

NOTES FOR USING RULA

Using RULA (Rapid Upper Limb Assessment) is simple, however there are four steps that will make your assessment thorough. They are O.S.A.R., Observe, Select, Assess, Review.

O. Observe

This first step is critical, so take time to observe the task you intend to assess. If permission is provided it is useful to video or photograph the task, making sure that you avoid a parallax error.

As you observe note:

1. What are the elements of the job? Is there more than one task for assessment? For example, is the person using a keyboard alone or also using a phone and does that make a difference? Does the mouse work require a different posture?
2. Does the task involve walking, bending over, lifting or rapid changes in posture? In which case using REBA (Rapid Entire Body Assessment) will be a more informative assessment.
3. Is the posture and movement of the right hand-arm-shoulder different from the left side?
4. To observe and assess you need a clear line of vision to all the body parts. If the person has loose clothing or hair obscuring the shoulders and neck you should address this. This can be tricky. Where possible ask them to move or tie up their hair or remove outer layers of clothing for the assessment. Sometimes this is not possible so you will need to estimate the angle.

S. Select

Now, select:

5. Using Point 1. and 2. what is the best assessment tool based on your observations, RULA or REBA? Perhaps you need to do further task analysis, or also use another tool if it is a complex task?
6. Using Point 3, what is the posture you are going to assess?
 - If the left and right hand-arm-shoulders are doing the same task with similar movement and posture you can select one side (dominant or where pain may be present)
 - If the left and right hand-arm-shoulders have different posture/movement then assess both unless one side has a neutral (Score 1) posture in which case you do not need to assess it. If unsure assess both sides.
 - If you are assessing several task postures note the length of time they are held as this may influence cumulative loading and inform the design/redesign recommendations.
 - While RULA can be used for repeated measures at set time intervals, be observant that a high load task is not missed using this approach.
7. Are you observing in real time or using video/photographs? For either, let the person become relaxed in your presence so you do not record their 'sitting up straight posture'. You need to put the person at ease so their posture is typical of their working day. I have even resorted to videoing a person from a distance so I had an accurate record of their work posture.

A. Assess

Before you assess check the steps 4. and 7. above have been addressed then undertake your assessment using the RULA tool, scoring all the body part positions and the repetition and static work scores. Always take the higher score where a body part position is on a line between two scores.

If you have a compromised view of the body parts (Point 4.) you may be able to do a comparative assessment. To do this take a RULA assessment of the current posture and then (if possible) undertake modifications to improve the design and reassess using the same assumptions you did in the first assessment. Your before and after scores then have the same observer assumptions which improves the validity of your assessment.

Complete the RULA scoring using the tables from the original article or a reputable online RULA tool.

R. Review

Now you have 3 levels of scores:

- Grand score, between 1 and 7
- Body part scores (higher indicating more biomechanical loading)
- Repetition and static muscle use score

They can be useful in different ways.

Firstly, the Grand Score indicates the musculoskeletal risk and actions needed. As RULA is a 'rapid' tool, these actions are only provided in terms of urgency.

By making RULA assessments of the proposed design changes the Grand Scores can be used to show the difference when/if your ergonomic changes are in place. This is useful in illustrating to management the impact of their investment in the redesign, equipment or education.

Secondly, review the body part scores and note the specific areas that have a higher loading. These often correlate with reported pain, ache or discomfort and can be useful in providing more detail to the Grand Score.

Lastly review the repetition and static muscle use scores as both have the potential to increase musculoskeletal loading especially if with a posture of 2 or more.

It can be useful to use RULA and REBA to educate the worker about their posture, of which most are usually unaware. Seeing the diagrams and their scores, they can be encouraged to change in postures, lengths of fixed posture work and encouragement around adding light activity and movement into their working day.

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