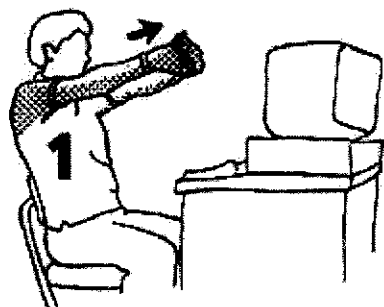


Computer & Desk Stretches

Approximately 4 Minutes

Sitting at a computer for long periods often causes neck and shoulder stiffness and occasionally lower back pain. Do these stretches every hour or so throughout the day, or whenever you feel stiff. Photocopy this and keep it in a drawer. Also, be sure to get up and walk around the office whenever you think of it. You'll feel better!



10-20 seconds
2 times



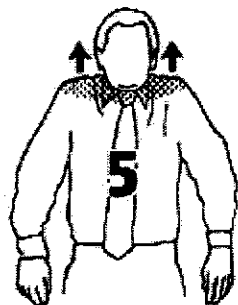
10-15 seconds



6-10 seconds
each side



15-20 seconds



3-5 seconds
3 times



10-12 seconds
each arm



10 seconds



10 seconds



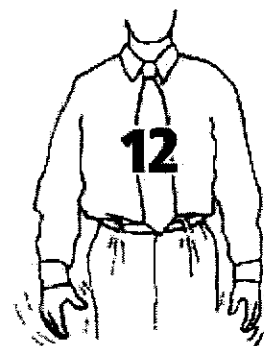
8-10 seconds
each side



8-10 seconds
each side



10-15 seconds
2 times



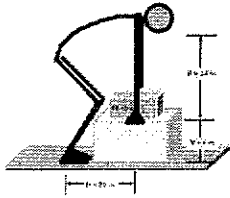
Shake out hands
8-10 seconds

Computer workstation checklist

Yes No

1. Is the chair adjusted to ensure proper posture, such as:
 - knees and hips bent at approximately 90 degrees?
 - feet flat on floor or footrest?
 - arms comfortably at sides with elbows at 90-degree angle?
 - straight wrists at keyboard?
2. Does the chair:
 - adjust easily from the seated position?
 - have a padded seat that is adjustable for height and angle?
 - have an adjustable backrest?
 - provide lumbar support?
 - have a stable caster base?
3. Is there sufficient space for knees and feet?
4. Are the height and tilt of the keyboard work surface adjustable?
5. Is the keyboard prevented from slipping when in use?
6. Is the mouse or pointing device at the same level as the keyboard?
7. Does keying require minimal force?
8. Is there an adjustable document holder?
9. Are arm rests provided where needed?
10. Is the screen clean and free of flickering?
11. Is the top line of the screen slightly below eye level?
12. Does the monitor have brightness and contrast controls?
13. Is the monitor 18-30 inches from the worker for viewing?
14. Is there sufficient lighting without causing glare?
15. Is an anti-glare screen used if necessary?
16. Are adequate rest breaks provided for task demands?
17. Are high stroke rates avoided by:
 - job rotation?
 - self pacing?
 - adjusting the job to the skill of the worker?
 - adequate rest pauses?
18. Are employees trained in:
 - proper postures?
 - proper work methods?
 - when and how to adjust their workstations?
 - how to seek assistance with concerns?

Basic concepts



Ergonomics: What is it?

- **Definition.** The scientific study (Greek - nomos) of human work (Greek - ergon).
- **Strategy.** Ergonomics considers the physical and mental capabilities and limits of the worker as he or she interacts with tools, equipment, work methods, tasks, and the working environment.
- **Goal.** Reduce work-related musculoskeletal disorders (MSDs) by adapting the work to fit the person, instead of forcing the person to adapt to the work.
- **Principle.** Since everything is designed for human use or consumption, human characteristics should be considered at the beginning of the design process.
- **What are Musculoskeletal Disorders (MSDs)?** Don't let this term scare you! Illnesses and injuries that affect one or more parts of the musculoskeletal system. They include sprains, strains, inflammation, degeneration, tears, pinched nerves or blood vessels, bone splintering and stress fractures. Symptoms are discomfort, pain, fatigue, swelling, stiffness, or numbness and tingling.



Why is effective ergonomics so important?

- **Back injuries are the leading cause of disability** in the United States for people younger than 45 years and have been the most expensive health care problem for the 30- to 50-year-old age group.
- **Low back pain accounted for 23%** (\$8.8 billion) of total workers' compensation payments in 1995.
- Statistics indicates that **in 1998 there were 279,507 back injuries** due to overexertion that resulted in lost work days (89% in material-handling).
- According to the Bureau of Labor Statistics, there were **582,300 MSDs that resulted in employees missing time from work in 1999**, the last year for which statistics are available.
- Successes. Jerome Foods Inc., a turkey hatching, growing and processing company, reports **saving \$3 for every \$1 spent since instituting its ergonomics program**. Similar savings have been reported by the Grumman Corp., Ford Motor Co., and several large food retailers.

Total Claims: 22,569
Average Cost: \$13,107

2003 Average Cost For Disabling Claims By Event or Exposure

Event or Exposure Leading to Injury (Partial list)	CLAIMS CLOSED	AVERAGE COST(\$)
Lifting objects	2,763	11,611
Bodily reaction, other	2,364	11,369
Repetitive motion	2,134	13,519
Fall to floor, walkway	1,930	12,124
Overexertion, all other	1,179	13,029
Non-classifiable	1,170	10,372
Pulling, pushing objects	1,131	11,989
Caught in equipment or objects	949	14,808
Holding, carrying, wielding objects	879	14,651
<u>Struck by falling object</u>	<u>863</u>	<u>14,249</u>
Struck against stationary object	598	7,784
Loss of balance	549	12,288
Highway accidents, collisions, other	484	19,848
Struck by, other	475	16,616
Fall to lower level, all other	369	16,088
Fall from ladder	367	21,808
Fall from non-moving vehicle	323	18,617
Fall down stair or step	283	13,690
Assault or Violent Act by person	249	13,385
Struck against moving object	161	15,008
Struck by Vehicle	157	15,105
Exposure to noise	146	11,563
Jump to lower level	142	15,171
Fall from floor, dock, ground level	119	17,940
Fall to same level, other	95	20,381
Fall from roof	67	34,053
Vibration	66	15,447
Fall from scaffold	61	47,817
Highway noncollision accident, other	41	14,164
Explosion	23	27,453
Contact with electrical current	22	21,500
Fall from stacked material	21	19,798
Bodily reaction, exertion, other	13	50,636
Exposure to traumatic event	13	13,386
Caught in collapsing material	6	20,495

Notes: Table reflects estimated medical, timeloss, and partial permanent disability cost data for disabling claim closure activity. Costs exclude partial total disability and fatal indemnity, vocational assistance, medical-only claim costs, settlements, timeloss paid prior to claim denial and prior to settlement where claim was never closed, and compensation modified on appeal. Source: Research and Analysis Section, Information Management Division, Department of Consumer and Business Services