

Electrical Injury:

Prevention, exposure, pathology, clinical aspects, treatment and follow-up

STAMI – The National Institute of Occupational Health, Oslo, Norway

18 – 20.4.2023

Tuesday, 18.4.2023

Acute reactions, and some chronic effects

10.00 – 10.30 *Course registration and coffee*

10.30 – 11.00 **Introduction**
Scope and purpose of the course
Presentation of participants

11.00 – 11.30 **What is an electrical injury** **Bo Veiersted**
Incidence, exposure characteristics and definitions, injury **Lars Ole Goffeng**
mechanisms. Acute, chronic, latent injury. Individual
vulnerability and risk of injuries.

11.30 – 12.00 **Acute effects and reactions - an overview** **Bo Veiersted**
Skin/burns, heart, nervous system, muscular, psychological
reactions, traumatic/fall

12.00 – 12.45 **Acute treatment of electrical burns** **Ragnvald Ljones Brekke**
Practice at department of plastic surgery and burns,
Haukeland Hospital, Bergen

12.45 – 13.30 *Lunch break*

13.30 – 14.30 **Acute neurological injuries and mechanisms** **Lisa Rådman**
Acute effects after exposure to electrical current. Why and **Martin Tondel**
how effects develop over time.

14.30 – 15.00 **Acute muscular symptoms and reactions** **Bo Veiersted**
“Now or never” – or later?

15.00 – 15.30 *Short break*

15.30 – 16.00 **Acute psychological/traumatic reactions** **Lars Ole Goffeng**

16.00 – 16.45 **Electrical accidents and heart complications** **Henrik Schirmer**
 Acute effects and risk for later arrhythmias
Acute medical follow-up
 Experiences and current recommendations

18.30 – 21.00 **Social program: Dinner at Restaurant Ludo**
Vibes gate 11a, 0365 Oslo, Norway

Wednesday, 19.4.2023

Long-term health, research

08.30 – 09.00 **Chronic and long-term effects – an introductory overview** **Bo Veiersted**
Lars Ole Goffeng

09.00 – 10.45 **Electrical accidents in Denmark** **Karin Biering**
 Recent epidemiological studies in electricians and general population. How much and how dangerous? How some get symptoms and others not, by “similar” accidents. Prognosis.

10.45 – 11.15 *Short break*

11.15 – 12.00 **Chronic neurological injuries after electrical current** **Lisa Rådman**
 Long-term effects and delayed nerve injury

12.00 – 12.45 **Chronic Psychological effects of electrical accidents** **Sara Thomée**

12.45 – 13.30 *Lunch break*

13.30 – 14.00 **Secondary injury prevention I - Reducing injury consequences** **Lars Ole Goffeng**
 Relevance of acute treatment medical examination and reports for long-term health effects and compensation or insurance considerations
Acute phase prognostic signs of long-term outcome
 Implications for follow-up?

14.00 – 14.30 **Secondary injury prevention II - Long-term coping** **Lars Ole Goffeng**
 Follow-up of chronic and long-term effects.
 “Focal training”/exercise, vs. “Compensation”/alternative behavioral or cognitive approach

14.30 – 14.45 *Short break*

14.45 – 15.45 **Group work**
 a) Criteria for acute medical follow-up in emergency ward?
 b) What shall be examined, or subject to follow-up?

- c) Patient-/risk communication:
 - What do patients know and expect from medical staff?
 - What should the patient – doctor dialogue emphasize?
 - How should patients be met or informed?
- d) How do we prevent accidents? Introductory thoughts on primary prevention.

15.45 – 16.30 **Plenum. Presentation and discussion**

17.15 – 22.00 **Social program: Street art tour of Oslo, dinner at Nedre Foss Gård**

17.15 Bus from Thon Hotel Gyldenløve (Bogstadveien 20, 0355 Oslo) to Rosenhoffgata 28, 0569 Oslo

17.30 Guided tour of Oslo's street art with a local street artist

19.15 Dinner at Nedre Foss Gård, Nordre gate 2, 0551 Oslo

22.00 Bus back to Thon Hotel Gyldenløve

Thursday, 20.4.2023

Accident prevention

08.30 – 09.15 **Primary prevention strategies – Introduction and overview** **Lars Ole Goffeng**
 How to prevent accidents: Legislative, organizational/structural, psychosocial: relational/communication, individual, and technical/practical approaches

09.15 – 10.00 **Legislative approach to accident prevention interventions:** **Robert Krahl**
 - Legislation DSB/AT, Standardization NEK/IEC, REN
 - Qualifications and specifications
 - Safety training courses/Teaching
 - Equipment design/Technical considerations

10.00 – 10.15 *Short break*

10.15 – 11.45 **Understanding organizational, social and individual driving forces for safe and unsafe behaviour as a basis for designing and implementing effective safety interventions** **Marianne Törner**
 - The significance of why humans act the way we do, for design and implementation of safety interventions.

11.45 – 12.30 **Practical/technical safety approach** **Lars Jacob Berg**
 - Experience based, "at work". Electrical safety in education and for young electricians/apprentices

12.30 – 13.15 *Lunch*

13.15 – 14.30 **Recommendations regarding follow-up** **All**
 - Who may benefit from follow-up?

How to prevent or reduce injury consequences – a general perspective taking into consideration integration of exposure information, anamnestic information, acute reactions of prognostic value, and long-term effects

- Where do we get information?

Focus on primary interview, where should we start?

14.30 – 14.45

Short break

14.45 – 15.30

Discussion, conclusion, summary

All

- Need for harmonization of treatment of injured?
- Should national recommendations for follow-up of victims be introduced?

Closing of the course
