

Table A.1 — Non-exhaustive list of main methods for risk assessment of repetitive movements/exertions at high frequency

Method		Main characteristics	Kind of output	Body part assessment
OWAS	Ref. [26]	Analysis of postures of different body segments; it also considers their frequency during a work shift.	Quantitative	Whole body
RULA	Ref. [34]	Rapid coded analysis of static and dynamic postures; it also considers force and action frequency: the result is an exposure score that drives to the kind of preventive measures to be taken.	Quantitative	Upper limbs
REBA	Ref. [18]	Similar to RULA (checklist), it considers all body segments while also taking into account manual handling of loads.	Quantitative	Whole body
PLIBEL^a	Ref. [27]	Checklist for the identification of different risk factors for different body segments; it considers awkward postures, movements, equipment and other organizational aspects.	Quantitative	Whole body
Strain Index	Ref. [35]	Detailed method (monotask) that considers the following risk factors: intensity of exertion, duration of exertion per cycle, efforts per minute, hand/wrist posture, speed of work, and duration of task per day.	Quantitative	Distal upper limbs
QEC^a	Ref. [31]	Quick method for estimating the exposure level; it considers different postures, force, load handled, duration of task with hypothesized scores for their interaction.	Quantitative	Whole body
OSHA checklist^a	Ref. [45]	Checklist proposed during the development of the OSHA standard (withdrawn); it considers repetitiveness, awkward postures, force, some additional factors and some organizational aspects.	Quantitative	Upper limbs
HAL/TLV ACGIH	Ref. [1]	Detailed method (for monotask handwork lasting almost 4 h per shift) mainly based on the analysis of frequency of actions (in relation to duty cycle) and of peak force; other main factors are generically considered.	Quantitative	Upper limbs
Upper limb expert tool^a	Ref. [28]	Screening method evaluating the “work load”, it considers repetition, force, awkward postures, task duration and some additional factors.	Semi-quantitative	Upper limbs
OCRA index	Ref. [11], [38]	Detailed method that considers the following risk factors: frequency of technical actions, repetitiveness, awkward postures, force, additional factors, lack of recovery periods, duration of repetitive task.	Quantitative	Upper limbs
OCRA checklist^a	Ref. [11], [41]	Semi-detailed method that considers, in a simplified way, the same risk factors as the OCRA index. Exposure level is classified in the three-zone system. Applicable also to multitask repetitive jobs.	Quantitative	Upper limbs

^a Method/tool useful for the purposes of Method 1.