

Risk assessment RA19 Resistance exercise machines

<https://sportsiencesafety.stir.ac.uk>

Faculty / Service Area	Faculty of Health Sciences and Sport	Location	Cottrell 3B140
Description of work task / equipment /area being assessed			
Cybex resistance exercise machines			
Change log	Version 1.1	29 Aug 2022	Expanded this section
	Version 1.2	11 July 2023	Referenced regulations and SOPs
Head of faculty	Prof Jayne Donaldson	Safety officer	Dr Nidia Rodriguez Sanchez
Completed by	Dr Stuart Galloway	Date	07 Jul 2020
Reviewed by	Dr Nidia Rodriguez Sanchez	Date	11 July 2023
	Chris Grigson	Date of next review	August 2024
Equipment used	Cybex resistance exercise machines		
Categories of people involved	Staff, UG, PG, Visitors		
Duration of activity	<3hrs	Frequency of activity	Daily
Legal compliance to standards and regulations required	<p>Health and Safety at Work act 1974 (HASAWA) https://www.hse.gov.uk/legislation/hswa.htm</p> <p>Management of Health and Safety at Work Regulations 1999 (MHSWR) https://www.legislation.gov.uk/uksi/1999/3242/contents/made</p> <p>Provision of Work Equipment Regulations 1998 (PUWER) https://www.hse.gov.uk/work-equipment-machinery/puwer.htm</p>		

		Manual Handling Operations Regulations 1992 (MHR) https://www.hse.gov.uk/pubns/priced/l23.pdf							
What are the hazards?	Hazard category	Who might be harmed and how?	What are you already doing to control the risks?	*Risk rating	What additional controls (if any) are required to reduce the risks?	*Risk rating	Action by who?	Action by when?	Date of completion
Overexertion	F4	User Low blood pressure - fainting High blood pressure episode Cardiac arrest Muscle fatigue Cramp Joint pain Pulled muscles, ligaments and tendons. Dizziness Hyperventilation Nausea Exhaustion	Risk assessment RA03 and RA04 Participants must go through health and fitness screening before use Only trained investigators allowed to use machine All users instructed to warm up before and down after the test All users instructed to stop if they experience unusual symptoms during the test	1x4=4					
Overextension of joints	F4	Operator Musculoskeletal injuries Fractures	Risk assessment RA03 and RA04 Machine must only be used as described in the manufacturers instructions	2x2=4					

What are the hazards?	Hazard category	Who might be harmed and how?	What are you already doing to control the risks?	*Risk rating	What additional controls (if any) are required to reduce the risks?	*Risk rating	Action by who?	Action by when?	Date of completion
			First aiders and first aid box close by						
Pinch points and crushing	F4	User Crush injuries Shearing injuries	SOP with clear instruction to allow adequate room for limb during full motion of machine parts avoiding additional objects of clothing that could be trapped between limb and machine Unloaded check of full range of machine motion Clear instruction on correct use of machine. Any injury to be reported to safety officer and advice sought from a first aider.	1x2=2					

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			First aid box close by in Cottrell 3b142b List of first aiders on door						
Sudden loss of load	F4	User Machine failure suddenly removes load from subject resulting in musculoskeletal injury from sudden motion or interaction with machine frame	Regular inspection and maintenance of machine and its weight lifting belt First aiders and first aid box close by Any injury to be reported to safety officer and advice sought from a first aider. First aid box close by in Cottrell 3b142b List of first aiders on door	1x2=2					
Slips, trips and falls	F4	User Trips over machine frame and collisions with machine	Area around machine to be kept clear of debris Floor, grips, seats and actuating points to be cleaned regularly and	1x2=2					

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			<p>checked for adequate grip before the machine is used</p> <p>Area around machine to be kept clear of sharp edges from eg furniture brought in from another area</p> <p>First aid box close by in Cottrell 3b142b</p> <p>List of first aiders on door</p>						
Injury from Jewellery or inappropriate clothing	F4	<p>User</p> <p>Cuts and lacerations</p> <p>Limbs caught up in clothing during exercise</p>	User instructed to remove jewellery and inappropriate clothing before test						
References and Further reading	<p>Preparticipation medical evaluation for elite athletes https://bmjopensem.bmj.com/content/bmjosem/7/4/e001178.full.pdf</p> <p>Standard Operating Procedures</p> <p>Cybex resistance machines</p>								

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	Laboratory Risk Assessments								
	RA80_TeachingLab_L19		RA81_ResistanceLab_3B140		RA82_PhysiologyLab_3B142				
	RA83_NeuromuscularLab_3B142D		RA84_MultipurposeLab_3A72						