

Ergonomic (MSI) Risk Factor Identification and Assessment

Ergonomics Risk Assessment Project

Department/Work Area: Food and Nutrition Services Specific Location: Assessed By:	Occupation: Food Service Worker Contact Name: Assessment Date:
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Task List Worksheet

Job Summary: Performs a variety of duties in the dietary department including serving and portioning of food for patients and hospital staff (trayline), ware washing (dishline), and cleaning of work areas and equipment.

Where possible, transfer list of job tasks from job description onto this sheet. Determine whether ergonomics (MSI) risk assessment is required, if no, provide rationale.

Tasks and Description of Activities	Frequency/Duration	Risk Assessment Required?
1. Assembles patient meal trays according to menus on trayline.		
2. Washes dishes and utensils by hand or machine, including stacking.		
3. Loads, delivers, collects and unloads meal service wagons.		
4. Prepares food for trayline, including making coffee, toast, sandwiches, salads, and fruit.		
5. Performs cleaning duties such as sweeping and damp mopping, cleaning counter tops, sinks, shelves, machines and equipment.		
TOTAL	100%	

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Description of workstation: Hours of Work/Shift Schedule: Discomfort noted on surveys:

Tasks for Ergonomics Risk Assessment (from Task Analysis worksheet):	Frequency of Task:
NOTE: Not all employees will perform all these tasks on the same day. Tasks assigned depend on requirements. 1. Assemble meals (trayline): starter, soup/cereal, entrée, dessert, vegetables, beverage, checker, loader 2. Wash dishes and utensils (dishline): stripper, loader, stacker. 3. Load, deliver and collect wagons. 4. Prepare food for trayline including handling supplies. 5. Clean work area.	

	Task	Risk Factors	Freq/Dur	Mag/Range		Assessment / Observations / Comments
IDENTIFICATION	Trayline: all positions (specifics related to subtasks follows; check specific position for details)	<ul style="list-style-type: none"> Awkward postures Repetition 			ASSESSMENT	<ul style="list-style-type: none"> Trayline height is appropriate. Postures include reaching, bending and twisting and vary by trayline position. Using good body mechanics can help to minimize awkward postures. Workstations are rotated so that workers are not at the same station all the time.
		<ul style="list-style-type: none"> Force (push) Force (grip) 				<ul style="list-style-type: none"> Worker may push tray forward in order to read the menu or to allow for more time to fill the tray. Forces are increased if more trays are pushed at once. Forces can be reduced by pushing fewer trays or requesting that the line be stopped temporarily. Workers required to use pinch or power grip to grasp various items, position lids, hold items to place on tray e.g. tray bottoms and lids, menus, plate liners, salt and pepper, sugar.
		<ul style="list-style-type: none"> Static posture 				<ul style="list-style-type: none"> Involves standing at workstation for duration of trayline. Depending on workstation, movement is limited. Anti-fatigue matting is provided at each workstation.
		<ul style="list-style-type: none"> Work pace Repetition 				<ul style="list-style-type: none"> Work on the tray line is machine-paced. Tray line can be stopped by checker, other positions need to call out to have it stopped temporarily. Depending on daily menu, some workstations are more difficult than others (e.g. may involve portioning or selecting from a variety of items).
	Trayline starter position	<ul style="list-style-type: none"> Awkward posture 				<ul style="list-style-type: none"> Starter: worker at the beginning of the trayline who sets the pace by placing trays at specific distances apart. Starter retrieves base from rack, places menu, cutlery and salt/pepper and other items on the base and places base on belt. Working heights are appropriate. Tips: continue to move the base rack to minimize reaching, position to optimize wrist posture, handle one base at a time and push forward onto belt instead of reaching over stack of bases.

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IDENTIFICATION	Trayline starter position (cont.)	• Force (lift)			ASSESSMENT	• Can reduce the number of items (e.g. bases, menu holders) handled at once to reduce forces associated with lifting and pushing onto belt.
		• Force (push/pull)				• Handling full rack of lids or bases; forces are within guideline levels.
	Trayline cereal / soup	• Awkward posture				• Cereal/Soup: worker responsible for filling bowls with soup or cereal, putting lid on and reaching to place bowl on trayline.
		• Force				• Involves wrist and shoulder motions for ladling hot cereal and soup. • Side table working height is appropriate. • Avoid twisting by moving feet and use hand closest to belt to place portion on tray.
	Trayline dessert / nourish.	• Awkward posture				• Heaviest bins are larger soup bins.
		• Force				• Can use cart to reduce carry distances. • Can load bins from backside to reduce reaching (cereal/soup station only).
	Trayline entrée	• Awkward posture				• Dessert/Nourishment: worker reads the menu as it approaches and places appropriate items on tray e.g. juice, milk, salad, ice cream, pudding; all lightweight items (<0.5 kg).
		• Force (pinch and power grip)				• Involves bending into lowerator to retrieve items. Carefully consider placement of items to optimize postures. • Need to wait until tray arrives rather than reaching for it.
		• Force				• Entrée: worker places entrée dish on the tray. Involves portioning out hot entrées onto plate, and reaching to place plate on tray. May also place sandwiches (lunch). • Requires various wrist motions for portioning, including scooping, cutting and lifting using utensils such as scoop, spoon, knife and spatula. • Due to portioning required, this station tends to slow down the trayline. • Also requires reaching into warmer to retrieve plates; and reaching to upper shelf to retrieve liners.
						• Using various utensils to serve food e.g. ladle, scooper • Use shallow ladle to minimize wrist movement.
						• Handling and positioning food bins into trayline e.g. gravy, peas, meatloaf, shepherd's pie. Weights vary. • Position into front slots to avoid reaching with load.

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IDENTIFICATION	Trayline: beverage	<ul style="list-style-type: none"> • Awkward posture 			ASSESSMENT	<ul style="list-style-type: none"> • Beverage: worker fills tea and coffee cups, selects cream, sugar etc, pinches lid on, and reaches to position onto tray. • Working height appropriate.
		<ul style="list-style-type: none"> • Force 				<ul style="list-style-type: none"> • Handling trays of cups; handling individual cups and lids.
	Trayline: checker	<ul style="list-style-type: none"> • Awkward posture 				<ul style="list-style-type: none"> • Checker: worker is typically shift supervisor, checks menu to make sure tray is complete and accurate. Working height is appropriate. • Reaching to retrieve/replace items. Avoid leaning to view items on tray and menu. • Menus are colour-coded for diet and location.
	Trayline: loader	<ul style="list-style-type: none"> • Awkward posture • Work pace 				<ul style="list-style-type: none"> • Loader reaches to retrieve lid from rack (4 tiers), positions lid onto tray, lifts tray and positions full tray onto wagon. Loader moves full tray into aisle and retrieves next tray for filling. • Loader is a separate position for breakfast only. At other meals, the checker does the loading also. • Food wagon: 2 tiers.
		<ul style="list-style-type: none"> • Force 				<ul style="list-style-type: none"> • Majority of the time one tray is handled at a time.
		<ul style="list-style-type: none"> • Force (push/pull) 				<ul style="list-style-type: none"> • Moving full wagons; measured forces are within guideline levels.
	Dishline: all positions (specifics related to subtasks follows; check specific position for details)	<ul style="list-style-type: none"> • Awkward posture • Repetition 				<ul style="list-style-type: none"> • Positions include stripper (pulling trays off wagon and dumping contents), loader (filling baskets and trays with items to be washed), and stacker (stacking clean items and rolling cutlery). • Various postures include bending to get trays off wagon, reaching to position trays on racks.
		<ul style="list-style-type: none"> • Static posture 				<ul style="list-style-type: none"> • Anti-fatigue matting available at stripper position. • Rotation does take place: rotate stripper and loader <i>during</i> meal; rotate to other positions for different meals
		<ul style="list-style-type: none"> • Force 				<ul style="list-style-type: none"> • Handling various items: trays, garbage bags, baskets of cutlery, tray of coffee cups
		<ul style="list-style-type: none"> • Environ't (flooring) 				<ul style="list-style-type: none"> • Floors may be slippery. Wearing booties is a requirement of the work area and are reported to reduce slippage.

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IDENTIFICATION		Task	Risk Factors	Freq/Dur	Mag/Range	ASSESSMENT		Assessment / Observations / Comments
	"Stripper" (empty used trays)		<ul style="list-style-type: none"> Awkward posture 					<ul style="list-style-type: none"> Stripping table height is appropriate. Set up/work processes to reduce forces and awkward postures: working height of cart and table are the same so transfer is possible to eliminate lifting; garborater is used; stripping and loading positions rotated. Working heights at stripper are appropriate with minimal trunk flexion. Primarily upper extremity dynamic movements.
			<ul style="list-style-type: none"> Force (lift) Force (grip) 					<ul style="list-style-type: none"> Worker disassembles individual tray by removing lid and removing contents to appropriate receptor; e.g. garborator, garbage, bins, crate. Pinch grip required to handle individual items.
			<ul style="list-style-type: none"> Force (push) 					<ul style="list-style-type: none"> Handling wagon carts; forces are within guideline limits (Snook & Ciriello).
	Loader		<ul style="list-style-type: none"> Awkward posture 					<ul style="list-style-type: none"> Worker loads the dish line conveyor; e.g. putting lids and bases onto conveyor racks, racking cups, loading dishes Working height of dishline is appropriate. Upper extremity movements required to lift items and load onto dishline. Spring loaded racks for cup holders helps to reduce trunk flexion.
			<ul style="list-style-type: none"> Force (lift) Force (grip) 					<ul style="list-style-type: none"> Use pinch and power grip to grasp items for e.g. loading. Can reduce forces by minimizing amount handled at once and using both hands.
								<ul style="list-style-type: none"> Lowerators used for cups rack to minimize trunk flexion.
	Stacker		<ul style="list-style-type: none"> Awkward posture 					<ul style="list-style-type: none"> Handling individual tray items; e.g. tray lid, tray bottom, cup rack, cutlery basket. Can reduce forces by minimizing amount handled at once and by using both hands.
			<ul style="list-style-type: none"> Force 					<ul style="list-style-type: none"> Stacking and rolling individual cutlery. Awkward postures can be minimized by technique. Pinch grip used to select cutlery to be rolled.
			<ul style="list-style-type: none"> Awkward posture Force pinch grip 					<ul style="list-style-type: none"> Bending to access lower shelves of food wagons.
	Load, deliver, collect wagons		<ul style="list-style-type: none"> Awkward posture 					<ul style="list-style-type: none"> Force to push food wagon, within guideline levels (Snook & Ciriello). Food wagons have swivelling wheels under the handle for ease of turning. Handle height is appropriate.
			<ul style="list-style-type: none"> Force (push/pull) 					

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IDENTIFICATION	Prepares food for trayline	<ul style="list-style-type: none"> Awkward posture 			ASSESSMENT	<ul style="list-style-type: none"> Working height for tables is appropriate. Some reaching and bending required to access items, e.g. loading toaster.
		<ul style="list-style-type: none"> Awkward posture Force Tool use 				<ul style="list-style-type: none"> Portioning out individual servings (e.g. pudding, jello), including washing, cutting, peeling and slicing e.g. fresh fruit using various hand utensils e.g. spoon, knife, spreader. Frequency varies depending on requirements; mainly associated with upper extremity hand actions including finger manipulation. Using appropriate tools will reduce forces on hands.
		<ul style="list-style-type: none"> Force (lift) Force (push/pull) 				<ul style="list-style-type: none"> Handling larger cans (e.g. pudding). Weights are within guideline levels. Opening cans: small hand openers used.
		<ul style="list-style-type: none"> Force 				<ul style="list-style-type: none"> General material handling for stocking trayline with required items.
		<ul style="list-style-type: none"> Static posture 				<ul style="list-style-type: none"> Anti-fatigue matting available at nourishments area.
	Cleaning duties	<ul style="list-style-type: none"> Force Awkward posture 				<ul style="list-style-type: none"> Cleaning food wagons requires tipping them to clean. Hose does not swing and must be supported.
		<ul style="list-style-type: none"> Awkward posture 				<ul style="list-style-type: none"> Required to clean work area/work surfaces at trayline. Awkward postures for reaching to clean. There is some flexibility for postures depending on position.
		<ul style="list-style-type: none"> Force 				<ul style="list-style-type: none"> Flexibility as to applied forces for cleaning.

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**Control Priority Note: 1 = recommended for implementation to reduce risk factors; 2 = optional, for consideration as a means of reducing risk factors; 3 = not for immediate action but for future consideration as appropriate.*

	Risk Factor	Potential Cause	Recommended Controls	Control Priority	Responsible Person	Status
CONTROLS	• Awkward and static posture	• Tasks at trayline and dishline	1. Continue to rotate positions at both the trayline and dishline on a daily basis, ensuring that rotation from one side of the trayline to the other is included.			
	• Awkward posture	• Tasks at trayline and dishline	2. Provide body mechanics and work methods tips/hints. 3. Post tips at each workstation.			
	• Static posture	• Tasks at trayline	4. Information on stretches for the trayline to be provided.			
	• Awkward posture	• Reaching to upper shelf	5. Consider lowering the “upper” shelf at entrée, soup and vegetable workstations on trayline to reduce reaching heights (minimize required clearance).			
	• Force	• Portioning	6. Carefully consider menu choices to reduce hand actions associated with portioning, such as cutting, spooning (gravy) and peeling (fruit).			
	• Force	• Using can opener	7. Consider automatic can opener for larger cans of fruit and pudding.			
	• Awkward posture	• Using hose for wagons	8. Consider requesting that hose be put on swing arm to allow its weight to be supported.			
	• Force • Awkward posture	• Material handling	9. Basic material handling information to be provided.			

Additional Comments: