of the nasal passages caused by wood dusts, the transfer of occupational medical findings in practice as illustrated by bitumen, the early detection of bladder cancer, the biological monitoring of polycyclic aromatic hydrocarbons, and the improved diagnostics for early disease detection.

Research Support from the HVBG

Page 263

V. Giegerich, J. Herrmann, et al.

The article discusses the principles and surrounding conditions for research support at the HVBG. The distribution of research funds, the financial structure, the support fund quantities and the financial development of the research fund are all described. Selected examples provide an overview of the breadth of topics dealt with in supported research: early detection of occupation-related skin disease, early detection of asbestos-caused tumour diseases, rehabilitation for asbestosis, case-control studies on dosage-effect relationships in spinal cord disease, mental disorders after occupational accidents and the development of a driving simulator.

The Institute for Hazardous Materials Research – IGF

Page 269

D. Dahmann

The historical development of the IGF, an institute of the BG for mining (BBG), is traced over its 75-year history. Following this is a description of the main duties of the institute as an institution for research and training. Several studies are described, with a special focus on the field of hazardous materials.

The Centre for Safety Engineering

Page 271

R. Ebenig

The article illustrates the organisational connection to the BG for the construction industry in Rhineland and Westphalia (BG Bau) along with the centre's working methods and facilities. The research project "Clothing to Protect against Weather in Construction" is used to exemplify the working methods.

Institute for Research on Electrical Accidents

Page 272

J. Jühling

The article provides an overview of the history, working methods and focal points of the Institute for Research on Electrical Accidents at the BG for Precision Mechanics and Electrical Engineering (BG der Feinmechanik und Elektrotechnik).

FSA Research Society for Applied System Safety and Industrial Medicine

Page 273

S. Radandt

An overview is presented of the organisation and findings of the FSA as an acknowledged non-profit association. The aims, tasks and main research focal points are illustrated.

The Research Activities of BGs

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Team of Authors

In their research efforts, the BGs not only rely on their jointly owned facilities financed through the HVBG, but they also co-operate with other scientific institutions and firms. The article presents several examples to illustrate these research activities. It focuses specifically on questions related to hazards and to specific industries. The research focal points lie in the mining, stone and earthworks, metalworking, electrical engineering, chemicals, food and restaurant, construction, commerce, transport and healthcare industries.

**Stem Cells, Intelligent Implants, Telemedicine
Current Research Projects of the BG Clinics – a Selection**

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Team of Authors

This article provides an overview of the research projects underway at the nine accident and two occupational disease clinics in Germany. From the countless projects available, the following are briefly described as an example of their general variety: poly-trauma treatment for severely injured patients, stability measurements in fractures, intelligent implants, absorbable films for covering wounds, new bone matter from the body's stem cells, cartilage cell cultures and transplantation, quality in preserved bone transplants, heel support systems, soft tissue distortions of the cervical vertebra, tele-rehabilitation in cortical blindness.

BG Contributions to "Wismut" Research

Page 291

D. Koppisch, H. Otten

After German unification in 1990, the BGs were also given responsibility for providing compensation in cases of occupational diseases incurred at firms in the former German Democratic Republic. This was particularly difficult for diseases related to uranium ore mining at the firm SDAG Wismut. The article briefly describes examples of the results obtained in research projects and their implementation on the part of the BGs.

BG Occupational Safety and Health Research in the National and International Contexts

Page 293

D. Reinert, K. Meffert

Are we doing the right thing? Are we setting the right priorities for the future in occupational safety and health research? How does BG research compare nationally and internationally? As a mosaic of answers to these questions, this article explores

international research on priorities in occupational research and analyses these against the backdrop of the nearly 1,000 research projects conducted by nine institutions from eight countries in the year 2003.

The Health and Work Initiative (IGA)

Page 298

F. Jahn

Since the mid 1990s, the HVBG, as a representative of statutory accident insurers, and the German association of statutory health insurers have co-operated on projects with the aim of preventing occupational health hazards and promoting workplace health. A number of projects have been undertaken in the framework of this initiative. The article reports on one of the projects related to improper mental strain and stress.

Studies and Projects of the Commission for Occupational Safety and Standards (KAN) Page 299

J. Lambert

KAN is a forum in which government, the social partners, accident insurers and the DIN standards-setting organisation can discuss all aspects of occupational safety related to setting industry standards. The article describes the organisation and its methodologies, especially with respect to how projects are handled and how expert reports on standards are prepared.

The Research Role of the Department of Social Insurance at the Bonn-Rhein-Sieg University of Applied Sciences

Page 300

G. Sokoll

In 2003, the BGs launched a co-operative programme with the Bonn-Rhein-Sieg University of Applied Sciences to create a formal university course leading to a bachelor degree to prepare students for higher duties in the administrative sector. The article reports on the organisation and research profile of this university department.

Further information:
info@dguv.de and www.dguv.de