



ERGONOMICS PROGRAM

1. PURPOSE

- 1.1. The University of Notre Dame's Ergonomics Program establishes a formal process to improve the overall health and safety of faculty and staff by preventing work-related injuries caused by musculoskeletal disorders (MSDs). This is accomplished by eliminating or reducing the risk factors that cause MSDs.

2. SCOPE

- 2.1. This applies to all University of Notre Dame personnel in all work operations, including workstations and office areas.

3. DEFINITIONS

- 3.1. **Ergonomics:** the scientific discipline concerned with the understanding of the interactions among humans and other elements of a system, and the profession that applies theory, principles, data and methods to design in order to optimize human well-being and overall system performance. It can be described as fitting the job to the person rather than forcing the person to fit the job.
- 3.2. **Ergonomic Risk Factors:** Include repetition, force, awkward postures, static postures, contact stress, vibration, cold temperatures, hot temperatures, insufficient recovery, and psychosocial.
- 3.3. **Ergonomic Stressors/Hazards:** Any condition that poses a biomechanical stress on the human body associated with an increased risk for developing musculoskeletal disorders.
- 3.4. **Musculoskeletal Disorder (MSD):** disorders of the muscles, nerves, tendons, ligaments, joints, cartilage and spinal discs. MSDs do not include disorders caused by slips, trips, falls, motor vehicle accidents, or other similar accidents.
- 3.5. **Work-related MSDs:** Work activities or conditions (such as job tasks, workstation design, etc.) where ergonomic stressors are present that are reasonably likely to cause or contribute to an MSD.

4. RESPONSIBILITIES

- 4.1. Notre Dame Wellness Center (NDWC) Occupational Health Nurses:
 - 4.1.1. Scheduling and completing departmental ergonomic assessments with requesting departments.
 - 4.1.2. Scheduling and completing ergonomics training with requesting departments.
 - 4.1.3. Scheduling and completing office ergonomics assessments with requesting faculty and staff.

- 4.1.4. Providing documentation and any recommendations from the ergonomics assessment to the employee and their supervisor.
 - 4.1.5. Conducting ergonomic assessments in response to ergonomic related injuries on campus.
 - 4.1.6. Implementing stretching programs within departments across campus.
 - 4.1.7. Documenting ergonomic assessments and training sessions.
 - 4.2. Risk Management and Safety (RMS):
 - 4.2.1. Identifying specific ergonomic risk factors and their cause through analysis and evaluation of specific work tasks and workstation setups.
 - 4.2.2. Assisting in the development and implementation of solutions to reduce risk factors for work-related injury and illness.
 - 4.2.3. Developing online training resources for faculty and staff on ergonomics.
 - 4.2.4. Forwarding any ergonomic recommendations made by a medical professional for an employee to the Office of Institutional Equity.
 - 4.2.5. Ensuring all ergonomic evaluations and training sessions are documented
 - 4.3. Notre Dame Faculty and Staff:
 - 4.3.1. Reporting MSD symptoms to a supervisor.
 - 4.3.2. Requesting an ergonomic evaluation even before symptoms occur if you feel that a workstation, equipment or job task is harmful by contacting the NDWC Occupational Health Nurses. This evaluation could prevent the onset of symptoms or rule out the existence of ergonomic stressors/hazards.
 - 4.3.3. If in need of medical treatment, schedule an appointment at the NDWC.
 - 4.4. Notre Dame Departments:
 - 4.4.1. Identifying potential ergonomic stressors/hazards.
 - 4.4.2. Contacting the NDWC for evaluation of identified ergonomic stressors/hazards.
 - 4.4.3. Providing sufficient resources to implement ergonomic recommendations in a timely manner if feasible.
 - 4.4.4. Implementing stretching programs as needed.
5. PROCESS
- 5.1. Workplace designs and job tasks requiring assessment shall be identified through requests for assessment, injuries, RMS inspections, and discovery of ergonomic risk factors.
 - 5.2. Ergonomic assessments shall be scheduled by the NDWC when workplace designs and job tasks requiring assessment are forwarded to them.
 - 5.3. Office workplace design assessments shall be documented on the Office Form (See Appendix A). The Office Form and any recommendations from the NDWC shall be provided to the employee and supervisor.
 - 5.4. Job task assessments shall be documented on the REBA Form (See Appendix B) or the RULA Form (See Appendix C) depending on the job task being assessed. The REBA or RULA Form and any recommendations from the NDWC shall be provided to the employee, supervisor, and RMS.

- 5.5. Office, REBA, and RULA Forms shall be uploaded into the Ergonomics folder in Google Drive by RMS.
- 5.6. If associated with an incident, Office, REBA and RULA forms shall be attached to the investigation in OnBase.
- 5.7. All assessment information shall be documented in the [Ergonomic Assessment Matrix](#) by RMS. Workplace design and job hazards along with controls and recommendations implemented are documented in the Ergonomic Assessment Matrix.
- 5.8. As jobs with ergonomic risk factors present themselves, RMS and the NDWC may incorporate training sessions for specific departments in order to reduce and control risks and prevent onset of work related MSDs.

6. ERGONOMIC INTERVENTION

- 6.1. When an ergonomic hazard has been identified, RMS and the NDWC shall work together with the department and employee to eliminate or reduce the cause of the ergonomic hazard in order to reduce the chance for injury for existing or future employees.
- 6.2. There are two general approaches to controlling ergonomic hazards:
Engineering and Administrative.
 - 6.2.1. Engineering Controls - Changes made to the workstations, tools, and/or machinery that modify the physical makeup of the area or process. This may include, but is not limited to, implementing a scissors lift table, hoist system, conveyor belt, ergonomic pipette, carts or other devices or pieces of equipment to the work environment.
 - 6.2.2. Administrative Controls - Changes made to reduce exposure without making physical changes to the area or process. This may include taking frequent breaks and/or job rotations. Moving workers from one area to the next can help reduce fatigue and stress on the body and help reduce injury risk.
 - 6.2.3. Engineering controls are preferred as their goal is to reduce the presence of hazards rather than to adjust the employee around the hazards. Administrative controls can be used in combination with others but should not be used as the only control for an ergonomic hazard.

7. TRAINING

- 7.1. The NDWC Occupational Health Nurses can provide ergonomics training upon request.
- 7.2. An ergonomic training course is available in complyND and can be assigned as needed.
- 7.3. NDWC Occupational Health Nurses conducting ergonomic assessments are Certified Ergonomic Specialists.

8. FREQUENCY OF REVIEW



8.1. This procedure shall be reviewed triennially and updated as needed.

9. REFERENCES

9.1. OSHA. "Ergonomics"

<https://www.osha.gov/SLTC/ergonomics/controlhazards.html>

Revision History Table

History	Effective Date

Appendix A

Computer Workstation Evaluation Checklist

Employee's Name: _____		Date: _____		<input type="checkbox"/> Initial <input type="checkbox"/> Follow Up	
WORKING POSTURES —The workstation is designed or arranged for doing computer tasks so it allows your:				Yes	No
1. Head and neck to be upright, or in-line with the torso (not bent down/back). If "no" check Monitors, Chairs and Work Surfaces.					
2. Head, neck, and trunk to face forward (not twisted). If "no" check Monitors or Chairs.					
3. Trunk to be perpendicular to floor (may lean back into backrest but not forward). If "no" check Chairs or Monitors.					
4. Shoulders and upper arms to be in-line with the torso, generally about perpendicular to the floor and relaxed (not elevated or stretched forward). If "no" check Chair.					
5. Upper arms and elbows to be close to the body (not extended outward). If "no" check Chair, Work Surface, Keyboard, and Pointer.					
6. Forearms, wrists, and hands to be straight and in-line (forearm at about 90 degrees to the upper arm). If "no" check Chair, Keyboard, Pointer.					
7. Wrists and hands to be straight (not bent up/down or sideways toward the little finger). If "no" refer to Keyboards, or Pointers.					
8. Thighs to be parallel to the floor and the lower legs to be perpendicular to floor (thighs may be slightly elevated above knees). If "no" refer to Chairs or Work Surfaces.					
9. Feet rest flat on the floor or are supported by a stable footrest. If "no" refer to Chairs, Work Surfaces.					
Notes:					
SEATING —Consider these points when evaluating the chair:				Yes	No
10. Backrest provides support for your lower back (lumbar area) and if needed, the upper back (thoracic area).					
11. Seat width and depth accommodate the specific user (seat pan not too big/small).					
12. Seat front does not press against the back of your knees and lower legs (seat pan not too long).					
13. Seat has cushioning and is rounded with a " waterfall " front (no sharp edge).					
14. Armrests , if used, support both forearms while performing computer tasks and they do not interfere with movement.					
<i>No answers to any of these questions should prompt a review of Chairs. Can the chair be adjusted to fit the client?</i>					
Notes:					
KEYBOARD/INPUT DEVICE —Consider these points when evaluating the keyboard or pointing device. The keyboard/input device is designed or arranged for doing computer tasks so the:				Yes	No
15. Keyboard/input device platform(s) is stable and large enough to hold a keyboard and an input device .					
16. Input device (mouse or trackball) is located right next to the keyboard so it can be operated without reaching .					
17. Input device is easy to activate and the shape/size fits hand (not too big/small).					



Evaluator: _____

Page 1

Source: OSHA Ergonomic Solutions: Computer Workstations eTool - Evaluation Checklist

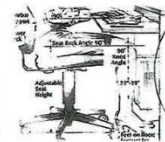
Employee's Name: _____

Date: _____ Initial: _____ Follow Up: _____

18. Wrists and hands do not rest on sharp or hard edges.			
<i>No answers to any of these questions should prompt a review of Keyboards, Pointers, or Wrist Rests.</i>			
Notes:			
MONITOR —Consider these points when evaluating the monitor. The monitor is designed or arranged for computer tasks so the:		Yes	No
19. Top of the screen is at or below eye level so it can be read without bending the head or neck down/back.			
20. User with bifocals/trifocals can read the screen without bending the head or neck backward .			
21. Monitor distance allows for reading the screen without leaning the head, neck or trunk forward/backward.			
22. Monitor position is directly in front so there is no twisting of the head or neck.			
23. Glare (for example, from windows, lights) is not reflected on the screen which can cause one to assume an awkward posture to clearly see information on the screen.			
<i>No answers to any of these questions should prompt a review of Monitors or Workstation Environment.</i>			
Notes:			
WORK AREA —Consider these points when evaluating the desk and workstation. The work area is designed or arranged for doing computer tasks so the		Yes	No
24. Thighs have sufficient clearance space between the top of the thighs and he computer table/keyboard platform (thighs are not trapped).			
25. Legs and feet have sufficient clearance space under the work surface . The individual is able to get close enough to the keyboard/input device .			
Notes:			
ACCESSORIES —Check to see if the:		Yes	No
26. Document holder , if provided, is stable and large enough to hold documents.			
27. Document holder , if provided, is placed at about the same height and distance as the monitor screen so there is little head movement, or need to re-focus, when looking from the document to the screen.			
28. Wrist/palm rest , if provided, is padded and free of sharp or square edges that push on wrists. (Flat not rounded on top.)			
29. Wrist/palm rest , if provided, allows for keeping the forearms, wrists, and hands straight and in-line when using the keyboard/input device.			
30. Telephone can be used with the head upright (not bent) and the shoulders relaxed (not elevated) when doing computer tasks at the same time.			
<i>"No" answers to any of these questions should prompt a review of Work Surfaces, Document Holders, Wrist Rests or Telephones.</i>			



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Evaluator: _____

Employee's Name: _____

Date: _____ Initial: _____ Follow Up: _____

Notes:		
GENERAL:		
31. Workstation and equipment have sufficient adjustability to promote a safe working posture and employee can make occasional changes in posture while performing computer tasks.	Yes	No
32. Computer workstation, components and accessories are maintained in serviceable condition and function properly .		
33. Computer tasks are organized in a way that allows for varying tasks with other work activities , or to take micro-breaks or recovery pauses while at the computer workstation.		
<i>"No" answers to any of these questions should prompt a review of Chairs, Work Surfaces, or Work Processes.</i>		
Notes:		
Equipment Recommendations:		
<input type="checkbox"/> Monitor <input type="checkbox"/> Keyboard Manager <input type="checkbox"/> Ergonomic Chair <input type="checkbox"/> Document Holder <input type="checkbox"/> Keyboard <input type="checkbox"/> Mouse		
<input type="checkbox"/> Wrist/Palm Rest <input type="checkbox"/> Adjustable Footrest <input type="checkbox"/> Other:		



Evaluator: _____

Appendix B

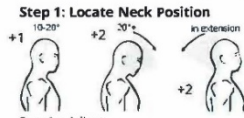


REBA Employee Assessment Worksheet

Task Name:

Date:

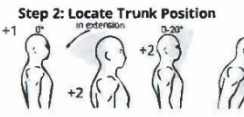
A. Neck, Trunk and Leg Analysis



Step 1: Locate Neck Position

+1
+2
+2

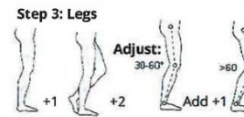
Step 1a: Adjust...
If neck is twisted: +1
If neck is side bending: +1



Step 2: Locate Trunk Position

+1
+2
+3
+4

Step 2a: Adjust...
If trunk is twisted: +1
If trunk is side bending: +1



Step 3: Legs

+1
+2
+3
+4

Adjust: 30-60°
Add +1
Add +2

Step 4: Look-up Posture Score in Table A

Using values from steps 1-3 above,
Locate score in Table A

Step 5: Add Force/Load Score

If load < 11 lbs.: +0
If load 11 to 22 lbs.: +1
If load > 22 lbs.: +2
Adjust: If shock or rapid build up of force: add +1 Force / Load Score

Step 6: Score A, Find Row in Table C

Add values from steps 4 & 5 to obtain Score A.
Find Row in Table C.

Scoring

1 = Negligible Risk
2-3 = Low Risk. Change may be needed.
4-7 = Medium Risk. Further investigate. Change Soon.
8-10 = High Risk. Investigate and Implement Change
11+ = Very High Risk. Implement Change

Scores

Table A

	Neck												
	1				2				3				
Legs	1	2	3	4	1	2	3	4	1	2	3	4	
Trunk	1	1	2	3	4	1	2	3	4	3	3	5	6
Posture	3	2	4	5	6	4	5	6	7	5	6	7	8
Score	4	3	5	6	7	5	6	7	8	6	7	8	9
	5	4	6	7	8	6	7	8	9	7	8	9	9

Table B

Lower Arm

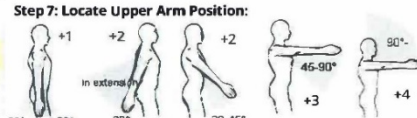
	1						2						
	Wrist	1	2	3	1	2	3	1	2	3	1	2	3
Upper Arm	1	1	2	3	2	3	4	1	2	3	2	3	4
Score	3	3	4	5	4	5	5	3	4	5	4	5	5
	4	4	5	5	6	7	7	4	4	5	5	6	7
	5	6	7	8	7	8	8	5	6	7	8	7	8
	6	7	8	8	8	9	9	6	7	8	8	8	9

Table C

Score A	Score B												
	1	1	1	1	2	3	3	4	5	5	6	7	7
2	1	2	2	3	4	4	5	6	6	7	7	8	8
3	2	3	3	3	4	5	6	7	7	8	8	8	8
4	3	4	4	4	5	6	7	8	8	9	9	9	9
5	4	4	4	5	6	7	8	8	9	9	9	9	9
6	6	6	6	7	8	8	9	9	10	10	10	10	10
7	7	7	7	8	9	9	9	10	10	11	11	11	11
8	8	8	8	9	10	10	10	10	10	11	11	11	11
9	9	9	9	10	10	10	11	11	11	12	12	12	12
10	10	10	10	11	11	11	11	12	12	12	12	12	12
11	11	11	11	11	12	12	12	12	12	12	12	12	12
12	12	12	12	12	12	12	12	12	12	12	12	12	12

Table C Score Activity Score REBA Score

B. Arm and Wrist Analysis



Step 7: Locate Upper Arm Position:

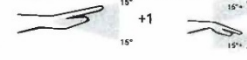
+1
+2
+2

Step 7a: Adjust...
If shoulder is raised: +1
If upper arm is abducted: +1
If arm is supported or person is leaning: -1

Step 8: Locate Lower Arm Position:



Step 9: Locate Wrist Position:



Step 9a: Adjust...
If wrist is bent from midline or twisted: Add +1

Step 10: Look-up Posture Score in Table B

Using values from steps 7-9 above, locate score in Table B

Step 11: Add Coupling Score

Well fitting Handle and mid rang power grip, **good: +0**
Acceptable but not ideal hand hold or coupling acceptable with another body part, **fair: +1**
Hand hold not acceptable but possible, **poor: +2**
No handles, **awkward, unsafe with any body part, Unacceptable: +3**

Step 12: Score B, Find Column in Table C

Add values from steps 10 & 11 to obtain Score B. Find column in Table C and match with Score A in row from step 6 to obtain Table C Score.

Step 13: Activity Score

+1 1 or more body parts are held for longer than 1 minute (static)
+1 Repeated small range actions (more than 4x per minute)
+1 Action causes rapid large range changes in postures or unstable base

Appendix C



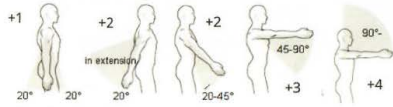
RULA Employee Assessment Worksheet

Task Name:

Date:

A. Arm and Wrist Analysis

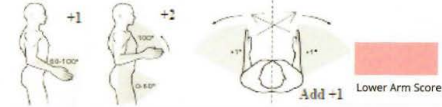
Step 1: Locate Upper Arm Position:



Step 1a: Adjust...
 If shoulder is raised: +1
 If upper arm is abducted: +1
 If arm is supported or person is leaning: -1

Upper Arm Score

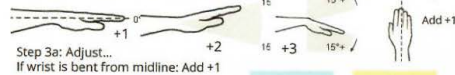
Step 2: Locate Lower Arm Position:



Step 2a: Adjust...
 If either arm is working across midline or out to side of body: Add +1

Lower Arm Score

Step 3: Locate Wrist Position:



Step 3a: Adjust...
 If wrist is bent from midline: Add +1

Wrist Twist Score

Wrist Score

Step 4: Wrist Twist:

If wrist is twisted in mid-range: +1
 If wrist is at or near end of range: +2

Step 5: Look-up Posture Score in Table A:

Using values from steps 1-4 above, locate score in Table A

Posture Score A

Step 6: Add Muscle Use Score

If posture mainly static (i.e. held > 10 minutes),
 Or if action repeated occurs 4X per minute: +1

Muscle Use Score

Step 7: Add Force/Load Score

If load < 4.4 lbs. (intermittent): +0
 If load 4.4 to 22 lbs. (intermittent): +1
 If load 4.4 to 22 lbs. (static or repeated): +2
 If more than 22 lbs. or repeated or shocks: +3

Force / Load Score

Step 8: Find Row in Table C

Add values from steps 5-7 to obtain
 Wrist and Arm Score. Find row in Table C.

Wrist & Arm Score

Scores

Table A		Wrist Score							
		1	2	3	4				
Upper Arm	Lower Arm	Wrist Twist	Wrist Twist	Wrist Twist	Wrist Twist				
		1	2	1	2	1	2	1	2
		1	2	2	2	2	3	3	3
2	3	3	3	3	3	4	4	4	
3	3	3	3	3	3	4	4	4	
4	3	3	3	3	3	4	4	4	
5	3	3	4	4	4	4	4	5	
6	3	3	4	4	4	4	4	5	
1	4	4	4	4	4	5	5	5	
2	4	4	4	4	4	5	5	5	
3	4	4	4	4	4	5	5	5	
4	4	4	4	4	4	5	5	5	
5	5	5	5	5	5	6	6	6	
6	5	5	5	5	5	6	6	6	
7	6	6	6	6	6	7	7	7	
8	6	6	6	6	6	7	7	7	
9	7	7	7	7	7	8	8	8	
10	7	7	7	7	7	8	8	8	
11	8	8	8	8	8	9	9	9	
12	8	8	8	8	8	9	9	9	
13	9	9	9	9	9	9	9	9	

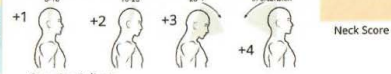
Table C		Neck, Trunk, Leg Score						
		1	2	3	4	5	6	7
Wrist / Arm Score	1	1	2	3	4	5	5	5
	2	2	2	3	4	4	5	5
3	3	3	3	4	4	5	6	
4	4	3	3	4	5	6	6	
5	4	4	4	5	6	7	7	
6	4	4	4	5	6	7	7	
7	5	5	6	6	7	7	7	
8	5	5	6	7	7	7	7	

Scoring: (final score from Table C)
 1-2 = acceptable posture
 3-4 = further investigation, change may be needed
 5-6 = further investigation, change soon
 7 = investigate and implement change

RULA Score

B. Neck, Trunk and Leg Analysis

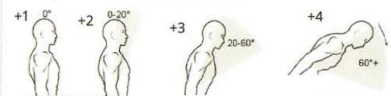
Step 9: Locate Neck Position:



Neck Score

Step 9a: Adjust...
 If neck is twisted: +1
 If neck is side bending: +1

Step 10: Locate Trunk Position:



Trunk Score

Step 10a: Adjust...
 If trunk is twisted: +1
 If trunk is side bending: +1

Step 11: Legs:

If legs and feet are supported: +1
 If not: +2

Leg Score

Table B: Trunk Posture Score

Neck Posture Score	Table B: Trunk Posture Score					
	1	2	3	4	5	6
1	1	2	1	2	1	2
2	1	2	1	2	1	2
3	1	3	2	3	4	5
4	2	3	2	3	4	5
5	3	3	3	4	4	5
6	4	5	5	6	6	7
7	5	6	6	7	7	8
8	6	7	7	8	8	8
9	7	8	8	8	8	8
10	8	8	8	8	8	9
11	8	8	8	8	8	9
12	9	9	9	9	9	9

Step 12: Look-up Posture Score in Table B:

Using values from steps 9-11 above,
 locate score in Table B

Posture B Score

Step 13: Add Muscle Use Score

If posture mainly static (i.e. held > 10 minutes),
 Or if action repeated occurs 4X per minute: +1

Muscle Use Score

Step 14: Add Force/Load Score

If load < 4.4 lbs. (intermittent): +0
 If load 4.4 to 22 lbs. (intermittent): +1
 If load 4.4 to 22 lbs. (static or repeated): +2
 If more than 22 lbs. or repeated or shocks: +3

Force / Load Score

Step 15: Find Column in Table C

Add values from steps 12-14 to obtain
 Neck, Trunk and Leg Score. Find Column in Table C.

Neck, Trunk, Leg Score