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# RULA

**Week 4 - February 28, 2022 – Ergonomic Prevention Tools**



## Quick Background:

- **R**apid **U**pper **L**imb **A**ssessment
- Last year's RSI Day we revealed a RULA worksheet that we hoped was more user-friendly.
- A worksheet with less words and more images.
- More images to decrease ambiguity and improve the consistency in its application.
- Typical worksheets I've seen have 19-21 explanatory images.
- Our update has 41 images.

# RULA: a survey method for the investigation of work-related upper limb disorders

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UK

## Abstract

RULA (rapid upper limb assessment) is a survey method developed for use in ergonomics investigations of workplaces where work-related upper limb disorders are reported. This tool requires no special equipment in providing a quick assessment of the postures of the neck, trunk and upper limbs along with muscle function and the external loads experienced by the body. A coding system is used to generate an action list which indicates the level of intervention required to reduce the risks of injury due to physical loading on the operator. It is of particular assistance in fulfilling the assessment requirements of both the European Community Directive (90/270/EEC) on the minimum safety and health requirements for work with display screen equipment and the UK *Guidelines on the prevention of work-related upper limb disorders*.

## RULA method:

- The RULA method uses diagrams of body postures and 3 scoring tables to provide evaluation of exposure to risk factors.
- It's an observation method, meaning you can perform an assessment in real time.
- It requires no specialized equipment.
- The risk factors considered are what they refer to as 'external load' factors:
  - work postures
  - repetitive muscle work (frequency)
  - static muscle work
  - force/load (ie. weight being handled)
- It considers the entire body, not just the upper limbs.

## RULA was developed to:

- provide a method of screening a working population quickly, for exposure to a likely risk of work-related upper limb disorders
- Help you identify the muscular effort which may be problematic
- Give a result which would ideally be part of a broad ergonomic assessment that includes such other things as environmental and organizational factors, etc.
- Fulfilling the assessment requirements of the ***UK Guidelines on the prevention of work-related upper limb disorders.***

## RULA is generally consider 'valid' & 'reliable':

- Validity: does it really measure what it's suppose to measure?
- Reliability: can the results be reproduced when the research is repeated under the same/similar conditions?



# Basic equipment to do a RULA assessment

RULA worksheet A

task: \_\_\_\_\_ date: \_\_\_\_\_

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**Upper arm score**

**Lower arm score**

**Wrist score**

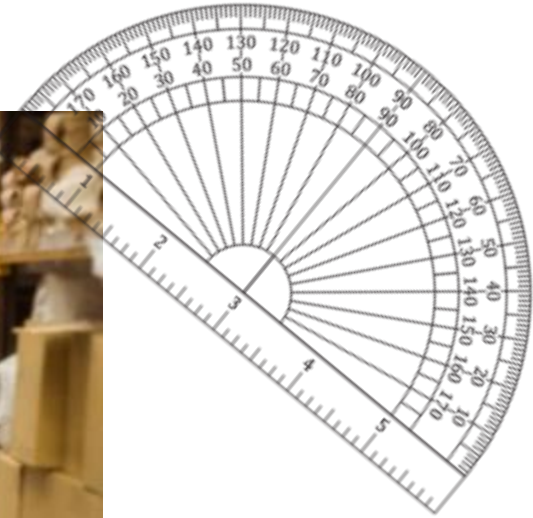
**Wrist twist score**

**A1** + **A2** = **A3**

Adapted from: Mikumini, L., & Corlett, E.N. (1993) RULA: a survey method for the investigation of work-related upper limb disorders. *Ergonomics*, 24(2), 91-99.



Image source: <https://essentialsiteskills.co.uk/blog/post/ess-guide-manual-handling>

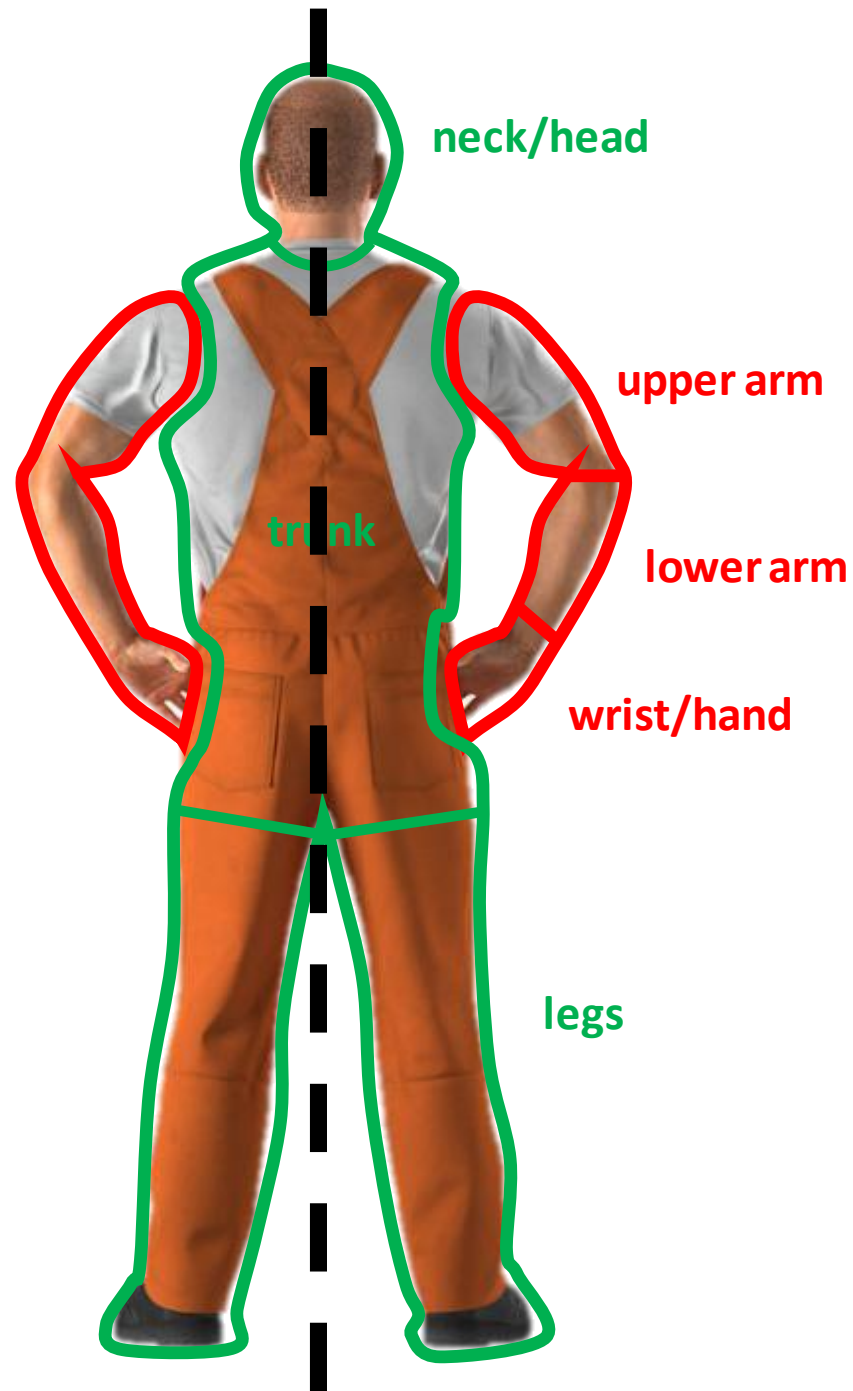




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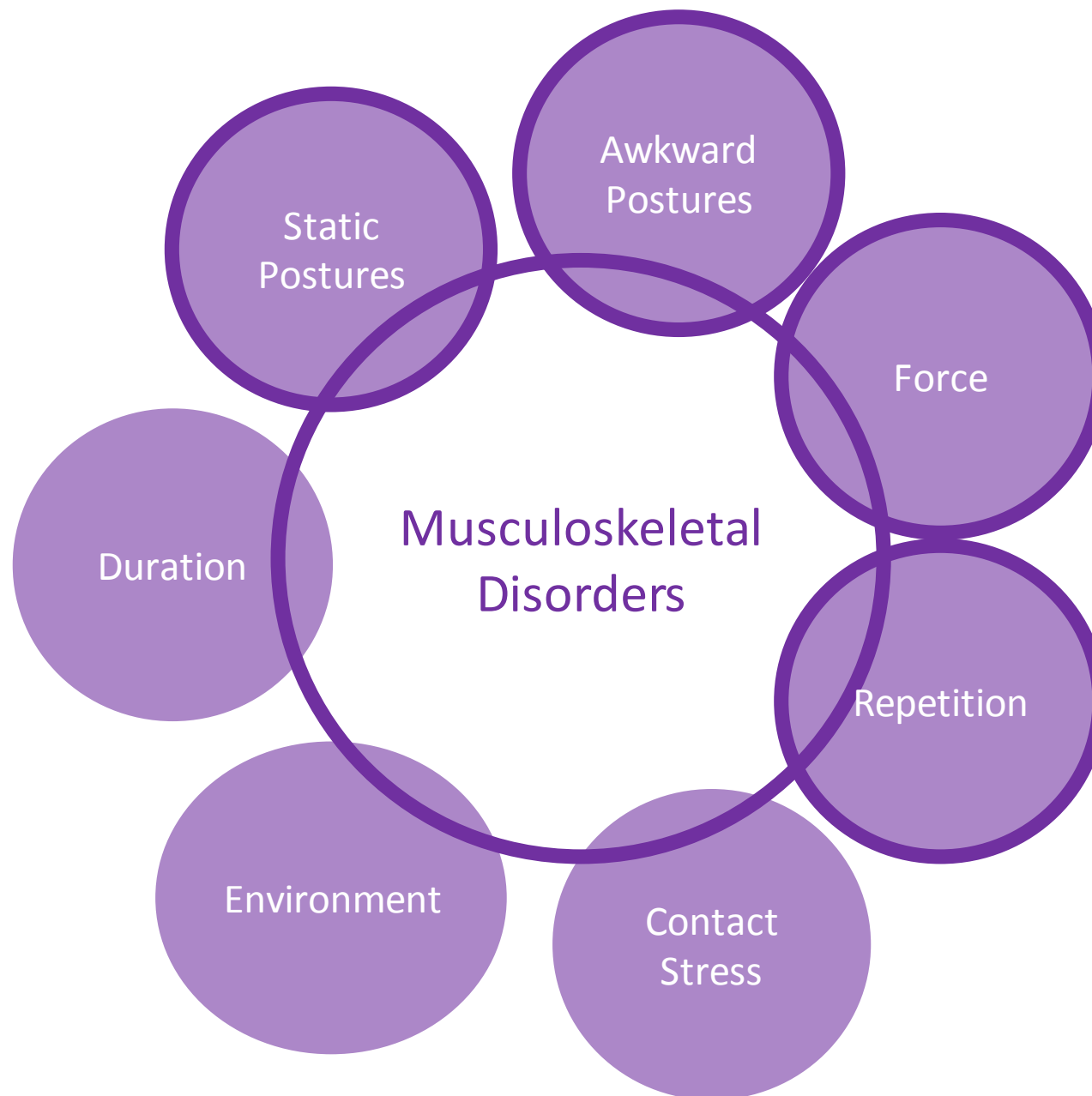


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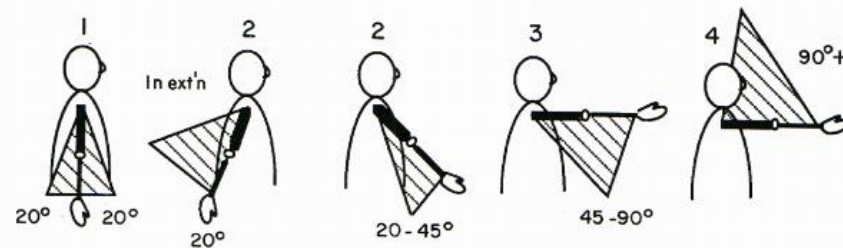
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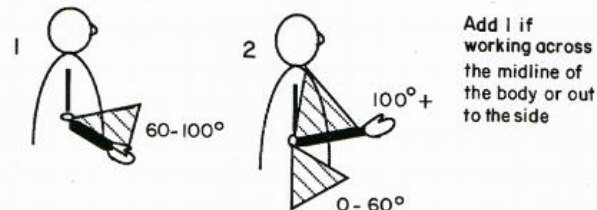
### Upper arms

Add 1 if shoulder is raised  
Add 1 if upper arm is abducted

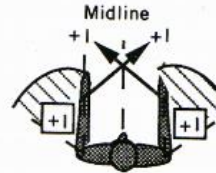
Subtract 1 if leaning or supporting the weight of the arm



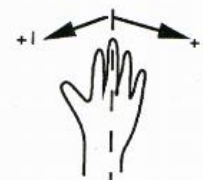
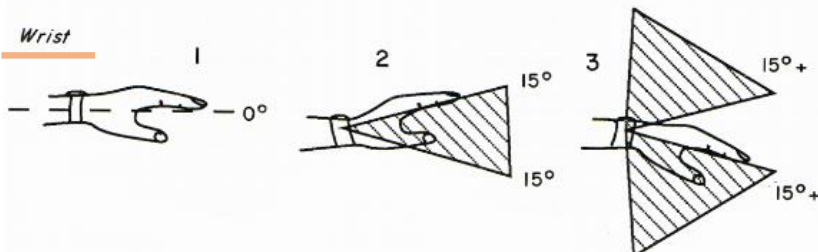
### Lower arms



Add 1 if working across the midline of the body or out to the side



### Wrist



Add 1 if wrist is bent away from the midline

### Wrist twist

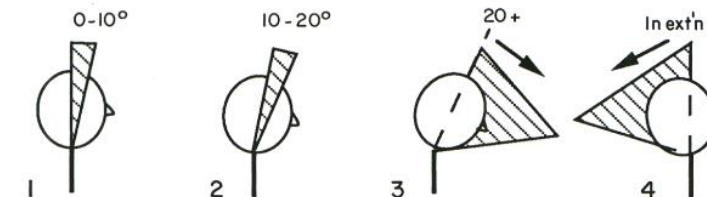
1 Mainly in mid-range of twist

2 At or near the end of twisting range

*RULA: a survey method for the investigation of work-related upper limb disorders*

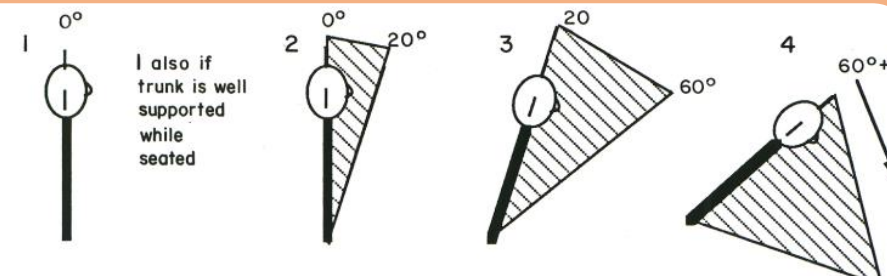
### Neck

Add 1 if the neck is twisting  
Add 1 if neck is side-bending



### Trunk

Add 1 if trunk is twisting  
Add 1 if trunk is side-bending



### Legs

1 if legs and feet are well supported and in an evenly balanced posture

2 if not



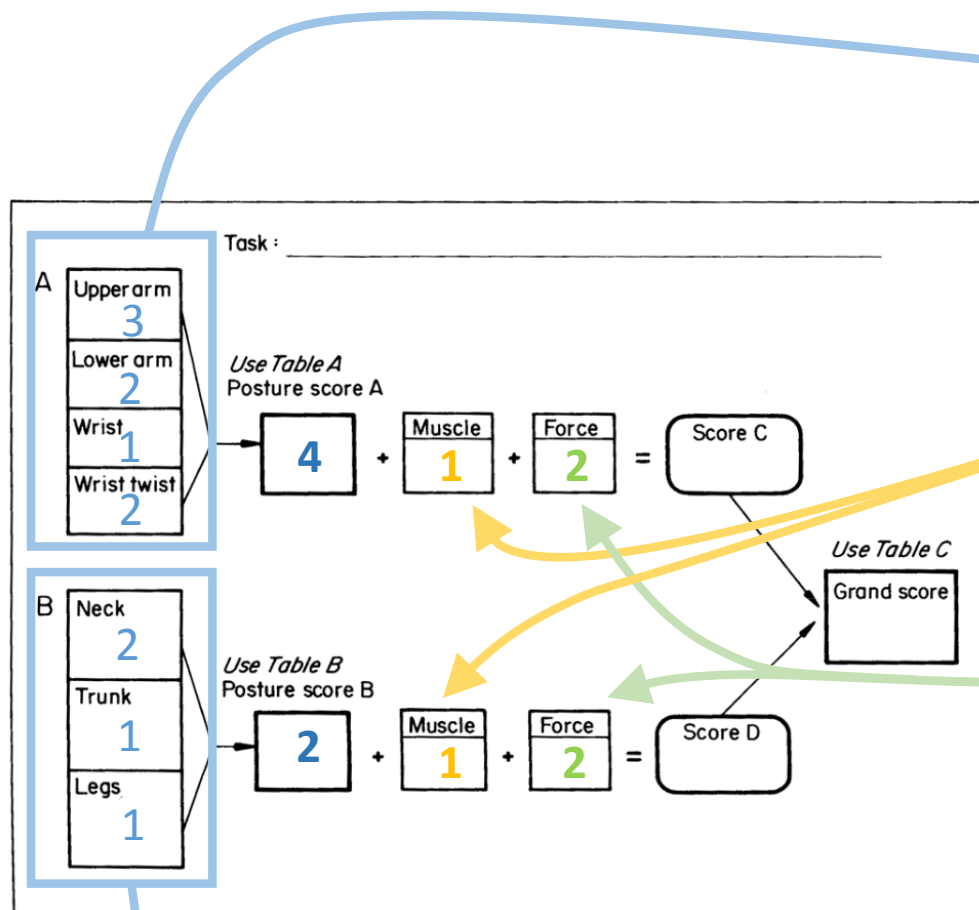


Figure 3 The RULA scoring sheet

Source: <https://www.rula.co.uk/RULASheet.pdf>

McAtamney, L., & Corlett, N.E. RULA: a survey method for the investigation of work-related upper limb disorders. Applied Ergonomics. 1993; 24(2): 91-99.

Table 1 Table A into which the individual posture scores for the upper limbs are entered to find posture score A

Upper arm	Lower arm	Wrist posture score							
		1		2		3		4	
		W. twist		W. twist		W. twist		W. twist	
		1	2	1	2	1	2	1	2
1	1	1	2	2	2	2	3	3	3
	2	2	2	2	2	3	3	3	3
	3	2	3	3	3	3	3	4	4
2	1	2	3	3	3	3	4	4	4
	2	3	3	3	3	3	4	4	4
	3	3	4	4	4	4	4	5	5
3	1	3	4	4	4	4	4	5	5
	2	3	4	4	4	4	4	5	5
	3	4	4	4	4	4	5	5	5
4	1	4	4	4	4	4	5	5	5
	2	4	4	4	4	4	5	5	5
	3	4	4	4	5	5	5	6	6
5	1	5	5	5	5	5	6	6	7
	2	5	6	6	6	6	7	7	7
	3	6	6	6	7	7	7	7	8
6	1	7	7	7	7	7	8	8	9
	2	8	8	8	8	8	9	9	9
	3	9	9	9	9	9	9	9	9

Give a score of 1 if the posture is :

- mainly static, eg held for longer than 1 min
- repeated more than 4 times / min

Figure 4 The muscle use scores which are added to posture score A and B

0	1	2	3
• No resistance or less than 2 kg intermittent load or force	• 2-10 kg intermittent load or force	• 2-10kg static load	• 10kg or more static load
		• 2-10 kg repeated load or force	• 10kg or more repeated loads or forces
			• Shock or forces with a rapid build-up

Figure 5 The force or load score which is added to posture score A and B

Table 2 Table B into which the individual posture scores for the neck, trunk and legs are entered to find posture score B

Neck posture score	Trunk posture score											
	1		2		3		4		5		6	
	Legs		Legs		Legs		Legs		Legs		Legs	
	1	2	1	2	1	2	1	2	1	2	1	2
1	1	3	2	3	3	4	5	5	6	6	7	7
2	2	3	2	3	4	5	5	5	6	7	7	7
3	3	3	3	4	4	5	5	6	6	7	7	7
4	5	5	5	6	6	7	7	7	7	7	8	8
5	7	7	7	7	7	8	8	8	8	8	8	8
6	8	8	8	8	8	8	8	9	9	9	9	9

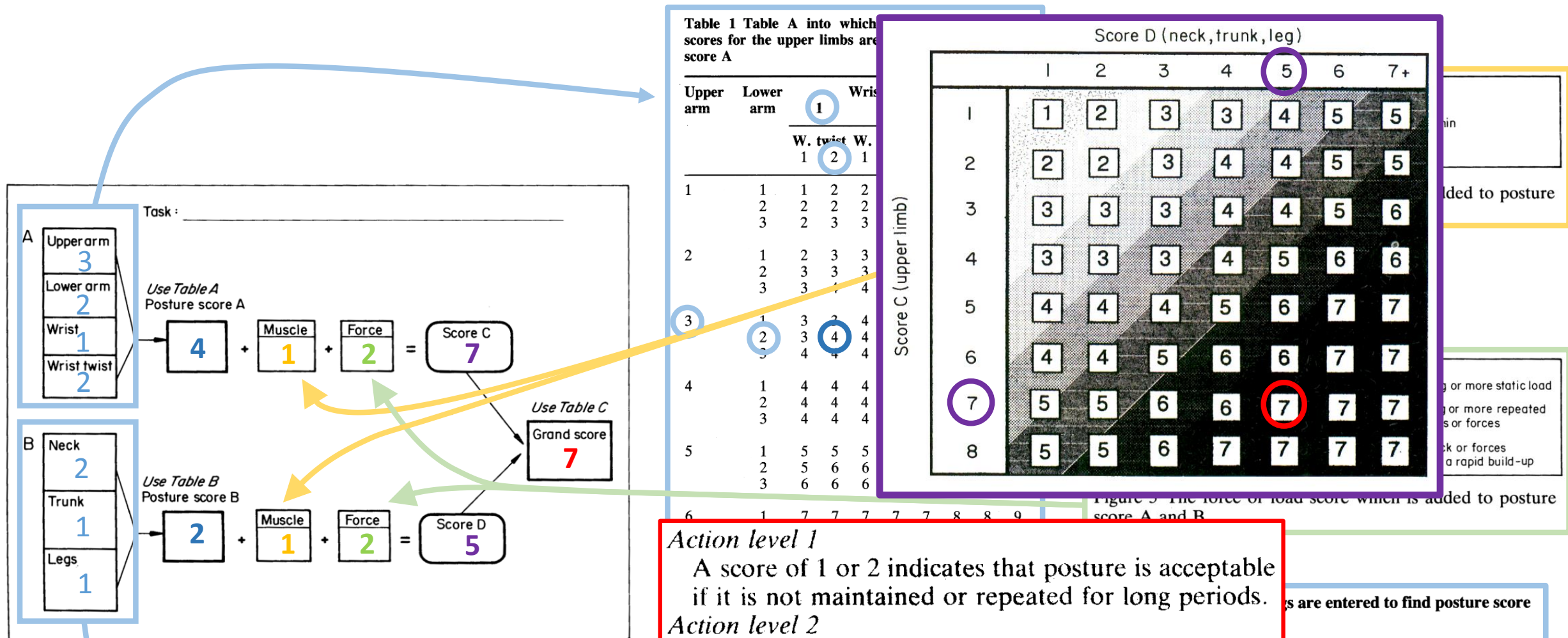


Figure 3 The RULA scoring sheet

Source: <https://www.rula.co.uk/RULASheet.pdf>

McAtamney, L., & Corlett, N.E. RULA: a survey method for the investigation of work-related upper limb disorders. Applied Ergonomics. 1993; 24(2): 91-99.

#### Action level 1

A score of 1 or 2 indicates that posture is acceptable if it is not maintained or repeated for long periods.

#### Action level 2

A score of 3 or 4 indicates that further investigation is needed and changes may be required.

#### Action level 3

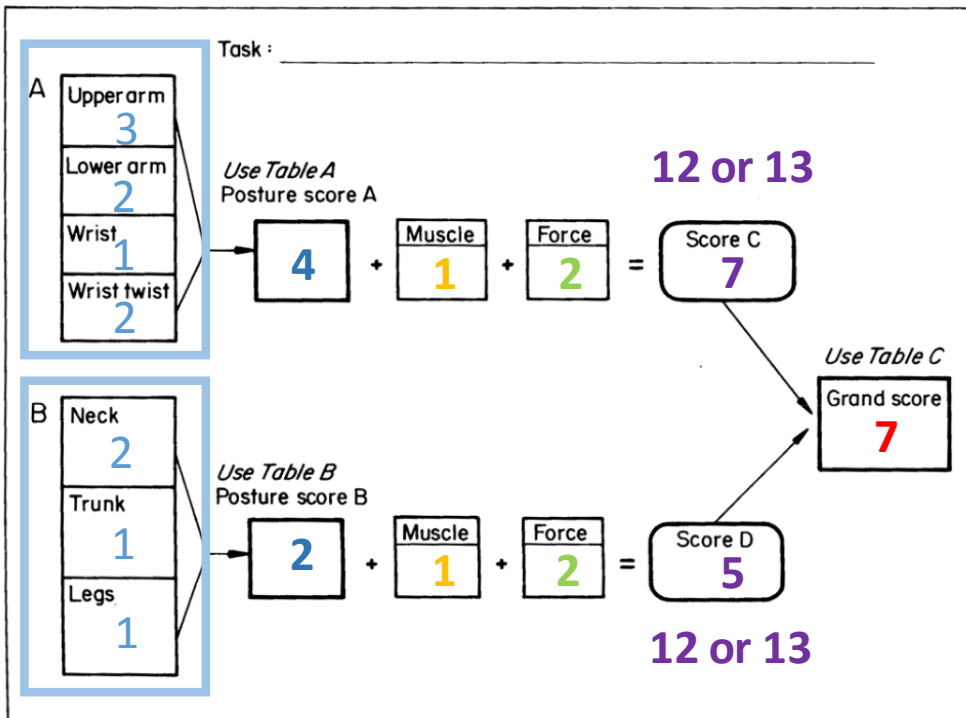
A score of 5 or 6 indicates that investigation and changes are required soon.

#### Action level 4

A score of 7 indicates that investigation and changes are required immediately.

are entered to find posture score

5		6	
Legs		Legs	
1	2	1	2
6	6	7	7
6	7	7	7
6	7	7	7
7	7	8	8
8	8	8	8
9	9	9	9



#### Action level 1

A score of 1 or 2 indicates that posture is acceptable if it is not maintained or repeated for long periods.

#### Action level 2

A score of 3 or 4 indicates that further investigation is needed and changes may be required.

#### Action level 3

A score of 5 or 6 indicates that investigation and changes are required soon.

#### Action level 4

A score of 7 indicates that investigation and changes are required immediately.

		Score D (neck, trunk, leg)						
		1	2	3	4	5	6	7+
Score C (upper limb)	1	1	2	3	3	4	5	5
	2	2	2	3	4	4	5	5
	3	3	3	3	4	4	5	6
	4	3	3	3	4	5	6	6
	5	4	4	4	5	6	7	7
	6	4	4	5	6	6	7	7
	7	5	5	6	6	7	7	7
	8	5	5	6	7	7	7	7

12 or 13

12 or 13

?



# RULA worksheet A

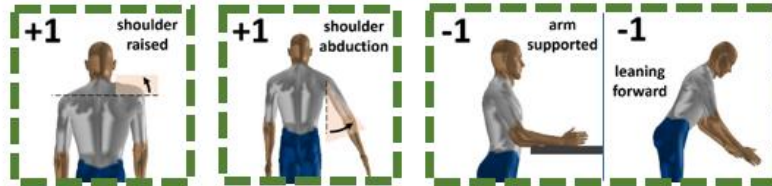
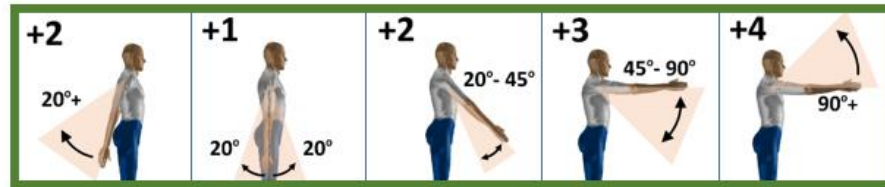
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date:

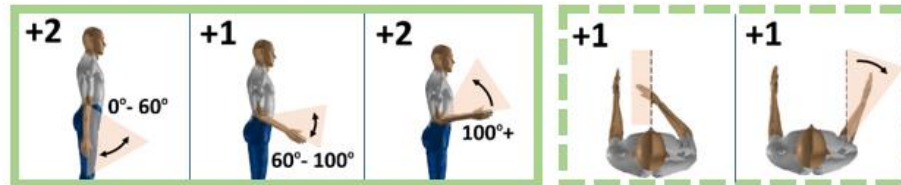


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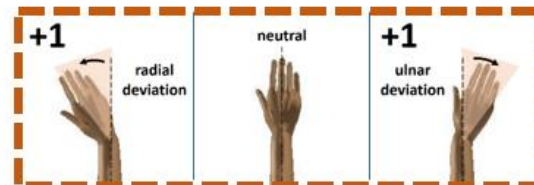
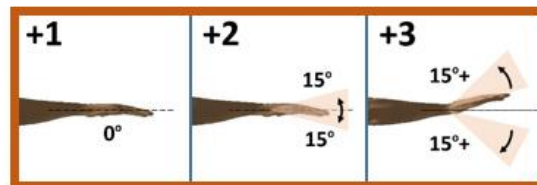
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Upper  
arm  
score



Lower  
arm  
score



Wrist  
twist  
score

Wrist  
score

A1		Wrist							
		1		2		3		4	
		Wrist twist		Wrist twist		Wrist twist		Wrist twist	
		1	2	1	2	1	2	1	2
1	1	1	2	2	2	2	3	3	3
	2	2	2	2	2	3	3	3	3
	3	2	3	3	3	3	3	4	4
2	1	2	3	3	3	3	4	4	4
	2	3	3	3	3	3	4	4	4
	3	3	4	4	4	4	4	5	5
3	1	3	3	4	4	4	4	5	5
	2	3	4	4	4	4	4	5	5
	3	4	4	4	4	4	5	5	5
4	1	4	4	4	4	4	5	5	5
	2	4	4	4	4	4	5	5	5
	3	4	4	5	5	5	5	6	6
5	1	5	5	5	5	5	6	6	6
	2	5	6	6	6	6	7	7	7
	3	6	6	7	7	7	7	7	7
6	1	7	7	7	7	7	8	8	8
	2	8	8	8	8	8	9	9	9
	3	9	9	9	9	9	9	9	9

A2	Muscle use is mainly:			
	static		repetitive	
Force/Load	> 1 min	≤ 1 min	> 4/min	≤ 4/min
No load	1	0	1	0
0 < 2 kg	1	0	1	0
2 - 10 kg	3	1	3	1
> 10 kg	4	2	4	2
rapid build-up	4	3	4	3
jolting action	4	3	4	3

A1

+

A2

= A3

# RULA worksheet B

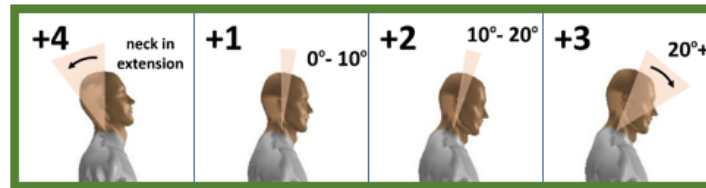
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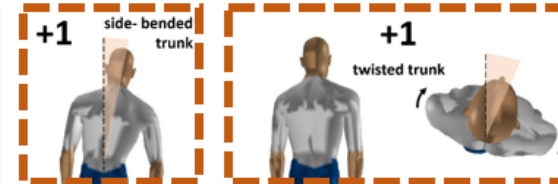
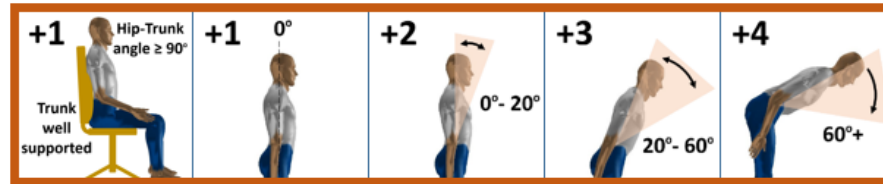


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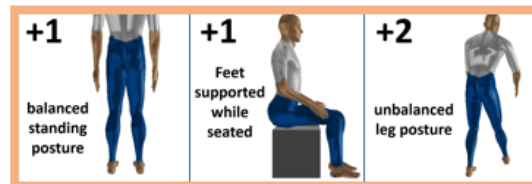
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Neck  
score



Trunk  
score



Legs  
score

**RULA score 1-2 :** posture is acceptable if it is not maintained or repeated for long periods.

**RULA score 3-4 :** further investigation is needed and changes may be needed.

**RULA score 5-6 :** investigation and changes are required soon.

**RULA score 7 :** investigation and changes are required immediately.

B1	Trunk											
	1		2		3		4		5		6	
Neck	1	2	1	2	1	2	1	2	1	2	1	2
1	1	3	2	3	3	4	5	5	6	6	7	7
2	2	3	2	3	4	5	5	5	6	7	7	7
3	3	3	3	4	4	5	5	6	6	7	7	7
4	5	5	5	6	6	7	7	7	7	7	8	8
5	7	7	7	7	7	8	8	8	8	8	8	8
6	8	8	8	8	8	8	9	9	9	9	9	9

B2	Muscle use is mainly:			
	static		repetitive	
Force/Load	> 1 min	≤ 1 min	> 4/min	≤ 4/min
No load	1	0	1	0
0 < 2 kg	1	0	1	0
2 - 10 kg	3	1	3	1
> 10 kg	4	2	4	2
rapid build-up	4	3	4	3
jolting action	4	3	4	3

RULA score		B3							
		1	2	3	4	5	6	7	
A3	1	1	2	3	3	4	5	5	
	2	2	2	3	4	4	5	5	
	3	3	3	3	4	4	5	6	
	4	3	3	3	4	5	6	6	
	5	4	4	4	5	6	7	7	
	6	4	4	5	6	6	7	7	
	7	5	5	6	6	7	7	7	
	8+	5	5	6	7	7	7	7	

RULA  
score

B1  + B2  = B3



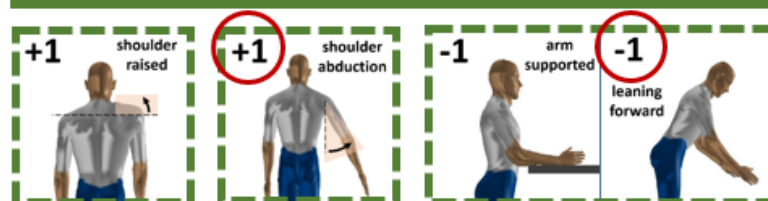
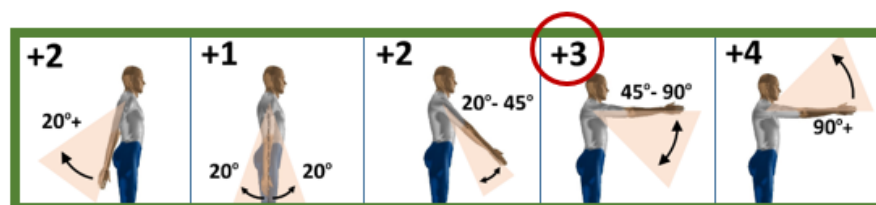
# Rapid Upper Limb Assessment (RULA): Basic worksheet instructions



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**Step 1:** Select only one value from each posture series enclosed by a **solid** border.



Upper  
arm  
score  
**3**

**Step 3:** Sum the selected values and record the result.

$$(+3) + (+1) + (-1) = 3$$

**Step 2 (optional):** Select the value for each applicable posture enclosed by a **dashed** border.

If there are two or more postures enclosed by the same **dashed** border, select only one value.

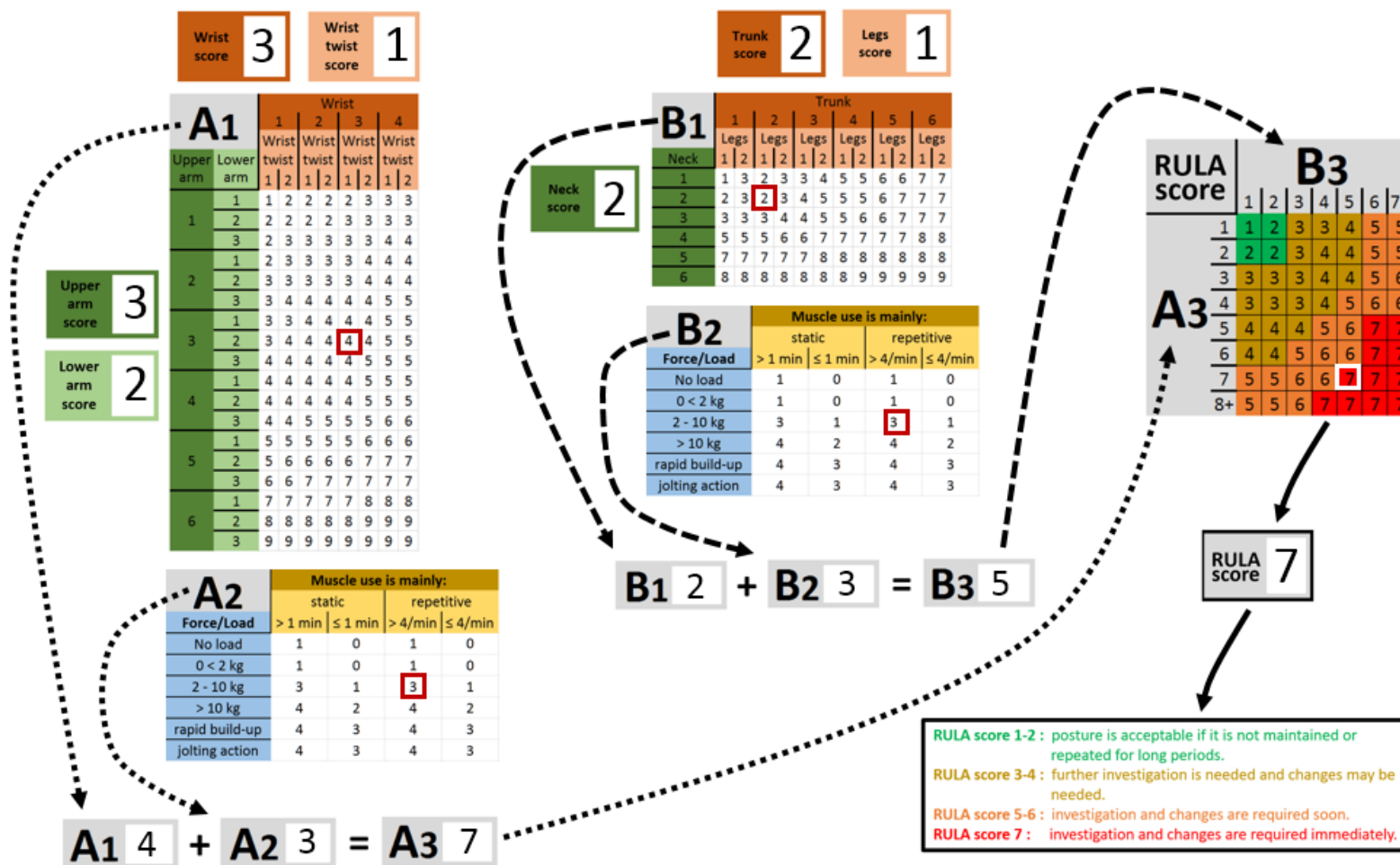
**Attention:** Before using RULA, you should be familiar with the assessment method described in: *McAtamney, L., & Corlett, E.N. (1993) RULA: a survey method for the investigation of work-related upper limb disorders. Applied Ergonomics, 24(2), 91-99.*

# Rapid Upper Limb Assessment (RULA): Basic worksheet instructions



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## RULA worksheet A

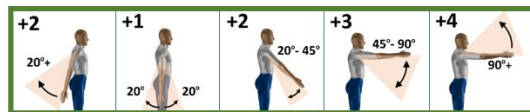
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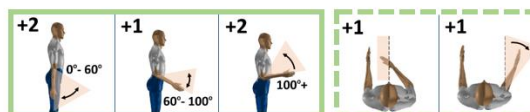


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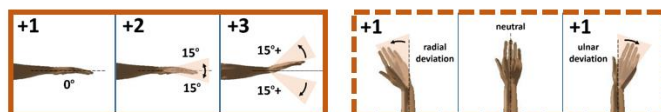
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Upper  
arm  
score



Lower  
arm  
score



Wrist  
twist  
score

Wrist  
score

$$A1 + A2 = A3$$

A1		Wrist			
		Wrist twist	Wrist twist	Wrist twist	Wrist twist
1	1	1	2	3	4
1	2	2	2	2	3
1	3	2	3	3	3
1	4	2	3	3	4
2	1	3	3	3	4
2	2	3	3	3	4
2	3	3	4	4	4
2	4	3	4	4	5
3	1	3	4	4	5
3	2	3	4	4	5
3	3	4	4	4	5
3	4	4	4	4	5
4	1	4	4	4	5
4	2	4	4	4	5
4	3	4	4	5	5
4	4	4	5	5	6
5	1	5	5	5	6
5	2	5	5	5	6
5	3	5	6	6	7
5	4	6	6	7	7
6	1	7	7	7	8
6	2	8	8	8	9
6	3	9	9	9	9

A2	Force/Load	Muscle use is mainly:			
		static > 1 min	static ≤ 1 min	repetitive > 4/min	repetitive ≤ 4/min
1	No load	1	0	1	0
2	0 < 2 kg	1	0	1	0
3	2 - 10 kg	3	1	3	1
4	> 10 kg	4	2	4	2
5	rapid build-up	4	3	4	3
6	jolting action	4	3	4	3

## RULA worksheet B

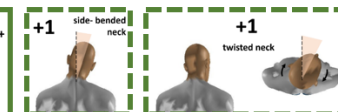
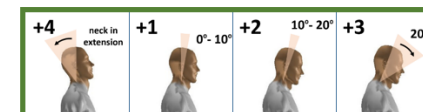
task:

date:

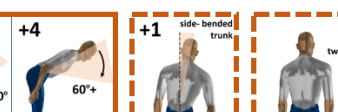
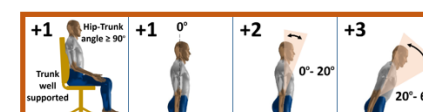


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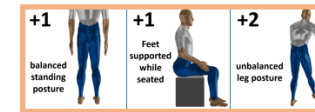
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Neck  
score



Trunk  
score



Legs  
score

**RULA score 1-2 :** posture is acceptable if it is not maintained or repeated for long periods.  
**RULA score 3-4 :** further investigation is needed and changes may be needed.  
**RULA score 5-6 :** investigation and changes are required soon.  
**RULA score 7 :** investigation and changes are required immediately.

B1		Trunk					
		Legs	Legs	Legs	Legs	Legs	Legs
1	1	1	2	3	4	5	6
1	2	2	2	3	4	5	6
2	1	3	3	4	5	6	7
2	2	3	3	4	5	6	7
3	1	4	4	5	6	7	8
3	2	4	4	5	6	7	8
4	1	5	5	6	7	8	9
4	2	5	5	6	7	8	9
5	1	6	6	7	8	9	9
5	2	6	6	7	8	9	9
6	1	7	7	8	8	8	8
6	2	8	8	8	8	9	9

B2	Force/Load	Muscle use is mainly:			
		static > 1 min	static ≤ 1 min	repetitive > 4/min	repetitive ≤ 4/min
1	No load	1	0	1	0
2	0 < 2 kg	1	0	1	0
3	2 - 10 kg	3	1	3	1
4	> 10 kg	4	2	4	2
5	rapid build-up	4	3	4	3
6	jolting action	4	3	4	3

RULA score		B3						
		1	2	3	4	5	6	7+
A3	1	1	2	3	4	5	6	7
	2	2	3	4	5	6	7	8
	3	3	4	5	6	7	8	9
	4	4	5	6	7	8	9	9
	5	5	6	7	8	9	9	9
	6	6	7	8	9	9	9	9
	7	7	8	9	9	9	9	9
	8+	8	9	9	9	9	9	9

RULA  
score

$$B1 + B2 = B3$$



Image source: pexels.com

## RULA worksheet A

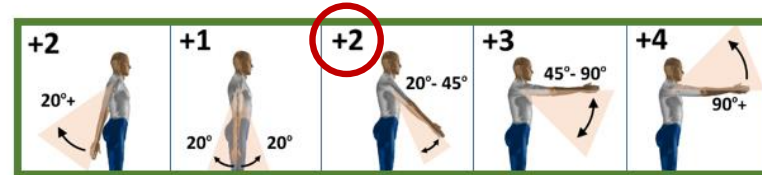
task:

date:



Occupational  
Health Clinics  
for Ontario  
Workers Inc.

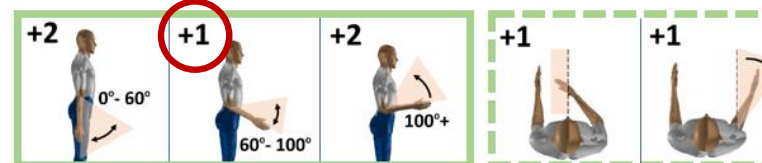
Centres de  
santé des  
travailleurs (ses)  
de l'Ontario Inc.



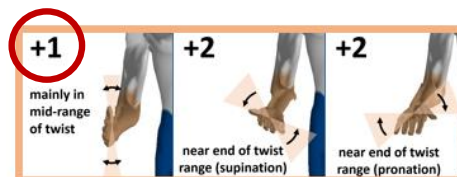
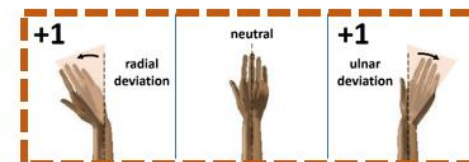
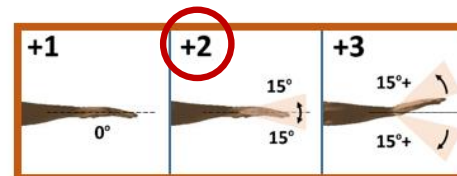
$$(+2) + (-1) = 1$$



Upper  
arm  
score **1**



Lower  
arm  
score **1**



Wrist  
twist  
score **1**

Wrist  
score **2**

A1		Wrist							
		1		2		3		4	
		Wrist twist	Wrist twist	Wrist twist	Wrist twist	Wrist twist	Wrist twist	Wrist twist	Wrist twist
Upper arm	1	1	2	2	2	2	3	3	3
	2	2	2	2	2	3	3	3	3
	3	2	3	3	3	3	3	4	4
2	1	2	3	3	3	3	4	4	4
	2	3	3	3	3	3	4	4	4
	3	3	4	4	4	4	4	5	5
3	1	3	3	4	4	4	4	5	5
	2	3	4	4	4	4	4	5	5
	3	4	4	4	4	4	5	5	5
4	1	4	4	4	4	4	5	5	5
	2	4	4	4	4	4	5	5	5
	3	4	4	5	5	5	5	6	6
5	1	5	5	5	5	5	6	6	6
	2	5	6	6	6	6	7	7	7
	3	6	6	7	7	7	7	8	8
6	1	7	7	7	7	7	8	8	8
	2	8	8	8	8	8	9	9	9
	3	9	9	9	9	9	9	9	9

A2	Force/Load	Muscle use is mainly:			
		static		repetitive	
		> 1 min	≤ 1 min	> 4/min	≤ 4/min
	No load	1	0	1	0
	0 < 2 kg	1	0	1	0
	2 - 10 kg	3	1	3	1
	> 10 kg	4	2	4	2
	rapid build-up	4	3	4	3
	jolting action	4	3	4	3

$$A1 \ 2 + A2 \ 1 = A3 \ 3$$





Image source: pexels.com

## RULA worksheet B

task:

date:



Occupational  
Health Clinics  
for Ontario  
Workers Inc.

Centres de  
santé des  
travailleurs (ses)  
de l'Ontario Inc.

+4

neck in extension

+1

0°- 10°

**+2**

10°- 20°

+3

20°+

+1

side-bended neck

+1

twisted neck

Neck score

2

+1

Hip-Trunk angle ≥ 90°

+1

0°

**+2**

0°- 20°

+3

20°- 60°

+4

60°+

+1

side-bended trunk

+1

twisted trunk

Trunk score

2

+1

balanced standing posture

**+1**

supported while seated

+2

unbalanced leg posture

Legs score

1

**RULA score 1-2 :** posture is acceptable if it is not maintained or repeated for long periods.

**RULA score 3-4 :** further investigation is needed and changes may be needed.

**RULA score 5-6 :** investigation and changes are required soon.

**RULA score 7 :** investigation and changes are required immediately.

B1	Trunk											
	Legs		Legs		Legs		Legs		Legs		Legs	
Neck	1	2	1	2	1	2	1	2	1	2	1	2
1	1	3	2	3	3	4	5	5	6	6	7	7
<b>2</b>	2	3	<b>2</b>	3	4	5	5	5	6	7	7	7
3	3	3	3	4	4	5	5	6	6	7	7	7
4	5	5	5	6	6	7	7	7	7	7	8	8
5	7	7	7	7	7	8	8	8	8	8	8	8
6	8	8	8	8	8	8	8	9	9	9	9	9

B2	Muscle use is mainly:			
	static		repetitive	
Force/Load	> 1 min	≤ 1 min	> 4/min	≤ 4/min
No load	<b>1</b>	0	1	0
0 < 2 kg	1	0	1	0
2 - 10 kg	3	1	3	1
> 10 kg	4	2	4	2
rapid build-up	4	3	4	3
jolting action	4	3	4	3

RULA score	B3						
	1	2	<b>3</b>	4	5	6	7+
1	1	2	3	3	4	5	5
2	2	2	3	4	4	5	5
<b>3</b>	3	3	<b>3</b>	4	4	5	6
4	3	3	3	4	5	6	6
5	4	4	4	5	6	7	7
6	4	4	5	6	6	7	7
7	5	5	6	6	7	7	7
8+	5	5	6	7	7	7	7

RULA score

3

$$B1 \ 2 + B2 \ 1 = B3 \ 3$$





Image source: pexels.com

## RULA worksheet A

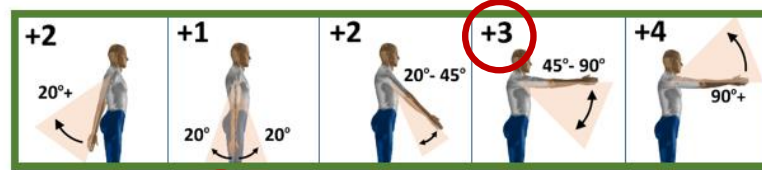
task:

date:

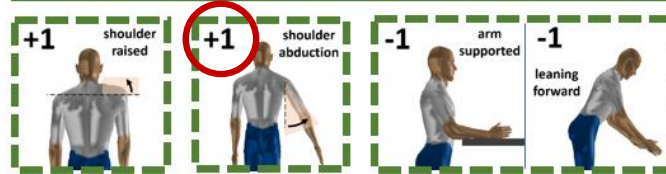


Occupational  
Health Clinics  
for Ontario  
Workers Inc.

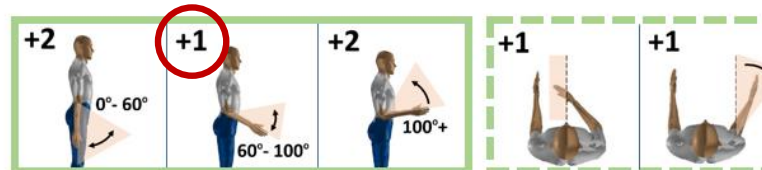
Centres de  
santé des  
travailleurs (ses)  
de l'Ontario Inc.



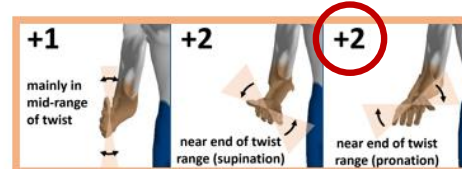
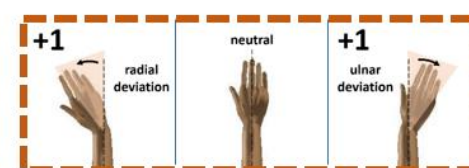
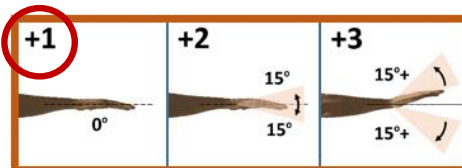
$$(+3) + (+1) = 4$$



Upper  
arm  
score **4**



Lower  
arm  
score **1**



Wrist  
twist  
score **2**

Wrist  
score **1**

A1		Wrist							
		Wrist twist		Wrist twist		Wrist twist		Wrist twist	
Upper arm	Lower arm	1	2	1	2	1	2	1	2
1	1	2	2	2	2	3	3	3	3
2	2	3	3	3	3	4	4	4	4
3	3	4	4	4	4	5	5	5	5
4	4	5	5	5	5	6	6	6	6
5	5	6	6	6	6	7	7	7	7
6	6	7	7	7	7	8	8	8	8

A2	Muscle use is mainly:			
	static		repetitive	
Force/Load	> 1 min	≤ 1 min	> 4/min	≤ 4/min
No load	1	0	1	0
0 < 2 kg	1	0	1	0
2 - 10 kg	3	1	3	<b>1</b>
> 10 kg	4	2	4	2
rapid build-up	4	3	4	3
jolting action	4	3	4	3

$$A1 \ 4 + A2 \ 1 = A3 \ 5$$





Image source: pexels.com

## RULA worksheet B

task:

date:



Occupational  
Health Clinics  
for Ontario  
Workers Inc.

Centres de  
santé des  
travailleurs (ses)  
de l'Ontario Inc.

<b>+4</b> neck in extension	<b>+1</b> 0°- 10°	<b>+2</b> 10°- 20°	<b>+3</b> 20°+	<b>+1</b> side-bended neck	<b>+1</b> twisted neck	<b>Neck score</b> <b>3</b>	
<b>+1</b> Hip-Trunk angle ≥ 90° Trunk well supported	<b>+1</b> 0°	<b>+2</b> 0°- 20°	<b>+3</b> 20°- 60°	<b>+4</b> 60°+	<b>+1</b> side-bended trunk	<b>+1</b> twisted trunk	<b>Trunk score</b> <b>3</b>
<b>+1</b> balanced standing posture	<b>+1</b> feet supported while seated	<b>+2</b> unbalanced leg posture	<b>Legs score</b> <b>1</b>				

**RULA score 1-2 :** posture is acceptable if it is not maintained or repeated for long periods.

**RULA score 3-4 :** further investigation is needed and changes may be needed.

**RULA score 5-6 :** investigation and changes are required soon.

**RULA score 7 :** investigation and changes are required immediately.

B1	Trunk											
	Legs		Legs		Legs		Legs		Legs		Legs	
1	1	2	1	2	1	2	1	2	1	2	1	2
2	2	3	2	3	2	3	2	3	2	3	2	3
3	3	3	3	4	4	5	5	6	6	7	7	7
4	5	5	5	6	6	7	7	7	7	8	8	8
5	7	7	7	7	7	8	8	8	8	8	8	8
6	8	8	8	8	8	8	9	9	9	9	9	9

B2	Muscle use is mainly:			
	static		repetitive	
Force/Load	> 1 min	≤ 1 min	> 4/min	≤ 4/min
< 2 kg	1	0	1	0
2 - 10 kg	3	1	3	1
> 10 kg	4	2	4	2
rapid build-up	4	3	4	3
jolting action	4	3	4	3

RULA score	B3											
	1	2	3	4	5	6	7+	1	2	3	4	5
1	1	2	3	3	4	5	5	1	2	3	3	4
2	2	2	3	4	4	5	5	2	2	3	4	4
3	3	3	3	4	4	5	6	3	3	3	4	4
4	4	3	3	3	4	5	6	4	3	3	3	4
5	5	4	4	4	5	6	7	5	4	4	4	5
6	6	4	4	5	6	6	7	6	4	4	5	6
7	7	5	5	6	6	7	7	7	5	5	6	6
8+	8	5	5	6	7	7	7	8	5	5	6	7

**RULA score** **6**

$$B1 \ 4 + B2 \ 1 = B3 \ 5$$



Image source: pexels.com

## RULA worksheet A

task: \_\_\_\_\_ date: \_\_\_\_\_

Occupational Health Clinics for Ontario Workers Inc.

Centres de santé des travailleurs (ses) de l'Ontario Inc.

**+2**  
20°+

**+1**  
20° 20°

**+2**  
20°- 45°

**+3**  
45°- 90°

**+4**  
90°+

**+1**  
shoulder raised

**+1**  
shoulder abduction

**-1**  
arm supported

**-1**  
leaning forward

**+2**  
0°- 60°

**+1**  
60°- 100°

**+2**  
100°+

**+1**  
0°

**+2**  
15° 15°

**+3**  
15°+ 15°+

**+1**  
radial deviation

neutral

**+1**  
ulnar deviation

**Upper arm score**  
2

**Lower arm score**  
2

**Wrist score**  
2

**Wrist score**  
2

**A1**

3

+

**A2**

3

=

**A3**

6

A1	Wrist							
	1		2		3		4	
	Wrist twist	Wrist twist	Wrist twist	Wrist twist	Wrist twist	Wrist twist	Wrist twist	Wrist twist
1	1	2	2	2	2	3	3	3
2	1	2	2	3	3	3	4	4
3	1	2	3	3	3	4	4	5
4	1	2	3	4	4	4	5	5
5	1	2	3	4	4	4	5	5
6	1	2	3	4	4	4	5	5

A2	Muscle use is mainly:			
	static		repetitive	
Force/Load	> 1 min	≤ 1 min	> 4/min	≤ 4/min
No load	1	0	1	0
0 < 2 kg	1	0	1	0
2 - 10 kg	3	1	3	1
> 10 kg	4	2	4	2
rapid build-up	4	3	4	3
jolting action	4	3	4	3

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Image source: pexels.com

## RULA worksheet B

task: \_\_\_\_\_ date: \_\_\_\_\_



Occupational Health Clinics for Ontario Workers Inc. Centres de santé des travailleurs (ses) de l'Ontario Inc.

**Neck**

+4 neck in extension

+1 0°- 10°

+2 10°- 20°

+3 20°+

+1 side-bended neck

+1 twisted neck

Neck score **1**

**Trunk**

+1 Hip-Trunk angle ≥ 90°

+1 0°

+2 0°- 20°

+3 20°- 60°

+4 60°+

+1 side-bended trunk

+1 twisted trunk

Trunk score **3**

**Legs**

+1 balanced standing posture

+1 Feet supported while seated

+2 unbalanced leg posture

Legs score **2**

**RULA score 1-2 :** posture is acceptable if it is not maintained or repeated for long periods.

**RULA score 3-4 :** further investigation is needed and changes may be needed.

**RULA score 5-6 :** investigation and changes are required soon.

**RULA score 7 :** investigation and changes are required immediately.

B1	Trunk											
	1		2		3		4		5		6	
Neck	1	2	1	2	1	2	1	2	1	2	1	2
1	1	3	2	3	3	4	5	5	6	6	7	7
2	2	3	2	3	4	5	5	5	6	7	7	7
3	3	3	3	4	4	5	5	6	6	7	7	7
4	5	5	5	6	6	7	7	7	7	7	8	8
5	7	7	7	7	7	8	8	8	8	8	8	8
6	8	8	8	8	8	8	8	9	9	9	9	9

B2	Muscle use is mainly:			
	static		repetitive	
Force/Load	> 1 min	≤ 1 min	> 4/min	≤ 4/min
No load	1	0	1	0
0 < 2 kg	1	0	1	0
2 - 10 kg	3	1	3	1
> 10 kg	4	2	4	2
rapid build-up	4	3	4	3
jolting action	4	3	4	3

RULA score	B3						
	1	2	3	4	5	6	7+
1	1	2	3	3	4	5	5
2	2	2	3	4	4	5	5
3	3	3	3	4	4	5	6
4	3	3	3	4	5	6	6
5	4	4	4	5	6	7	7
6	4	4	5	6	6	7	7
7	5	5	6	6	7	7	7
8+	5	5	6	7	7	7	7

**B1 4 + B2 3 = B3 7**

**RULA score **7****

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Adapted from: McAtamney, L., & Corlett, E.N. (1993) RULA: a survey method for the investigation of work-related upper limb disorders. Applied Ergonomics, 24(2), 91-99.



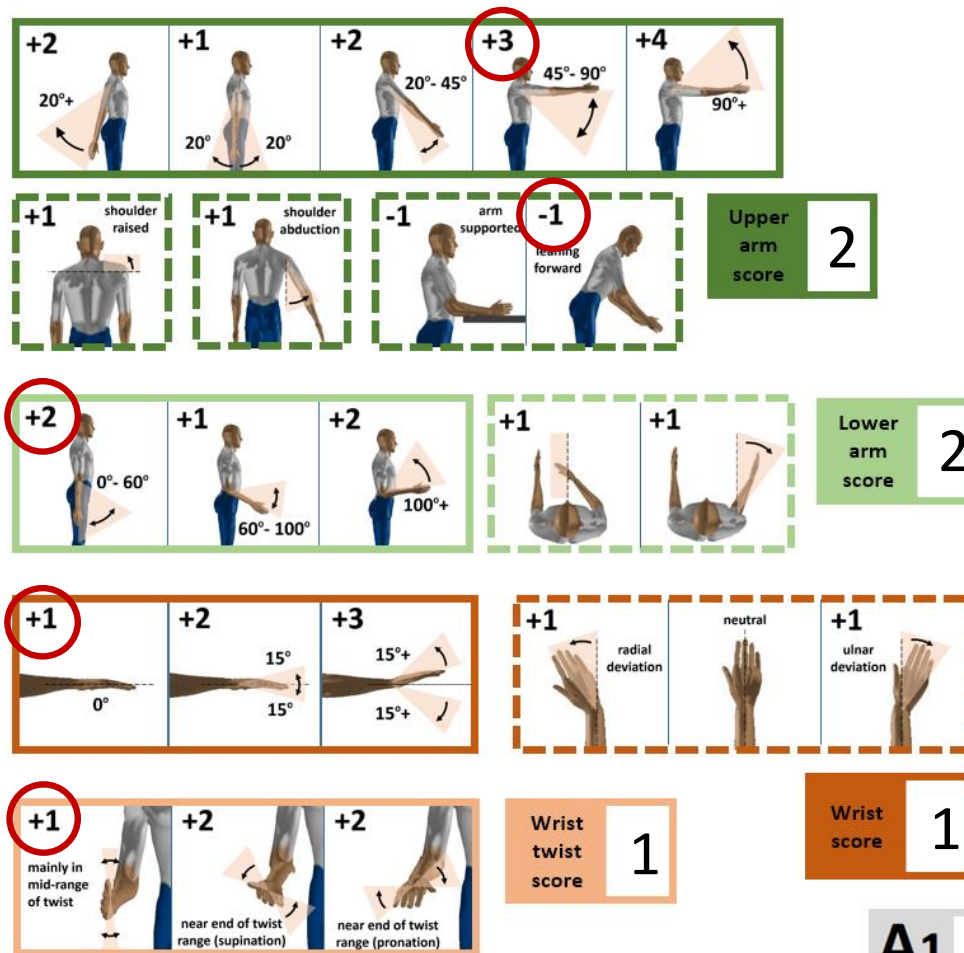
## RULA worksheet A

task:

date:

Occupational  
Health Clinics  
for Ontario  
Workers Inc.

Centres de  
santé des  
travailleurs (ses)  
de l'Ontario Inc.



A1		Wrist			
		1	2	3	4
Upper arm	Lower arm	twist	twist	twist	twist
		1 2	1 2	1 2	1 2
1	1	2	2	2	3
	2	2	2	2	3
	3	2	3	3	4
2	1	2	3	3	4
	2	3	3	3	4
	3	3	4	4	5
3	1	3	3	4	5
	2	3	4	4	5
	3	4	4	4	5
4	1	4	4	4	5
	2	4	4	4	5
	3	4	4	5	6
5	1	5	5	5	6
	2	5	6	6	7
	3	6	6	7	7
6	1	7	7	7	8
	2	8	8	8	9
	3	9	9	9	9

A2 Force/Load	Muscle use is mainly:			
	static		repetitive	
	> 1 min	≤ 1 min	> 4/min	≤ 4/min
No load	1	0	1	0
0 < 2 kg	1	0	1	0
2 - 10 kg	3	1	3	1
> 10 kg	4	2	4	2
rapid build-up	4	3	4	3
jolting action	4	3	4	3

$$A_1^3 + A_2^4 = A_3^7$$





## RULA worksheet B

task:

date:



Occupational  
Health Clinics  
for Ontario  
Workers Inc.

Centres de  
santé des  
travailleurs (ses)  
de l'Ontario Inc.

+4 neck in extension +1 0°- 10° <b>+2</b> 10°- 20° +3 20°+				+1 side-bended neck +1 twisted neck		<b>Neck score</b> 2
+1 Hip-Trunk angle ≥ 90° +1 0° +2 0°- 20° +3 20°- 60° <b>+4</b> 60°+				+1 side-bended trunk +1 twisted trunk		<b>Trunk score</b> 4
+1 balanced standing posture +1 Feet supported while seated <b>+2</b> unbalanced leg posture				<b>Legs score</b> 2		

**RULA score 1-2 :** posture is acceptable if it is not maintained or repeated for long periods.

**RULA score 3-4 :** further investigation is needed and changes may be needed.

**RULA score 5-6 :** investigation and changes are required soon.

**RULA score 7 :** investigation and changes are required immediately.

B1	Trunk											
	1		2		3		4		5		6	
Neck	1	2	1	2	1	2	1	2	1	2	1	2
1	1	3	2	3	3	4	5	5	6	6	7	7
<b>2</b>	2	3	2	3	4	5	5	<b>5</b>	6	7	7	7
3	3	3	3	4	4	5	5	6	6	7	7	7
4	5	5	5	6	6	7	7	7	7	7	8	8
5	7	7	7	7	7	8	8	8	8	8	8	8
6	8	8	8	8	8	8	8	9	9	9	9	9

B2	Muscle use is mainly:			
	static		repetitive	
Force/Load	> 1 min	≤ 1 min	> 4/min	≤ 4/min
No load	1	0	1	0
0 < 2 kg	1	0	1	0
2 - 10 kg	3	1	3	1
<b>&gt; 10 kg</b>	<b>4</b>	2	4	2
rapid build-up	4	3	4	3
jolting action	4	3	4	3

RULA score	B3											
	1	2	3	4	5	6	7+					
1	1	2	3	3	4	5	5					
2	2	2	3	4	4	5	5					
3	3	3	3	4	4	5	6					
4	3	3	3	4	5	6	6					
5	4	4	4	5	6	7	7					
6	4	4	5	6	6	7	7					
<b>7</b>	5	5	6	6	7	7	<b>7</b>					
8+	5	5	6	7	7	7	7					

$$\text{B1 } 5 + \text{B2 } 4 = \text{B3 } 9$$

**RULA score** 7



A2	Muscle use is mainly:			
	static		repetitive	
	> 1 min	≤ 1 min	> 4/min	≤ 4/min
Force/Load				
No load	1	0	1	0
0 < 2 kg	1	0	1	0
2 - 10 kg	3	1	3	1
> 10 kg	4	2	4	2
rapid build-up	4	3	4	3
jolting action	4	3	4	3



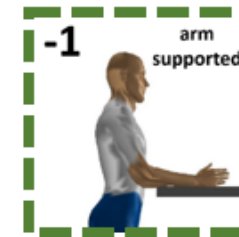
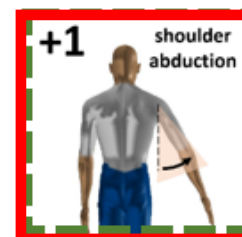
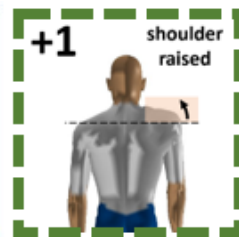
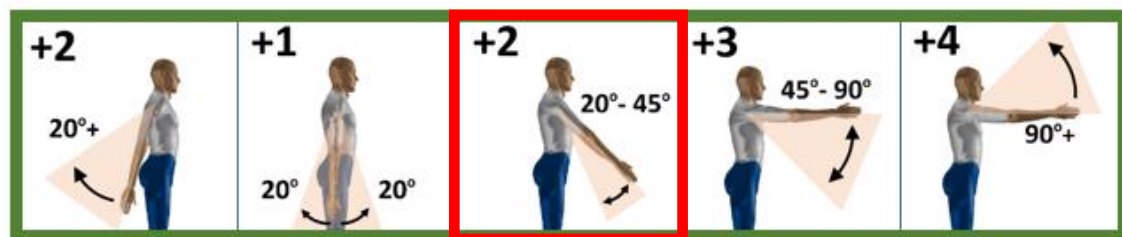
B2	Muscle use is mainly:			
	static		repetitive	
	> 1 min	≤ 1 min	> 4/min	≤ 4/min
Force/Load				
No load	1	0	1	0
0 < 2 kg	1	0	1	0
2 - 10 kg	3	1	3	1
> 10 kg	4	2	4	2
rapid build-up	4	3	4	3
jolting action	4	3	4	3





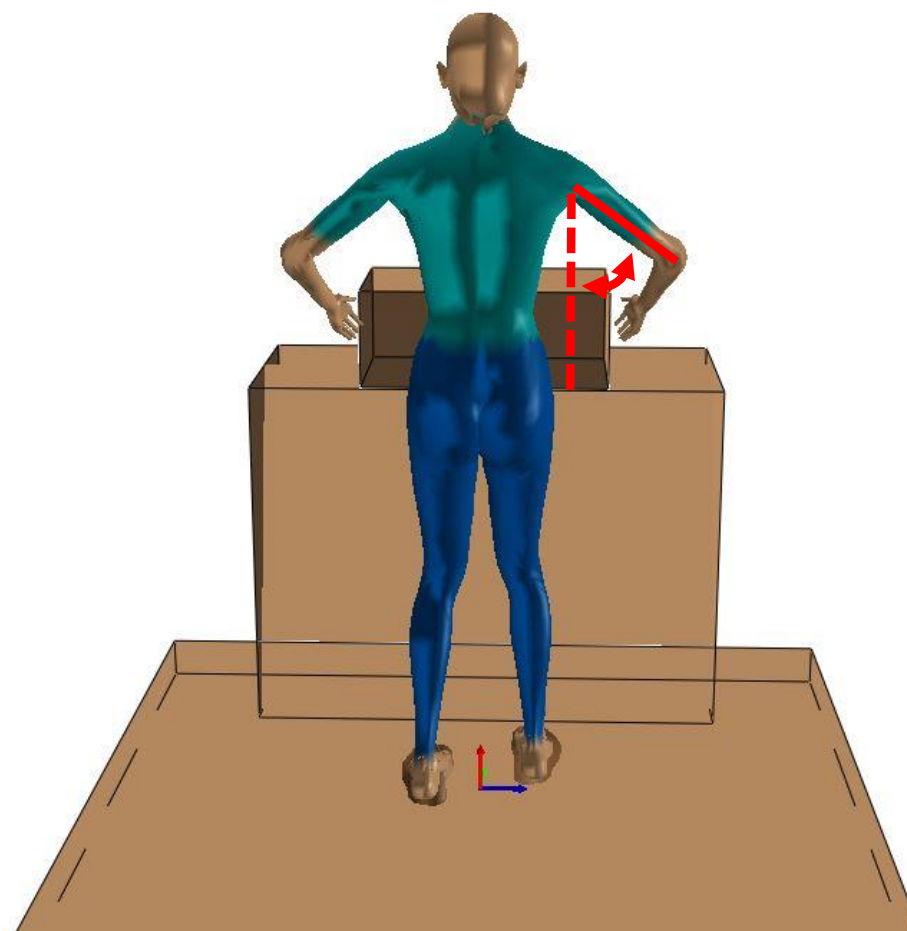
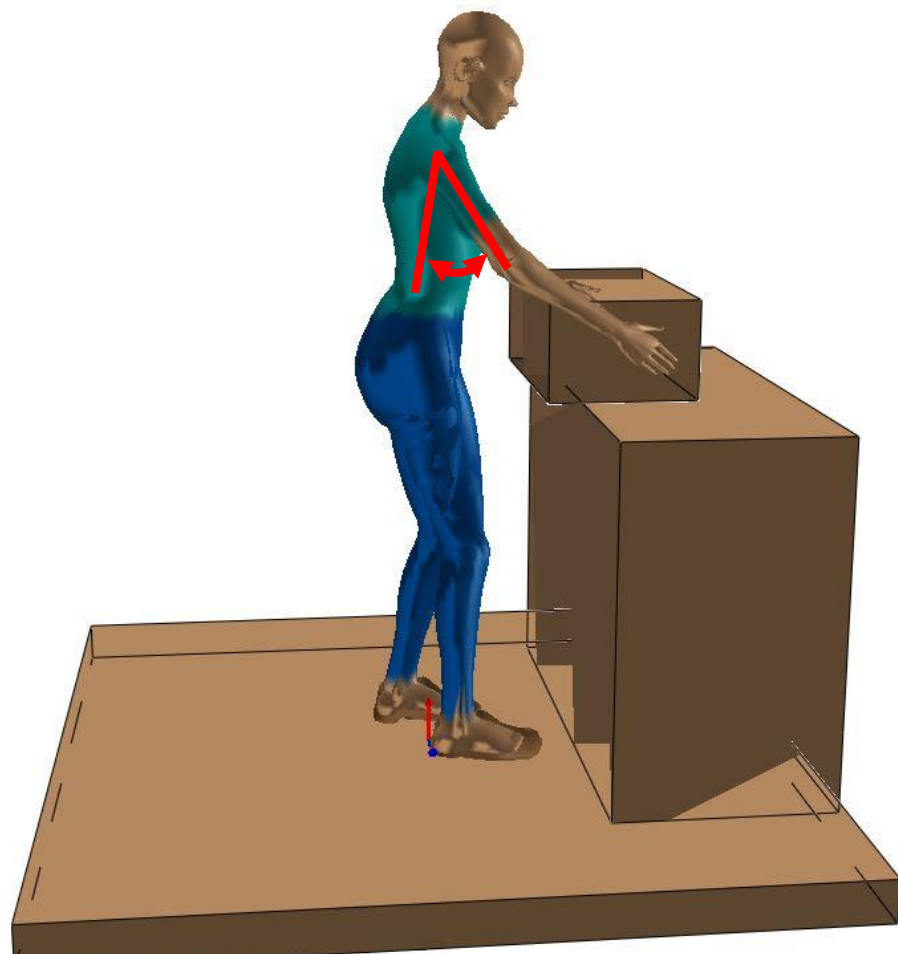
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Workers Inc.

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Upper  
arm  
score

3

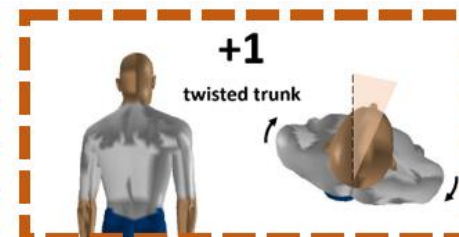
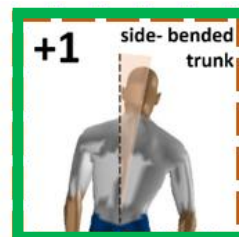
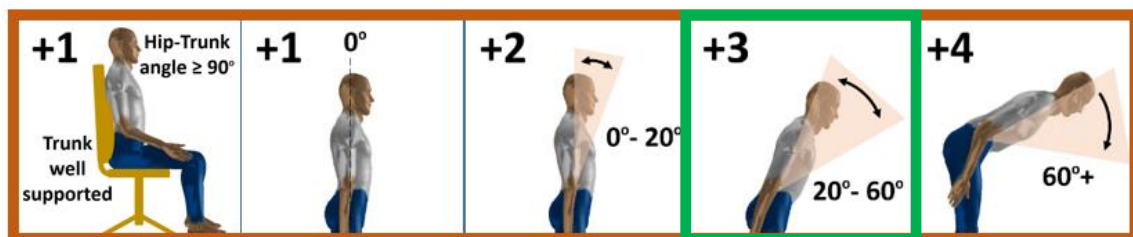






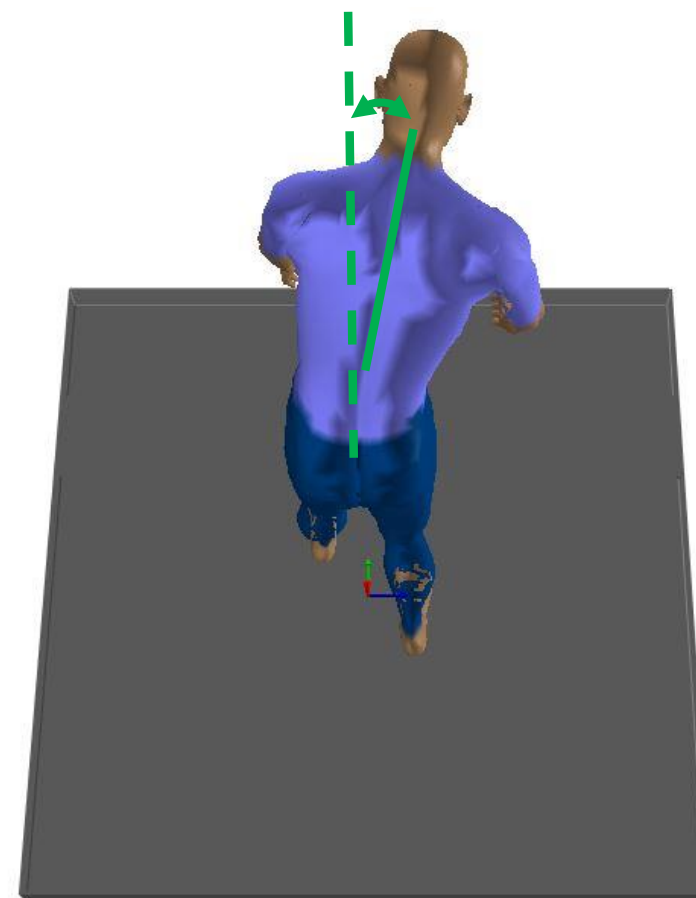
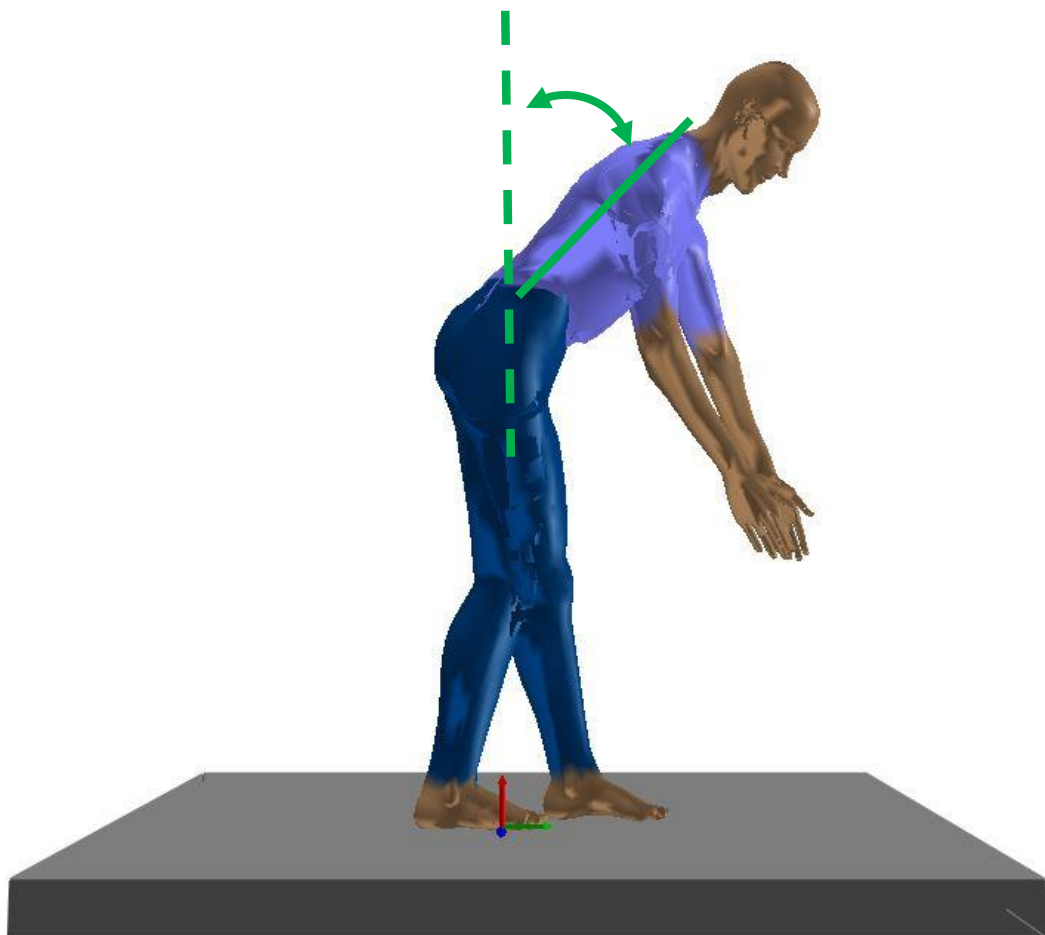
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Trunk  
score

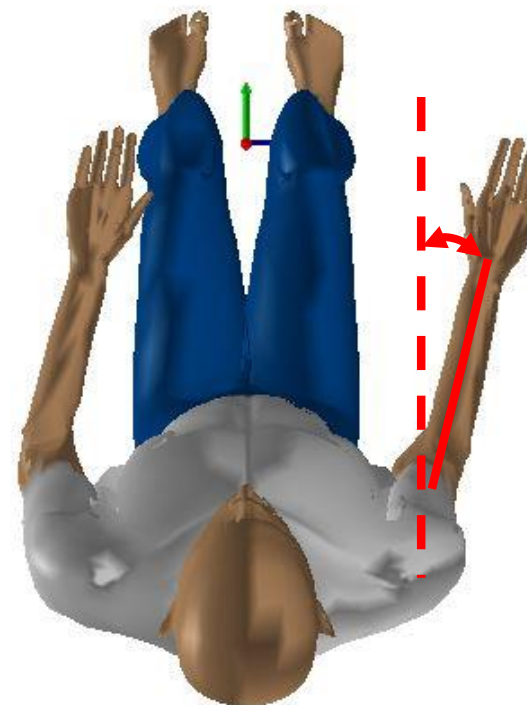
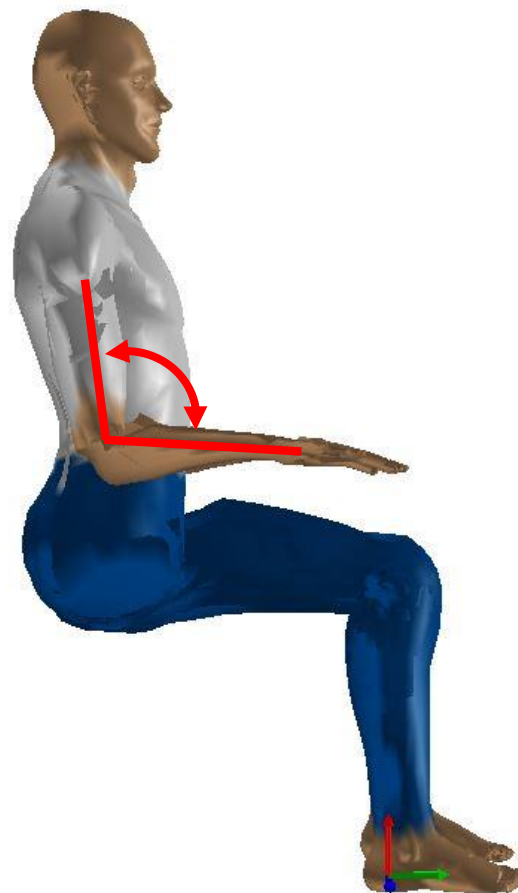
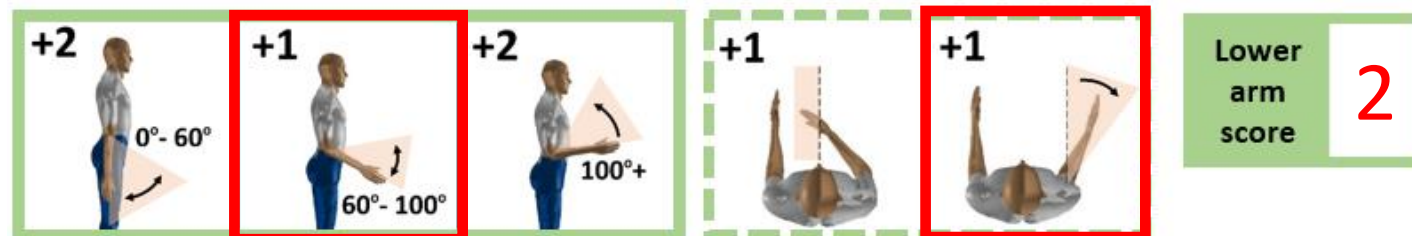
4





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Search

NEWS & EVENTSAPPS, TOOLS & CALCULATORSOTHER RESOURCES

Our website is being updated. All Apps, Tools & Calculators are being updated. If you are looking for something, Contact us.

REPETITIVE STRAIN INJURY DAY 2022  
An Annual, International Event

A Weekly Webinar Series in February

10th Musculoskeletal Disorders17th Integrating Components for a Return-to-Work Program24th Ergonomics Specific to the Workplace28th

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Dedicated to the Identification and Prevention of Work-Related Injuries and Illnesses

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Ergonomic APPS, TOOLS and CALCULATORS

Long popular with workers and workplaces OH COW tools and calculators translate a complex problem into a simple solution by defining a problem and/or contributing to solutions. Try one today!

Ergonomic Apps

Ergonomic Tools and Calculators

Note: These Ergonomics Tools may be useful for a wide variety of users such as Individual Workers, Joint Health Experts, WSIB Representatives, Rehabilitation Specialists, Return to Work Specialists, Ergonomists, or anyone in the workplace.

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NOV 29 2021

**Strain Index\***

Repetitive Work Involving Hands and Wrists A workplace risk assessment tool used to evaluate the risk of developing a musculoskeletal disorder to the hand, wrist, and elbow.

ERGONOMIC TOOLS / CALCULATORS, INJURY PREVENTION, MUSCULOSKELETAL DISORDERS (MSD), TOOLS AND CALCULATORS

NOV 29 2021

**Rapid Upper Limb Risk Assessment (RULA) Tool\***

A Posture Risk Assessment Tool A workplace risk assessment tool that evaluates the exposure of workers to ergonomic risk factors associated with upper extremity musculoskeletal disorders.

ERGONOMIC TOOLS / CALCULATORS, MUSCULOSKELETAL DISORDERS (MSD), TOOLS AND CALCULATORS

NOV 29 2021

**Rapid Office Strain Assessment (ROSA) Tool\***


Risk Assessment for Office Workstations A picture-based checklist used to quantify exposure to risk factors in an office environment. An action level for change based on the reports of the workers discomforts is provided upon completion.

ERGONOMIC TOOLS / CALCULATORS, MUSCULOSKELETAL DISORDERS (MSD), TOOLS AND CALCULATORS, WORK ENVIRONMENT

Rapid Upper Limb Assessment

Upper Arm Angle

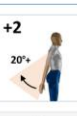
+1



Between -20° and 20°

☒


+2



Extension > than -20°

☐

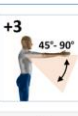
+2



Flexion between 20° and 45°

☐


+3



Flexion between 45° and 90°

☐

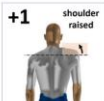
+4



Flexion > 90°

☐

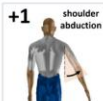
+1



Shoulder is Raised

☐


+1



Arm Abducted


☐

-1



OR

-1

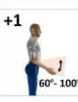


Arm Supported

☐

Lower Arm Angle

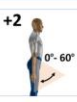
+1



60° - 100°

☒

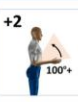
+2



0° - 60°

☐


+2



100°+


☐

+1



OR

+1




Arm to Side/Across Midline

☐

Wrist


+1



Neutral

☒


+2



15° of flexion/extension

☐


+3




> 15° of flexion/extension

☐

neutral




+1



OR


+1



Ulnar or Radial Deviation

☐


+1



Mid Range


☒

+2



OR

+2




Extreme Twist


☐

Back Next

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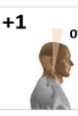
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Rapid Upper Limb Assessment

Head and Neck


+1



0° - 10°

☒


+2



10° to 20°

☐


+3



20°+

☐


+4



Any Extension

☐

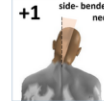
+1



Neck Twisted

☐

+1

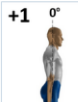


Side Bending

☐

Trunk


+1



0° - 10°

☒


+2



10° to 20°

☐


+3



20° to 60°

☐

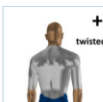
+4



20° to 60°

☐

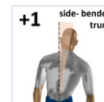
+1



Spine Twisted

☐

+1




Side Bending

☐

Legs


+1



Evenly Balanced

☐


+1



Feet Supported (seated)

☒


+2




Unbalanced

☐

Back Next



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Rapid Upper Limb Assessment

Load / Force

No Load (+0)

☒

>0 to 2kg

☐

2 to 10kg

☐

>10kg / shock

☐

Muscle Use

Static

- Posture held more than 1 per minute

No Load

☒

Intermittent

- Static <1 minute

- frequency <4/min.

☐

Repetitive

- Frequency > 4/min

☐

Back Next

RULA Grand Score

1

1 - 2 Negligible Risk  
3 - 4 Low Risk  
4 - 6 Medium Risk  
6+ Very High Risk

Upper Limb Total

1

Neck, Trunk and Legs

1

Click here to do another RULA evaluation



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# THANK YOU

Please send feedback and/or suggestions on any of our Ergonomics tools/apps to:

[ergo@ohcow.on.ca](mailto:ergo@ohcow.on.ca)