Prevention and Management of the Occupational Biomechanical Overload of the Upper Limbs using the OCRA Checklist

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Managing all the risk assessment data collected and the relevant risk score calculations can be so complex that “simple tools”, i.e., Excel©, have been developed for gathering, managing, and processing the data. These tools (present in different calculation models for biomechanical overload estimation) are employed to implement the strategy we have developed for calculating the risk arising.
During the course, specific free software will be provided with which exercises will be done. It is mandatory to bring and use a personal laptop during the course.

The tool is primarily designed to be used by ergonomists, employers, OSH operators, and trade union representatives. It may also be helpful for occupational medical staff conducting periodical inspections and drafting health surveillance protocols and for supervisory bodies (labour inspectors) conducting inspections in the workplace needing to detect potentially dangerous situations requiring specific preventive interventions rapidly.

This course is dedicated to studying the work-related biomechanical overload of upper limbs, representing the world's largest occupational risk and is consequently the cause of the most numerous work-related diseases.

The main aim of the course is to transmit the necessary knowledge:

- To apply the up-to-date European (CEN) and international (ISO) standards concerned, ● To determine quickly what proportion of tasks can be classified as green (no risk), yellow (significant or borderline risk), red (medium risk) or purple (high risk),
- To produce an initial map of the risk related to repetitive work,
- To determine priorities for ergonomic improvement,
- To reintegrate workers with musculoskeletal diseases,
- To discuss the presence or absence of causal links between the level of risk exposure and musculoskeletal disorders for occupational disease reporting,
- To predict the probability of getting musculoskeletal occupational diseases of the upper

limbs

- Application examples are proposed using Excel spreadsheets prepared by EPMIES, which can be downloaded for free from the EPMIES website (www.epmresearch.org).

In practice, the OCRA method allows the management of biomechanical overload risk of the upper limbs at 360 degrees, in compliance with international standards to different professional figures (also not experts in ergonomics) like company technicians, occupational medical doctors, occupational physiotherapists, security technicians, etc.

About Our Speakers:

1. Daniela Colombini

MD in Occupational Medicine and Statistics, European Ergonomist. President of Scientific Association Ergonomics of Posture and Movements International Ergonomics School (EPM IES), she has 40 years of experience in risk assessment methods for biomechanical overload prevention. Coauthor of OCRA method, VLI NIOSH ML, TACOs posture. Occupational Medicine Professor at the University of Milan, Florence and Bogotà for many years.Since 20 years active member of CEN and ISO in TC 159 SC3: co-chair of sub-groups in TC MSDs in International Ergonomics Association. Chair of **ISO TR 23476** ***(agriculture)*** and the new **ISO TR** ***(construction).*** Author of more than 20 books and 200 scientific papers.

2. Enrico Occhipinti

Enrico has a degree in Medicine and Surgery with postgraduate specializations in Occupational Medicine and in Health Statistics at the University of Milano (Italy). He is a Certified European Ergonomist. He is professor at the School of Specialization in Occupational Medicine, University of Milano and has been Director of the Research Unit “Ergonomics of Posture and Movement” (EPM) at Fondazione Don Gnocchi ONLUS - Milano up to 2015. He is the Scientific Director of EPM International Ergonomics School. He has devoted about 40 years on ergonomic issues related to physical ergonomics and the prevention of work-related musculoskeletal disorders and is Author of more than 250 papers and handbooks, in Italian and English, on the matter. He developed and co authored the OCRA method. He is a member and has been coordinator (up to 2012) of the Technical Committee on Prevention of Musculoskeletal Disorders of the International Ergonomics Association (IEA) and represents Italy in international commissions of the European Committee for Normalization (CEN) and the International Organization for Standardization (ISO) dealing with ergonomics and biomechanics. He is member of the Italian Working Group devoted to the Prevention of Occupational Musculoskeletal Diseases in the framework of the National Health Service Plan for Prevention (2021-2025).

3. Matteo Candoli

Graduated in Prevention Techniques in workplaces from the University of Bologna and specialized in Prevention Sciences from the University of Milan, Matteo is a researcher and collaborator at the “Ergonomics of Posture and Movement” - research unit of Milan, since 2021. He has worked as a consultant alongside Marco Cerbai at Safety Work Srl since 2021, where he carries out risk analysis in the field of workplace ergonomics. Specialized in biomechanical overload analysis using OCRA, NIOSH, Snook&Ciriello and TACOS methods. He works with local, national and multinational companies where he analyzes and proposes solutions for improving workstations.