

# Revised Strain Index Assessment Worksheet

## Step 1: Measure the risk factors

Factor	Observation	Left Hand	Right Hand
<b>Intensity of Exertion</b> (Borg Scale; I)  An estimate of the force requirement to perform the task once (Rate of perceived exertion)	8-10 Near Maximal Uses shoulder or trunk for force		
	6-7 Very Hard Substantial effort with changed facial expression		
	4-5 Hard Obvious effort but unchanged facial expression		
	3 Somewhat Hard Noticeable or definite effort		
	0-2 Light Barely noticeable or relaxed effort		
<b>Efforts Per Minute</b> (Frequency; E)  Average number of efforts over a representative sample of task requirements (several complete task cycles).	Total Number of Exertions Observed		
	Total Observation Time (sec.)		
	Efforts Per Minute		
<b>Duration Per Exertion</b> (Duration; D)	Average Single Exertion Time (sec.)		
<b>Hand/Wrist Posture</b> (Posture; P)  Refers to the anatomical position of the hand/wrist relative to anatomical neutral (degrees)		<b>Posture</b>	
		Flexion <input type="checkbox"/> Flexion <input type="checkbox"/> Extension <input type="checkbox"/> Extension <input type="checkbox"/>	
<b>Duration of Task Per Day</b> (Hours; H)	Total time that a task is performed per shift (hours)	<b>Position (degrees)</b>	
		degrees	degrees

## Step 2: Determine the multipliers

Intensity of Exertion		Efforts Per Minute		Duration Per Exertion	
I	IM Factor	E	EM Factor	D (sec)	DM Factor
0	0.40	0	0.1	0	0.45
1	1.57	10	2.6	10	3.55
2	2.62	20	5.1	20	6.65
3	3.71	30	7.6	30	9.75
4	5.02	40	10.1	40	12.85
5	6.70	50	12.6	50	15.95
6	8.79	60	15.1	60	19.05
7	11.51	70	17.6	70	22.00
8	15.08	80	20.1	80	24.56
9	19.70	90	22.6	90	26.82
10	25.61	100	27.78	100	28.84

  

Intensity Multiplier (IM)		Efforts Multiplier (EM)		Duration Multiplier (DM)	
L	R	L	R	L	R

  

Hand/Wrist Posture				Duration of Task Per Day	
P : Flexion (degrees)	PM Factor	P : Extension (degrees)	PM Factor	H (hours)	HM Factor
0	1.0	0	1.0	0	0.2
10	1.11	10	1.0	1	0.52
20	1.24	20	1.0	2	0.62
30	1.37	30	1.0	3	0.7
40	1.52	40	1.03	4	0.77
50	1.68	50	1.11	5	0.83
60	1.86	60	1.25	6	0.89
70	2.05	70	1.45	7	0.95
80	2.27	80	1.7	8	1.0
90	2.5	90	2.01	9	1.05
				10	1.1
				11	1.15
				12	1.2

  

Posture Multiplier (PM)		Hours Multiplier (HM)
L	R	

## Step 3: Calculate RSI Score for both hands

**Left**     ×  ×  ×  ×  =   
           IM        EM        DM        PM        HM                    RSI

**Right**     ×  ×  ×  ×  =   
           IM        EM        DM        PM        HM                    RSI

**Result key**

<b>RSI ≤ 10</b>	Job is probably safe
<b>RSI &gt; 10</b>	Job is probably hazardous