

Laboratory Animal Ergonomic Risk Factors and Solutions



Although work in the vivarium is varied, some risk factors are common throughout RARC. Other risk factors, however, are specific to certain tasks. It is important to know where these risk factors exist in your work so you can work safely.

Job Task	Risk Factors	Possible Solutions
General Risk Factors	<ul style="list-style-type: none"> Lifting of heavy objects Bending and squatting Twisting, pushing, pulling Extended standing Reaching Repetitive motion 	<ul style="list-style-type: none"> Use safe lifting techniques Minimize bending and squatting when possible Work in neutral positions Periodically switch hands and rotate stations Keep frequently-used objects close to you Take “micro-breaks” once an hour that involve sitting from a standing position Utilize anti-fatigue mats if present in your area
Cage Change Tasks	<ul style="list-style-type: none"> Lifting of feed bag Changing cages Twisting torso to reach cages 	<ul style="list-style-type: none"> Use safe lifting techniques Ensure cages are kept close to you during changes Adjust the height of the station to a level where elbows are in a neutral position Periodically switch hands Place change station in a location where twisting is minimized
Cage Disassembly	<ul style="list-style-type: none"> Removing water stoppers Retrieving cages from cart 	<ul style="list-style-type: none"> Use safe lifting techniques Minimize bending and squatting when possible Periodically switch hands and rotate stations If present, use a tool to remove water stoppers
Bedding Disposal	<ul style="list-style-type: none"> Banging of soiled cages Scraping of soiled cages Open air dumping Torso twisting 	<ul style="list-style-type: none"> Scrape cages prior to bedding disposal Use the anti-vibration piece at disposal stations Place cages in a location where twisting is minimized
New Cage Assembly	<ul style="list-style-type: none"> Pinch point – automated flipping mechanism Twisting and bending Back and knee bends 	<ul style="list-style-type: none"> Keep hands away from the flipping mechanism Place cart for new cages closer to the work area Place newly assembled cages on a taller cart to avoid excessive back bends
Water Dispensing	<ul style="list-style-type: none"> Capping water bottles Carrying and flipping crates of full bottles 	<ul style="list-style-type: none"> Use a tool to cap water bottles if present Use safe lifting techniques Only carry one crate of full bottles at a time Use a cart to move full crates
Rounds and Health Checks	<ul style="list-style-type: none"> Squatting Awkward bending Pushing of racks Lifting animals themselves 	<ul style="list-style-type: none"> If possible, minimize squatting, sit, or move cages to an area where you can perform work at a neutral position during health checks Push only one rack at a time Utilize the techniques outlined in your SOP’s for lifting of animals
Bulk Autoclave	<ul style="list-style-type: none"> Pushing or pulling of carts Awkward elbow position 	<ul style="list-style-type: none"> Push only one cart at a time Use handles at all times when pushing carts