

Returning to Work after Surgery

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*Work Related Injuries Workshop
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Disclosure

- **I have no actual or potential conflict of interest in relation to this program/presentation.**

Objectives

- Understand the importance of timely post-operative return to work
- Develop strategies to optimize successful post-operative return to work planning

Goal: To return injured employees safely and quickly to work.

Why this talk?

Work-related injuries and illness:

- Most Americans from age 22 to 65 spend over 50% percent of waking hours at work
- 2.9 million injury cases reported in 2015 in the U.S.
 - More than half involved days away from work
- About 5,000 (~13/day) U.S. workers die annually and another 50,000 (137/day) deaths are attributed to work-related diseases each year (8th leading cause of death)

Bureau of Labor Statistics website, <https://www.bls.gov/iif/>

Why this talk?

Work-related injuries and illness:

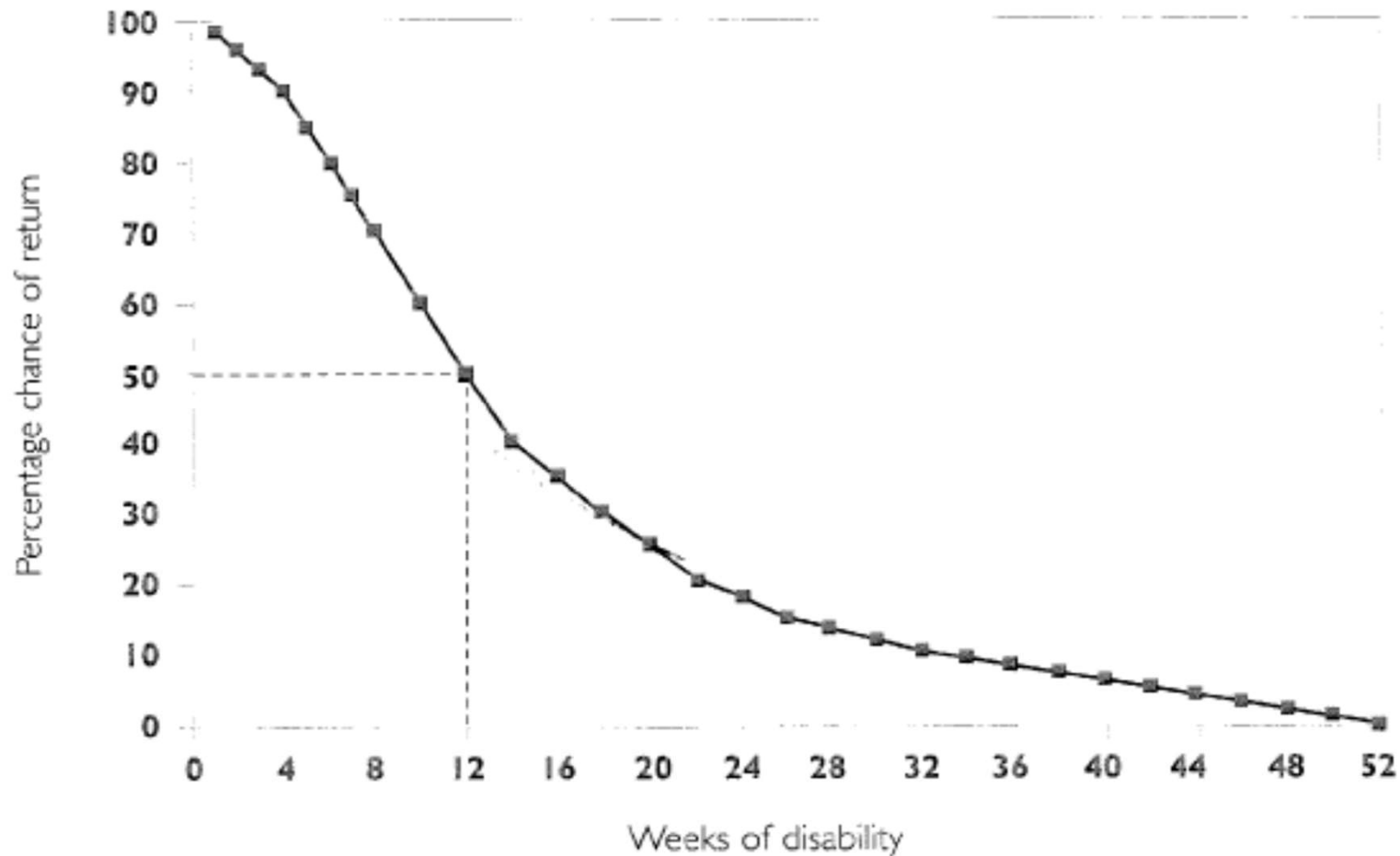
- Non-fatal workplace injuries cost ~\$60 billion* in 2016
- The total direct and indirect costs ~\$155.5 billion (~3% GDP).
- Costs are roughly:
 - 5x times the costs for AIDS
 - 3x times the costs for Alzheimer's disease
 - 0.9x the costs for cancer
 - 0.82x the costs of all circulatory (heart and stroke) diseases
- Delayed recovery is common
- Disability and cost of care is greater than non-WC cases

*Liberty Mutual Workplace Safety Index,

<https://www.libertymutualgroup.com/about-lm/research-institute>

Return to work – A medical emergency!

Disabled workers off duty 12 weeks have only a 50 percent chance of ever returning to work.



Work prescription:

Health effects of unemployment

“...convincing evidence that unemployment has a direct effect on health over and above the effects of socioeconomic status, poverty, risk factors, or prior ill-health.”

- Avoids deconditioning, promotes conditioning
- Increased morbidity/mortality rates, physical and mental ill health
- Excess mortality of wives, separation, divorce, perinatal and infant mortality, poorer infant growth, more health service use
- Children have increased chronic disease, more health service use

Mathers and Schofield 1998



Top 15 Diagnoses for RTW Guidelines

1. Back strains
2. Disc disorders
3. Whiplash
4. Shoulder sprains
5. Depression
6. Ankle sprains
7. Arthritis
8. CTS
9. Hernia
10. Meniscus tears
11. Chronic pain
12. Bruises
13. Broken arm
14. Pregnancy
15. H1N1 Flu

Official Disability Guidelines (ODG), <http://www.odg-twc.com/>

Top 15 Procedures for Medical Treatment Guidelines

1. **Discectomy**
2. Physical therapy
3. Manipulation
4. **Spinal fusion**
5. **Knee replacement**
6. **Hip replacement**
7. **Rotator cuff repair**
8. **Meniscectomy**
9. **CTR**
10. **Hernia repair**
11. Medications
12. Injections
13. Opioids
14. PTSD
15. CRPS

Official Disability Guidelines (ODG), <http://www.odg-twc.com/>



Background: discectomy

- Lumbar surgery for disc prolapse and spinal stenosis is one of the most common performed
- Patients' recovery after the operation can vary
- Many patients continue to have recurrent back pain or nerve root pain after surgery (10% to 51%)
- About 40% return to their pre-sciatica activity post-discectomy
- Approximately 20% of patients will become permanently disabled
- Residual symptoms and psychosocial factors increase the risk of disability
- Current practice usually entails several weeks to several months of restricted activities after lumbar discectomy to avoid disc "reinjury."
- The more severe and chronic the condition, the greater the need for post-op rehabilitation



Optimizing post-op return to work

Good surgical outcome depends on:

- Selecting appropriate surgical candidates
- Selecting technically adept surgeon(s)
- Recognizing deviation from expected recovery
- Early and appropriate post-operative rehabilitation
- Recognizing that treating provider is most influential in patient recovery
- **Focusing on function**
- Using return to work resources

RAT1

Select appropriate surgical candidates

ACOEM indications for discectomy --

Discectomy, Microdiscectomy, Sequestrectomy, Endoscopic Decompression is Recommended for Sub-Acute Radicular Pain Syndromes (including Sciatica) (**Moderate Evidence (B)**)

- Lumbar discectomy is recommended as an effective operation to speed recovery in patients with radiculopathy due to ongoing nerve root compression who continue to have significant pain and functional limitation after 4 to 6 weeks of time and appropriate conservative therapy.
- Patients who are candidates for discectomy should be informed that (other than for cauda equina syndrome and the rare progressive major neurologic deficit), there is evidence that there is no need to rush surgical decisions as there is no difference in long-term functional recovery whether the surgery is performed early or delayed. Open discectomy, microdiscectomy, and endoscopic discectomy are all potentially appropriate ways to perform discectomy. The decision as to which of these procedures to choose should be left to the surgeon and the patient until quality evidence becomes available to provide evidence-based guidance.

Indications:

- All of the following should be present:
 - 1) radicular pain syndrome with current dermatomal pain and/or numbness, or myotomal muscle weakness all consistent with a herniated disc;
 - 2) imaging findings by MRI, or CT with or without myelography that confirm persisting nerve root compression at the level and on the side predicted by the history and clinical examination; and
 - 3) continued significant pain and functional limitation after 4 to 6 weeks of time and appropriate conservative therapy.

Slide 12

RAT1

slide 12

Robert A. Timmons, 4/21/2017



Recognize deviation from expected recovery trajectory

**Return to work pathway:
Displacement of intervertebral disc
without myelopathy**

Herniated disc, **Initial conservative medical treatment:**

- Clerical/modified work, 0-3 days
- Manual/heavy manual work, 28 days
- Regular work if cause of disability, 84 days



Recognize deviation from expected recovery trajectory

**Return to work pathways:
Displacement of intervertebral disc without
myelopathy**

After Treatment by **Discectomy**:

- Clerical/modified work: 28-42 days
- Manual work: 56 days
- Heavy manual work: 126 days to indefinite



Recognize deviation from expected recovery trajectory

**Return to work pathways:
Displacement of intervertebral disc without
myelopathy**

After treatment by **Laminectomy**:

- Clerical/modified work: 28 days
- Manual work: 70 days
- Heavy manual work: 105 days to indefinite



Recognize deviation from expected recovery trajectory

**Return to work pathways:
Displacement of intervertebral disc, without
myelopathy**

Lumbar **fusion**:

- Clerical/modified work: 56 days
- Manual work: 140 days
- Heavy manual work: indefinite

(Note: Fusion is not recommended in workers' compensation patients for degenerative disc disease (DDD), disc herniation, spinal stenosis without degenerative spondylolisthesis or instability, or nonspecific low back pain, due to lack of evidence or risk exceeding benefit.)

Recognize deviation from expected recovery trajectory

Table 14. Guidelines for Modification of Work Activities and Disability Duration

Disorder	Activity Modifications and Accommodation	Recommended Target for Disability Duration		
		Job Classification Dictionary of Occupational Titles	Modified Duty Available	Modified Duty Not Available
Low Back Pain (includes all non-specific LBP including "strain" and "sprain")	Avoid substantially aggravating irritating activities (e.g., heavy lifting, prolonged or repeated bending or stooping, prolonged maintenance of any one posture including sitting) until full activity possible or 90 days have elapsed.	Sedentary	0 to 1 days	Up to 14 days
		Light	0 to 3 days	Up to 14 days
		Moderate	0 to 14 days	Up to 56 days
		Heavy	3 to 28 days	Up to 84 days
		Very Heavy	3 to 42 days	Up to 84 days
Lumbar Disc Protrusion, with Radiculopathy (including sciatica)	Avoid substantially aggravating irritating activities (e.g., bending, lifting, stooping, prolonged standing, walking, sitting) until full activity possible or 90 days have elapsed or until surgery has occurred and work ability is assessed based on surgical result.	Sedentary	1 to 14 days	Up to 42 days
		Light	7 to 21 days	Up to 56 days
		Moderate	14 to 42 days	Up to 84 days
		Heavy	91 to 119 days	Up to 182 days
Spinal Stenosis (aggravation)	Changes in position to avoid symptoms	Very Heavy	119 to 147 days	Up to 182 days
		Sedentary	1 to 7 days	14 days
		Light	1 to 14 days	21 days
		Moderate	1 to 21 days	42 days
Post-laminectomy Syndrome	Same as lumbar disc protrusion with referral to surgeon if no improvement	Heavy	1 to 56 days	Indefinite
		Very Heavy	1 to 91 days	Indefinite
			0 to 42 days	Indefinite

Disability durations used with permission from Reed Group, Ltd. Reed P. *The Medical Disability Advisor*.

Evidence regarding post-operative restrictions

Findings regarding restrictions after spinal surgery:

- There is no empirical evidence supporting post-operative restrictions on activity.
- There is strong evidence that most post-operative restrictions are not necessary.
- There is strong evidence that most post-operative restrictions delay recovery and return to work.
- Limited evidence suggests that restricting specific activities (e.g. lifting, pushing or pulling) may also be unnecessary.
- Evidence suggests that patients are uncertain about what activities they can or should undertake post-operatively.
- There is a lack of consensus among surgeons about the need for and the nature and timing of post-operative restrictions
- Imposing restrictions on activity after surgery seems to be related to anxiety and uncertainty of patients and clinicians.

McGregor AH, Burton AK, Sell P, Waddell G. The development of an evidence-based patient booklet for patients undergoing lumbar discectomy and un-instrumented decompression. Eur Spine J. 2007 Mar;16(3):339-46. Epub 2006 May 11.

Evidence regarding post-operative restrictions

- **CONCLUSION: Lifting postoperative restrictions after limited discectomy allowed shortened sick leave without increased complications. Postoperative precautions in these patients may not be necessary.**

Carragee EJ, Helms E, O'Sullivan GS. Are postoperative activity restrictions necessary after posterior lumbar discectomy? A prospective study of outcomes in 50 consecutive cases. Spine (Phila Pa 1976). 1996 Aug 15;21(16):1893-7

- **CONCLUSION: Lifting postoperative restrictions after limited discectomy allowed shortened return to work time relative to the 4-16 weeks commonly recommended. Complication rates appear comparable to those reported in the literature for patients under postoperative restrictions. Post-op restrictions may not be necessary in most patients.**

Carragee EJ, Han MY, Yang B, Kim DH, Kraemer H, Billys J. Activity restrictions after posterior lumbar discectomy. A prospective study of outcomes in 152 cases with no postoperative restrictions. Spine (Phila Pa 1976). 1999 Nov 15;24(22):2346-51

- **CONCLUSIONS: There is no evidence that patients need to have their activities restricted after first-time lumbar disc surgery. There is strong evidence for intensive exercise programs (if started 4-6 weeks post-op) and no evidence they increase the reoperation rate. It is unclear what the exact content of postsurgery rehabilitation should be.**

J. G. Ostelo, Raymond W. PhD, PT//; W. de Vet, Henrica C. PhD†; Waddell, Gordon DSc, FRCS, MD‡; Kerckhoffs, Maria R. MsC, PT*§//; Leffers, Pieter MsC*; van Tulder, Maurits PhD†. Rehabilitation Following First-Time Lumbar Disc Surgery: A Systematic Review Within the Framework of the Cochrane Collaboration. Cochrane Collaboration Review. Spine:1 February 2003 - Volume 28 - Issue 3 - pp 209-218.*

Early and appropriate post-operative rehabilitation

Findings regarding return to activity/work, and rehabilitation:

- There is **strong** evidence that:
 - Encouraging mobility and return to full activities as soon as possible after surgery produces better pain relief, earlier return to work
 - Early post-op rehab programs improve activities of daily living
 - Early post-op rehab programs improve chances of returning to work, reduce the amount of time to return to work
 - Early post-op return to work is not detrimental, and generally advantageous
 - As early as 1 week, but depends on nature of work, surgery
 - A progressive return to previous duty is desirable

McGregor AH, Burton AK, Sell P, Waddell G. The development of an evidence-based patient booklet for patients undergoing lumbar discectomy and un-instrumented decompression. Eur Spine J. 2007 Mar;16(3):339-46. Epub 2006 May 11.

Early and appropriate post-operative rehabilitation

Findings regarding return to activity/work, and rehabilitation:

- There is **moderate direct** evidence that:
 - Early post-operative return to work results in faster recovery and better clinical outcomes
 - Work and exercise are good for physical and mental health
 - The rate of recovery (both for clinical and vocational outcomes) is greatest in the first 3 months with further improvement occurring more slowly
 - Patients' expectations and satisfaction are important factors; recovery is facilitated by knowing what to expect
 - The concept of 'let pain be your guide' to guide reactivation is counterproductive and slows down recovery.

McGregor AH, Burton AK, Sell P, Waddell G. The development of an evidence-based patient booklet for patients undergoing lumbar discectomy and un-instrumented decompression. Eur Spine J. 2007 Mar;16(3):339-46. Epub 2006 May 11.

Early and appropriate post-operative rehabilitation

- **CONCLUSION:** These results support the positive effects of the postoperative early lumbar extension muscle-strengthening program on pain, return to work, and strength of back muscles in patients after operation of herniated lumbar disc.

Choi G, Raiturker PP, Kim MJ, Chung DJ, Chae YS, Lee SH. The effect of early isolated lumbar extension exercise program for patients with herniated disc undergoing lumbar discectomy. Neurosurgery. 2005 Oct;57(4):764-72; discussion 764-72.

- **CONCLUSIONS:** Immediate commencement of exercises enabled patients to become independently mobile more rapidly and return to work sooner.

Newsome RJ, May S, Chiverton N, Cole AA. A prospective, randomised trial of immediate exercise following lumbar microdiscectomy: a preliminary study. Physiotherapy. 2009 Dec;95(4):273-9.

- **CONCLUSION:** Intensive rehabilitation program started early after lumbar disk surgery can improve function and allow early return to professional activities with reduction of the healthcare cost.

Hamdoun-Kahlaoui S, Rahali-Khachlouf H, Sifi MA, Miri I, Saadallaoui K, Matoui L, Lebib S, Ben Salah FZ, Dziri C. [Necessity of physical activities restriction after lumbar discectomy]. Tunis Med. 2009 Apr;87(4):257-61. [Article in French]

NEW HAMPSHIRE WORKERS' COMPENSATION MEDICAL FORM

This form must be completed at each health professional visit (MD, DO, DC or DDS) and must be filed with the worker's compensation insurance carrier within 10 days of the treatment (first aid excluded). Failure to comply and complete this form shall result in the provider not being reimbursed for services rendered and may result in a civil penalty of up to \$2,500.

In compliance with RSA 281-A:23-b, the employer with 5 or more employees must provide temporary alternative/transitional work opportunities to all employees temporarily disabled by a work related injury or illness.

Employee Avery, Staci Employer _____
 SS # 001-60-5990 Work telephone # _____
 Occupation _____ Employer contact _____
 Date last worked _____ Employer address _____
 W.C. insurer _____

HEALTH PROFESSIONAL TO COMPLETE

☐ Initial visit ☐ Follow-up visit Date of injury 07/20/2005 Time _____
 Worker's statement of the incident _____
 Worker's complaints _____
 Diagnosis/Prognosis Fracture - compression
 Treatment plan _____

In your opinion is this injury and disability as a result of injury described above? ☐ Yes ☐ No ☐ Unclear

EMPLOYEE WORK CAPABILITY

☐ Continue Working ☐ Can return to work: ☐ Yes ☐ No
☐ Full Duty ☐ With Modification. If so, for what duration _____

Employee can	No Restrictions	Frequently	Occasionally	Unable to
bend				
kneel				
squat				
climb				
stand				
walk				
sit				
reach				
drive				
do fine motor				

Employee can lift/carry maximally _____ lbs.
 Employee can lift/carry frequently _____ lbs.
 Employee can work a maximum of # _____ hours/day, # _____ days/wk.
 What special accommodations are required? _____
 Other _____

Has employee reached maximum medical improvement?
☐ Yes ☐ No
 Has injury caused permanent impairment?
☐ Yes ☐ No ☐ Undetermined

ALL MEDICAL NOTES MUST BE ATTACHED TO BILL

I certify that the narrative descriptions of the principal and secondary diagnosis and the major procedures performed are accurate and complete to the best of my knowledge.

Provider's signature _____ Provider's Printed name _____ Provider's telephone# _____
 Federal ID# _____ Date of visit _____

MEDICAL AUTHORIZATION: The act of the worker in applying for workers' compensation benefits constitutes authorization to any physician, hospital, chiropractor, or other medical vendor to supply all relevant medical information regarding the worker's occupational injury or illness to the insurer, the worker's employer, the worker's representative, and the department. Medical information relevant to a claim includes a past history of complaints of, or treatment of, a condition similar to that presented in the claim. [281-A:23 V(a)]
 76 WCA-1 (08/04)

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Focus on function

Impairment

- **Objective** limitations of physiological and psychological functioning

Disability

- Decrease in social and vocational functioning

Physical (work) capacity

- The obverse of impairment
- Physical and occupational therapists can measure objectively (physical capacity evaluation)

Work tolerance

- A psychophysical concept
- Imperfectly related to impairment and physical capacity
- As reported by **employee, patient**

Is there a medical contraindication to work?

- Yes
 - Required health care appointment(s)
 - Recovery requires confinement at home or in bed
 - Work or commute is contraindicated because it will worsen MEDICAL condition or threaten others safety
- No: Determine the specific barrier to RTW
 - Lack of medical clearance by treating provider
 - Lack of light duty
 - Physical capacity
 - Psychophysical tolerance (fear)
 - Job satisfaction
 - Home life

Importance of treating provider: The Obstacle Question

- What SPECIFICALLY is the obstacle preventing you from working today?

This test uncovers situational or environmental obstacles to RTW

Importance of treating provider:

Screening for predictors of delayed RTW

- Modified Work Apgar
 - How do you like your supervisor?
 - How do you like your job?
 - How do you like your colleagues?
 - How are things at home?
 - How are you sleeping?
- Depression
- Substance abuse screen
- Do you think you will return to your regular job within the next 6 months?

Importance of treating provider: Reassessment

Work capacity is dynamic. If out of work or restricted, frequently reassess based on acuity, type of injury, and level of vocational functioning:

- Acute (> 6 weeks): 1-2 x per week
- Sub-acute (6- 12 weeks): q 1-2 weeks
- Chronic q 2-4 weeks until at MMI

Return to work resources

- Job demand assessment
- Work capacity assessment
- Work site assessments
- Ergonomic evaluations
- Job shadowing
- Work practice coaching
- Call employer to identify light duty jobs
- Case conference
- Occupational disability guidelines (ACOEM, ODG)




RTW Prescription™


Clear Text

Diagnosis Codes:

Please enter 2 or more characters

of:

No Designation 

No Designation 

Telephone/Email:

Employer Name:

Physician Name:

Date of Injury:

 MM/DD/YYYY 

Date of Surgery:

☐

Claimant Age:

RTW Prescription™

Diagnosis Codes:

Search in: ☒ ICD10 database ☐ ICD9 database

f:

Telephone/Email:

Employer Name:

i:

Physician Name:

Date of Injury:

Date of Surgery:

☒

Claimant Age:

a:

s:

es?



Attach Job Description?



Intervertebral disc disorders with radiculopathy, lumbar region

compression procedure, percutaneous, of nucleus pulposus of intervertebral disc, any method utilized

Suggested Text ☐)

ODG Evidence Based Decision Support

Training: [ODG: Good to Go!](#) (automated) or [Webinars](#) (live) ~ Join [Email List](#)

Active Days Away from Work: 116 days

Target RTW Date:

08/04/2017

Work Guidelines (check only those that apply):

Modified work: 7 days

<: 21 days

Full work: 42 days

Guidelines as follows:

☐ Copy ODG Template

Restrictions & Activity Modifications for Restricted Work (check only those that apply)

Modified work: "Lifting with knees (with a straight back, no stooping) not more than 5 lbs [2 kg] up to 3 times/hr; squatting up to 4 times/hr; standing or walking with a 5-minute break at least every 20 minutes; sitting with a 5-minute break every 30 minutes; no extremes of extension or flexion; no climbing ladders; driving car only up to 2 hrs/day. "

<: Lifting with knees (with a straight back) not more than 25 lbs [11 kg] up to 15 times/hr; squatting up to 16 times/hr; standing or walking with a 10-minute break at least every 1-2 hours; sitting with a 10-minute break every 1-2 hours; extremes of flexion or extension allowed up to 12 times/hr; standing or walking allowed up to 16 times/hr; climbing ladders allowed up to 25 rungs 6 times/hr; driving car or light truck up to a full work day; driving heavy truck up to 4 hrs/day.

RTW/Modifications as follows:

☐ Copy ODG Template

Acknowledgements

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Questions