Healthy work.
Healthy future.

Institute of Occupational and Social Medicine and Health Services Research

Universitätsklinikum Tübingen
INSTITUT FÜR ARBEITSMEDIZIN, SOZIALMEDIZIN UND VERSORGUNGSFORSCHUNG
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EBERHARD KARLS
UNIVERSITÄT
TÜBINGEN

Universitätsklinikum
Tübingen

Creating knowledge for a healthy working environment

Occupational medicine and occupational health research are more important today than ever before. An ageing society, digitalisation, globalisation and climate change present companies and employees with a variety of challenges. Evidence-based knowledge is key for promoting economic productivity through effective prevention and making work healthy in a changing world.

As an independent academic institution, the Institute of Occupational and Social Medicine and Health Services Research (IASV) has combined research, teaching and occupational healthcare for many decades. The institute was founded in 1965 and was one of the first of its kind in Germany.

Our studies provide a scientifically sound basis from which both employers and employees can benefit. Our findings inform operational concepts directly, offering companies that wish to combine health and economic success reliable guidance in an increasingly complex working world.

Our work has an impact far beyond the company itself. It benefits the economy and society, promoting participation, social justice and integration.

Please take a look at the following pages to find out more about us. Together, let‘s make the world of work healthier, safer and more sustainable – for everyone.

Yours sincerely,
Prof. Dr. med. Monika A. Rieger

Medical Director of the Institute of Occupational and Social Medicine and Health Services Research

Healthy work. Healthy future.

Around 46 million people in Germany – over half of the population – are in employment and benefit from strong occupational medicine that puts effective concepts for health and prevention into practice.

Contents

Our institute at a glance

The Institute of Occupational and Social Medicine and Health Services Research (IASV) at the University Hospital of Tübingen promotes close collaboration between research, teaching and occupational and social medical care. Our team's work is based on interdisciplinary expertise, decades of experience and a wealth of institutional knowledge. The IASV is currently home to the only chair of occupational medicine in Baden-Württemberg.

Building on this solid foundation, we conduct research in two key areas: "Work-related stress – work design" and "Health care for people of working age".

We run courses and offer further training for external participants. Our occupational and socio-medical outpatient clinic carries out all occupational medical tasks for various companies and institutions in accordance with the German Act on Occupational Physicians, Safety Engineers and Other Occupational Safety Specialists.

Our research focuses on the working person as a 'human being' – not as a biomechanical model.

We are

- interdisciplinary: integrating perspectives from research, care, practice and teaching
- competent: with high scientific standards
- independent: university-based and open-ended research, without any fixed expectations
- practical: relevant topics and direct implementation on the company level
- reliable: evidence-based results
- responsible externally and internally – and committed to a healthy work-privacy balance.

Our institute in figures

7 out of **8**
IASV senior managers are women.

38
employees
in outpatient clinics, research and administrative functions

13 **scientific projects** are carried out **on average each year** in collaboration with our practice partners.

9 languages
are spoken in our team.

25
international publications
per year (original papers and reviews)

20 to **62** **years**
age range in the team

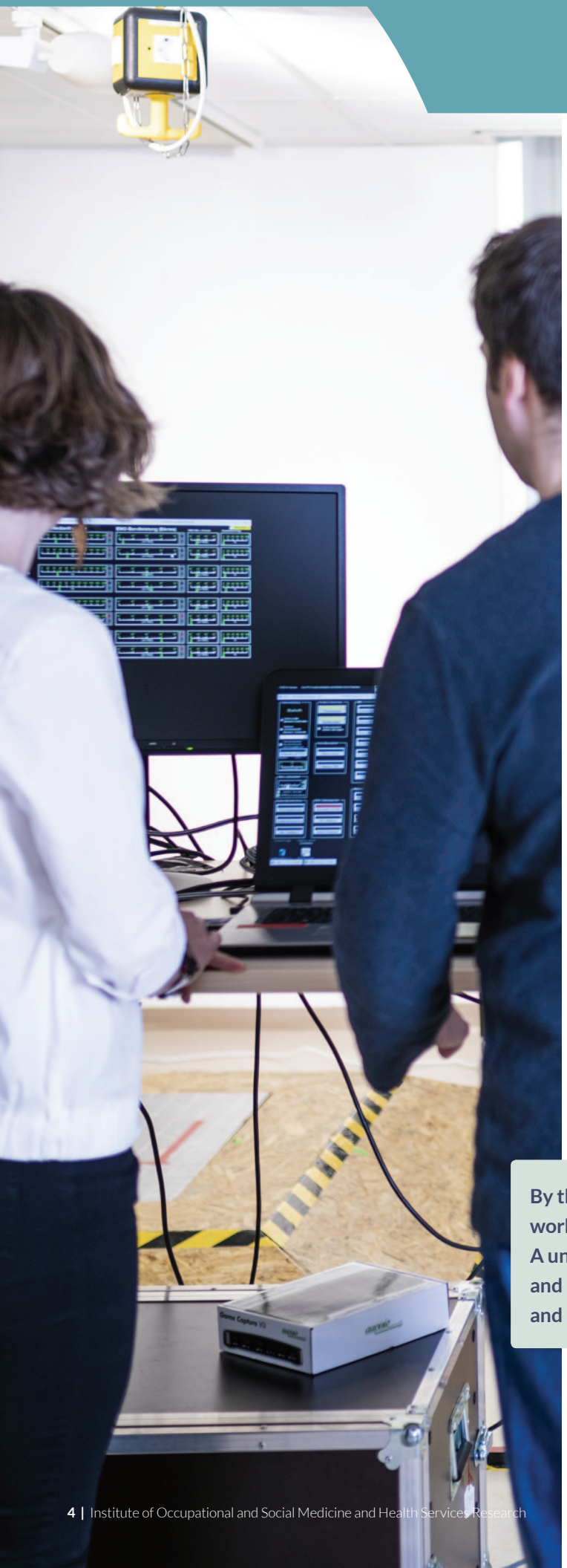
345 Students
of human medicine per year

4 completed **doctorates** per year

Employees from **20** different **disciplines** are active in scientific research at the institute, ranging from **human medicine** and **medical technology** to **sport science, sociology** and **nursing science**.

37.000 employees
receive occupational health care at the IASV (average per year).

Reference period: average 2022-2024, or as at 31.12.2024



What we do

We conduct research

in the areas of "Work-related exposures – work design" and "Health care for people of working age"

- on work physiology principles and methods
- for the optimisation of work-related factors influencing health
- for the design of health-promoting working conditions
- for the improvement of interfaces in healthcare - health management
- for concepts for health services in the workplace - occupational health management

We network

and strengthen the exchange between occupational medicine, social medicine and healthcare research.

Participation and collaboration:

- Competence Network for Occupational Medicine in Baden-Württemberg
- Competence Centre for Occupational and Social Medical Prevention, Rehabilitation and Women's Health
- Forum Occupational Physiology
- Centre for Public Health and Health Services Research Tübingen

By the way, occupational medicine focuses on all people of working age, which constitutes over half of the population. A unique opportunity for doctors to actively shape prevention and health protection and a professional field with prospects and impact!

What we do

We teach

and qualify people in healthcare professions at the interface between work and health:

- Teaching in the medical specialties occupational medicine and social medicine and contributing to the interdisciplinary areas of clinical environmental medicine as well as prevention and health promotion, in the internship of occupational medicine field trips as well as in the longitudinal curriculum scientific work in the areas of basic research and health services research; teaching in the degree programs medical technology, population-based medicine and midwifery science
- Further training and promotion of young talent in occupational medicine, supervision of theses in human medicine and qualification of students and trainees in related disciplines
- In-house training and cooperation at events in the fields of occupational medicine, social medicine and health services research

We train occupational physicians

We contribute to high-quality occupational medical care and help to counteract the shortage of occupational physicians:

- Our own CME programs and cooperations within regional CME programs for occupational medicine
- Participation in further training courses in occupational medicine in Baden-Württemberg and throughout Germany
- Practice-related publication and communication of innovative occupational health services developed at our institute, such as video consultations, online appointments and online occupational health care for student groups

We offer company medical care

The team at the occupational and social medicine outpatient clinic takes on all company medical tasks for companies and institutions in the Tübingen region in accordance with the German Act on Occupational Physicians, Safety Engineers and Other Occupational Safety Specialists.

Our services (selection)

- Occupational health screening and advice for employees and students
- Vaccination consultations and travel medicine
- Aptitude tests
- Advice and inspections on workplace design
- Contact point for accidents at work and occupational diseases
- Advice on health in the workplace, including maternity protection, mental health and reintegration after long-term illness
- Expert opinions and consultations on specific issues

Research that makes a difference

Work design on a scientific foundation
We establish evidence-based foundations for a healthy and productive working environment.

Occupational health management that works
Our findings enable measures that are tailored precisely to the needs of employees.

Employment as a resource
Preventively designed work actively promotes health and increases job satisfaction at the same time.

Training the specialists of tomorrow
Our educational offers and promotion of young talent ensure qualified occupational health care in the long term.

Answers to change
We research solutions for the working world of tomorrow.

Research for society as a whole
Good work promotes participation, social justice and integration – and therefore good and democratic cooperation and togetherness.

Project example

Study on work-related cancer: How is effective prevention possible?

The aim of the current project is to develop practical and sustainable approaches for better protection against work-related cancer – not only in agriculture and on construction sites, but also in adjacent work areas.

Every year, over 740,000 people worldwide die from work-related cancers – that's more than a third of all work-related deaths. Workers in the construction industry, who are exposed to asbestos, for example, are particularly affected. Another health risk is the carcinogenic effect of UV radiation from the sun for outdoor workers both on construction sites and in agriculture. Heavy physical work and precarious working conditions are also common in both sectors, as are many people with a migrant background.

An ethnographic research project at the IASV is investigating how harmful effects can be reduced and prevention and early detection can be improved in such workplaces. The focus is on the interplay of various factors: working conditions, management culture, age, gender and migration background.

Our research questions:

- What are the needs, barriers and fostering factors in prevention? What do people report from practice?
- How can we develop practical measures? What solutions promote protection against work-related cancer?
- What findings can be transferred to other occupational settings and other carcinogens?

At a glance

Prevention of work-related cancer: Intervention potential in different sectors, taking into account various factors of employment

PI	Christine Preiser
Project Team	Yusef El Damaty, Alicia Protze, Monika A. Rieger, Esther Rind
Duration	Start summer 2023, 36 months
Funding	German Cancer Aid
Cooperation	Professional associations and social insurances, civil society initiatives with a focus on migration in the world of work, employees

Dr. Christine Preiser

Researcher in the Research Unit
"Health Care for People of Working Age"

"Multiple perspectives and research on site, embedded in everyday working life – this is how complex intersections can be grasped holistically.

Project example

Digital change in the workplace: an ethnographic study

Digitalisation means more than just technology – it affects the people who work with it. The study provides tips on how to shape digitalisation in the world of work in a healthy way.

"Digitalisation" is an omnipresent buzzword in the world of work. The promise: higher efficiency and easier work. But what digital transformation processes mean in real and concrete terms for the working conditions, occupational health and satisfaction of employees is often a black box. We have investigated the actual effects in everyday working life.

Our research team analysed the experiences of employees and managers at an institute of pathology that digitised key work processes and introduced a laboratory management system and software-supported workflows, for example.

We wanted to know:

- How does digitalisation affect working conditions?
- What impact do pre-existing working conditions such as staff shortages and work culture have on digitalisation?

The study team used participant observations, interviews and other ethnographic methods to analyse the links between digitalisation and health and well-being in the workplace.

The results:

The promised effects, expectations and reality often diverge. Digitalisation sometimes increases the workload instead of supporting employees, especially if a work system is already overloaded. A successful transformation is a joint effort: anyone making decisions in the digitalisation process should involve employees early and transparently so that the solutions match the actual requirements.

At a glance

Digital transformation in pathology: An ethnographic study

PI	Christine Preiser
Project Team	Ourania Amperidou, Linny Geisler, Sina Pauly, Monika A. Rieger, Esther Rind
Duration	22 months
Funding	In-house research project of the IASV, University Hospital Tübingen
Cooperation	Falko Fend, Sven Mattern, Christian M. Schürch, Institute of Pathology, University Hospital Tübingen

> *Yes, digitalisation is a good thing. But we're already so badly staffed anyway. Too few people, too much work – and then there's digitalisation on top of that.*
>
> Employee interviewed as part of the study

Project example

ADVANCE – opportunities and risks of exoskeletons

A guideline, which was developed partly on the basis of the research findings, provides specialists in the fields of ergonomics, occupational medicine and occupational safety as well as employers with important information on the possible use of exoskeletons.

We investigated the extent to which exoskeletons can actually support physical work in a meaningful way and, for example, relieve employees in logistics who lift and carry objects.

We wanted to know:

- Does a back-supporting exoskeleton put less strain on the back muscles?
- How does the exoskeleton affect muscles and joints in areas of the body that are not supported?
- What influence does the exoskeleton have on the internal load in the spine?
- How does the exoskeleton affect performance? Does it impair activities such as walking and climbing stairs?

In laboratory tests with test subjects, different lifting techniques and postures with and without the exoskeleton were put to the test. The researchers measured parameters such as muscle activity, joint loads and performance.

The result:

Exoskeletons can reduce strain in certain areas of the body. However, there is insufficient scientific evidence that they can prevent or alleviate muscle and joint problems. Risks, such as incorrect loading caused by the exoskeleton, cannot be completely ruled out at present.

At a glance

ADVANCE – Work physiological-biomechanical analysis of a passive exoskeleton to support occupational lifting and bending processes

PI	Benjamin Steinhilber
Project Team	Mona Bär, Gianluca Caputo, Tessy Luger, Monika A. Rieger, Pia Rimmele, Robert Seibt, Sylvia Weymann
Duration	48 months
Funding	IASV's own funds and funding from eight industrial companies: Daimler AG, AUDI AG, BMW AG, MTU Aero Engines AG, Iturri Group, Deutsche Post AG, BASF, Dachser Intelligent Logistics. The industrial partners had no influence on the study design and implementation, data analysis and interpretation of results.
Cooperation	Daniel Häufle (Hertie Institute for Clinical Brain Research in Tübingen), Syn Schmitt (Institute for Modelling and Simulation of Biomechanical Systems, University of Stuttgart)

Prof. Dr. Benjamin Steinhilber

Head of Research Unit
"Work-related Stress – Work Design"

Exoskeletons offer promising possibilities for reducing physical stress at work, but there are still many unanswered questions. Long-term studies are essential to understand the actual benefits and limitations.

Project example

Making standing work healthier – a risk index as the key to better prevention

An evidence-based risk index offers occupational health and safety professionals an assessment system for health risks in standing workplaces – reliable and easy to use in practice as a smartphone app.

Standing work is part of everyday life in many professions – and is often associated with health consequences such as back pain and venous disorders. Until now, there have only been a few scientifically sound approaches to classifying such problems from an occupational health perspective. We have developed an evaluation system for possible risks of standing work.

For a scientifically sound assessment, a research team observed more than 100 participants in laboratory studies. They alternated between standing, walking and sitting. Physical complaints and venous strain were recorded using diagnostic measurements.

We wanted to know:

- How do changes between standing, walking and sitting affect health risk?
- How can the results be incorporated into a rating system that accurately predicts who might develop health problems?
- How can companies make practical use of such a risk index?

The researchers integrated the risk index developed in the study into a software app for smartphones in order to reliably assess health risks and make it easy to use in occupational practice.

The assessment tool shows that interrupting standing, particularly by walking, is crucial to reducing health problems associated with standing work. Regular and frequent changes between standing, walking and sitting are also important.

At a glance

Risk assessment of standing work – content expansion, validation and optimisation of a health-based risk index for the assessment of work-related standing exposures

PI	Benjamin Steinhilber
Project Team	Leoni Ansari, Nicole Bott, Florian Dartmann, Julia Gabriel, Alina Kratzenstein, Dominique Michels, Marlies Oltmanns, Monika A. Rieger, Sven Schmitt, Robert Seibt, David Süß, Luis Ulmer, Carmen Volk, Florestan Wagenblast
Duration	53 months
Funding	Berufsgenossenschaft Handel und Warenlogistik (BGHW)

Health risks:

- Almost half of employees stand for more than three quarters of their working time.
- After about 40 minutes of standing, complaints in the lower back can increase significantly.
- 25% of employees feel stressed by standing work.
- Venous diseases (varicose veins, swelling)
- Back pain
- Pain/discomfort in the lower extremities

Together for a healthy working environment: The IASV in dialog with citizens

Occupational medicine can achieve a great deal in practice. However, this is only possible if we incorporate the experiences of those who work in production lines, offices, construction sites and other workplaces.

What does a healthy working environment look like? What stresses do employees experience in their daily lives? How can workplaces in large and small companies be better organised? These questions cannot be answered without considering the views of those affected. To ensure our research is as close to reality as possible, we attach great importance to exchanging ideas with working citizens.

Formats such as our dialog forum "Healthy work. Healthy future" offer a platform for a regular exchange between research and professional practice. We invite working people to contribute their views to our research in practical ways, such as helping to design funding applications, implementing research projects and developing events with a focus on occupational health.

We invite you to join us:

- To contribute your views on the world of work and healthcare.
- To actively participate in our research projects.
- To develop ideas for healthy working conditions.

Are you interested?
You can find more information on our website.

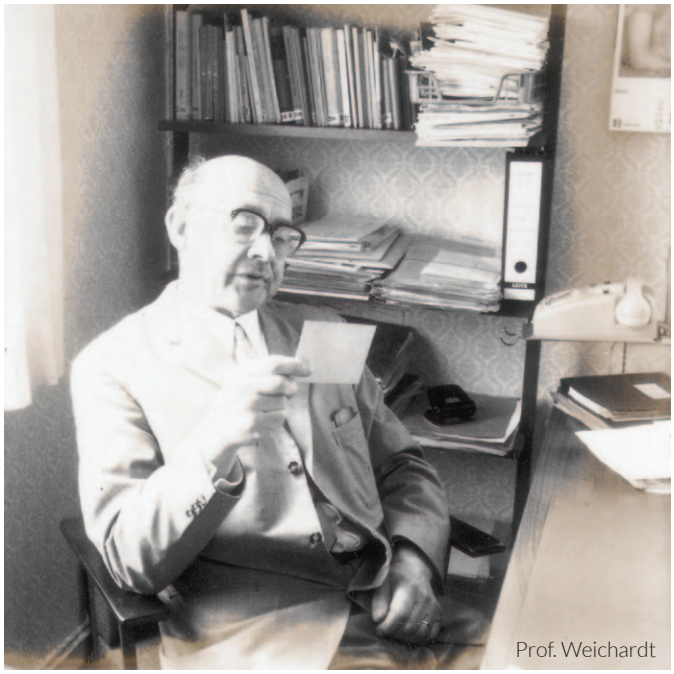
Dr. Esther Rind
(PhD, United Kingdom)

Head of the Research Unit
"Healthcare for People of Working Age"

For many people, physically demanding work, stress, time pressure and constantly changing tasks are part of everyday working life. Exchanging ideas with employees provides valuable insights into a wide range of working environments. By doing this, we learn about the real stresses and strains that many people experience daily and how they wish to prevent risks to their physical and mental health at work more effectively.

The history of the IASV: Decades of research for practice

The Institute of Occupational and Social Medicine and Health Services Research (IASV) was founded in 1965 on the initiative of the Baden-Württemberg state parliament. The IASV is one of the first academic occupational medicine institutes in Germany.



Prof. Weichardt

1965–1977

Foundation and early years

1965 - Foundation of the institute on the initiative of the Baden-Württemberg state parliament. Prof. Dr. med. Heinz Weichardt is appointed as the first director. Temporary accommodation of around 150 m² in a residential building at Frondsbergstraße 31 in Tübingen

1977 - Expansion of the Institute to include the Department of Social Medicine and relocation to the building at Wilhelmstraße 27, which is still home to the Institute today

Did you know?

The IASV was one of the first university-based occupational medicine institutes in the Federal Republic of Germany and since its foundation has produced numerous innovative research results that have been directly implemented into company practice. Today's name "Institute of Occupational and Social Medicine and Health Services Research" reflects its interdisciplinary orientation.

1978–2008

Establishment and consolidation

1979 - Appointment of Prof. Dr. med. Friedrich W. Schmahl to the Chair of Social Medicine

1981 - Following the retirement of Prof. Weichardt, Prof. Schmahl takes over the management of the Institute and develops it further.

2003 - Securing of the Institute through a cooperation between the University, University Hospital and Medical Faculty of Tübingen and the Association of the Metal and Electrical Industry of Baden-Württemberg (Südwestmetall)

End of 2006 to beginning of 2008 - After the retirement of Prof. Schmahl, Dr. Sibylle Hildenbrand takes over as acting director

Reaserch content:

- Analysis of hazardous substances and their effects at the workplace and in the environment
- Causes and prevention of occupational diseases
- Social inequity and health inequity

The history of the IASV: Decades of research for practice

With its long and successful history, the IASV stands for pioneering research, teaching and occupational health care, which has benefited companies, employees and society then and now.

2008–today

Reorientation, expansion and internationalisation

2008 - Start of the unrestricted grant by Südwestmetall to secure funding of the institute, PD Dr. med. Monika A. Rieger takes over the provisional management of the institute

2009 - Prof. Dr. med. Monika A. Rieger is appointed to the W3 endowed professorship for occupational and social medicine and heads the institute as Medical Director.

2012 - Renaming of the institute in line with its expanded research focus to Occupational and Social Medicine and Health Services Research

2025 - Organisation of the international conference PREMUS 2025 (Prevention of Work-Related Musculoskeletal Disorders) of the International Commission on Occupational Health (ICOH) in Tübingen, scientific management: Prof. Dr. Monika A. Rieger and Prof. Dr. Benjamin Steinhilber

Today's research focuses on:

- Health care for people of working age
- Work-related stress and work design
- Solutions for a changing world of work

Publisher

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