ERGONOMICS FOR MANUFACTURING INC.

Assessments to Solutions…
360° Innovative Ergonomics for your Company…

- Ergonomic Assessments
- Workstation & Equipment Design
- PDAs
- Office Ergonomics
- Lunch & Learn Training
- Ergonomic Engineering Workshops
- Injury Prevention Programs
- Remain & Return to Work Consulting
- Pre Placement Post Offer Screening

Ergonomic Solutions that Reduce Injuries & Promote Healthy Workplaces & Productivity

ERGONOMICS FOR MANUFACTURING INC.

Phone: 519.369.8688 - email; info@ergo4mfg.ca website; www.ergonomicsformanufacturing.ca

Assessments to Solutions…
360° Innovative Ergonomics for your Company…

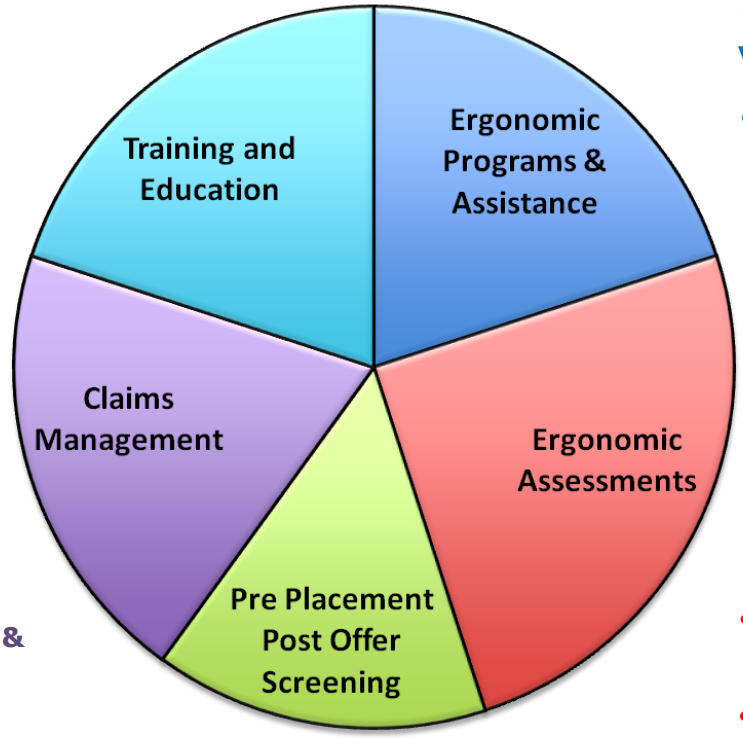
Our Mission;

Specializing in the prevention of injuries through the application of successful ergonomics; from simple to innovative solutions in your workplace, to promote health and wellness and business growth. Our trained Canadian Certified Professional Ergonomists are an ideal complement to your team, providing guidance on reducing injuries and improving productivity in a variety of workplaces.

Ergonomics for Manufacturing Inc. proved to be the perfect choice in an ergonomics consultant for a project that proposed major changes to our logistics group. Their Ergonomist worked closely with our team to understand the current challenges, and validate the assessment of changes that were proposed. I particularly appreciated their ability to communicate with our shop floor employees, both to listen to and understand their concerns, as well as to help win their confidence and support in learning new ways of working. I highly recommend Ergonomics for Manufacturing and would not hesitate to call myself for consultation on another project for me."
Cheryl Gasparet, ATS

360° of INNOVATIVE ERGONOMICS

- Lunch & Learns
- Ergonomic Awareness & Best Practices
- Ergonomic Design Guidelines for Engineers
- Office Ergonomics
- Remain @ Work & RTW for your team



Worksite ergonomic visits for your entire team, integrating ergonomic practices into daily business operations

- Worksite Injury Compatibility Assessments
- Remain @ Work & RTW Programs
- Job Match Analysis & Job Coaching
- Incident & Claims Trend Analysis

- Office Assessments
- Physical Demands Assessments
- Ergonomic Risk Assessments
- Safe Job Procedures & Job Hazard Analysis
- Design, Workstation and Equipment Reviews

Assessing your Applicants Work Readiness & Physical Suitabilty

PHYSICAL DEMANDS ANALYSIS

A detailed & illustrated quantitative analysis of the “bona fide” physical demands required of the worker to perform the essential duties of their assigned job. Detailed PDAs are the foundation of a great ergonomics program with many uses.

Claims management

...determination or compatibility assessments of work relatedness of an injury
… return to work decisions
… job matching for task accommodation.

Lean Manufacturing and Opportunities for Improvement;

… identify non-essential tasks, wasted movements, potentially stressful joint ranges of movement, high strength demands

Pre-placement, Post-Offer Physical Screening

… Are your applicants “fit for duty” this proactive screening tool tests and determines the physical suitability of your applicant for your workplace. Current accurate PDAs are necessary to determine the bona fide task demands and test elements as well as pass/fail cut points.

Department:	Production: Cell 4	Job: Rivet & Leak Test	Date: January, 2013
Cycle time:	~32 sec/ cycle. Shift production goal for Delta product on Cell 4 is 720 coolers, resulting in 90 cycles per hour at this stn	Job Rotation: Hourly between 12 workstation (2 Build stations and 2 Hose stations)	
Shift informatio	8 hr shift, 2 x 10 min and 1 x 20 min paid breaks, 3 shifts, designated shifts	Analyst: Ann Marie Burmeister, B.Sc., Hons. Kin., C.C.P.E., Ergonomics for Manufacturing Inc.	
Job Objective:	Rivet and Leak test coolers	Verified By:	
Job Duties:	Cell Operators stationed at this position handle individual brazed coolers (1 lb./0.5 kg, 4.1”/ 10.4 cm in height, 23”/ 58.4 cm in length and approx. 0.75”/ 1.9 cm in grip span) rivets and brackets. Brazed coolers are presented to the rivet station on a cooling table to the left of the workstation, introducing a forward reach across the actuators to collect a cooler. Brackets are collected from material bins to the right of the 2- head riveter and the bilateral 0-force palm sensor actuators rest on an independent stand perpendicular to the riveter and parallel to the riveter parts fixture. A bracket is collected and placed in the rivet machine, the cooler is collected and placed in the parts fixture, the two palm buttons are actuated cycling the machine, the cooler is grasped and turned end for end, another bracket is loaded in the rivet machine, the cooler set back into place and actuated once again. 2 coolers are riveted taking 32 seconds, passed on to the flame brazer and then the team member moves to the leak test station to dry leak test 2 coolers per cycle, the leak test time is 29.1 seconds, loading, unloading and cycling the machine takes approx. 3-4 seconds per cycle.		

Summary Requirements for Essential Duties			
Mobility			
Walking	No Walking	Walking m per minute per cycle	☑ 2 m at a time
Standing	No Standing	Sit/Stand under worker control	
	☑ Less than 15 min at a time standing stationary	15-30 min at a time standing stationary	More than 30 min at a time standing stationary
	Less than 15 min at a time	15-30 min at a time	More than 30 min at a time
Sitting	☑ No sitting	Sit/Stand under worker control	
	Less than 15 min at a time	15-30 min at a time	More than 1 hr at a time
Stair climbing	No stair climbing	steps maximum at a time	steps per min cycle
Low Level Work	Kneel	Stoop	Squat
Work at or above shoulder height	No work at shoulder height	☑ Some work at or above shoulder height, rare, refill rivet hopper.	
Strength			
Lifting (floor to waist)	☑ No lifting floor to waist	Lifting	Frequency Dimensions of load:
Lifting (waist to shoulder)	No lifting waist to shoulder	☑ Lifting 36-40” 1 lb./ 0.45 kg	Frequency Occasional Dimensions of load: 23 ”/ 58.4 cm, length of spacer, 6”/ 15.2 cm width of bundled tooling
Lifting (above shoulder height)	☑ No lifting above shoulder height	Lifting	Frequency Dimensions of load:
Lower (waist to floor)	☑ No lowering waist to floor	Lowering	Frequency Dimensions of load:
Lower (shoulder to waist)	No lowering shoulder to waist	☑ Lowering 1 lb./ 0.45 kg	Frequency Occasional Dimensions of load: 23 ”/ 58.4 cm, length of spacer, 6”/ 15.2 cm width of bundled tooling
Lower (from above shoulder height)	☑ No lowering from above shoulder height	Lowering	Frequency Dimensions of load:
Bilateral Upper extremity strength	☑ light, freq-constant		Frequency Frequent-Constant
Push (whole body)	No pushing	☑ Pushing kg strength applied, distance moved	other:
Pull (whole body)	☑ No pulling	Pulling kg strength applied, distance moved	other:
Gripping	☑ Power, normal and wide frequency: freq-constant, < 2 lb. avg.		frequency:

Job Breakdown

Step 1	Force (kg)	Back	rom	Neck	rom	Left Arm: Shoulder	rom	Elbow	rom	Wrist	rom	Grip	Right Arm: Shoulder	rom	Elbow	rom	Wrist	rom	Grip
Collect and place cooler in parts fixture in rivet machine.	~1 lb./ 0.45 kg	neutral		neutral		neutral		neutral		neutral		neutral	☑ neutral		☑ neutral		☑ neutral		☑ neutral
		☑ flexion	0-30°	☑ flexion	0-20°	☑ flexion	30-90°	☑ flexion	0-110°	flexion		☑ power	flexion		flexion		flexion		power
		extension		extension		extension		☑ extension	0-110°	☑ extension	0-45°	2-finger pinch	extension		extension		extension		2-finger pinch
		rotation		rotation		abduction		☑ pronation	full	ulnar dev		lateral key	abduction		pronation		ulnar dev		lateral key
		lat bending		lat bending		adduction		supination		radial dev		☑ palmar	adduction		supination		radial dev		palmar
						external rot						hook	external rot						hook
						hiking						finger press	hiking						finger press
	task time	Vertical working range				Horizontal reach range						Strength	Horizontal reach range						Strength
	< 4 sec	~38”/ 96.5 cm				16-24”/ 41-61 cm						1 lb./ 0.45 kg	<16”/ 41 cm required						1 lb./ 0.45 kg

Collect a cooler resting vertically from the staging table, a unilateral forward reach with either arm across the palm sensor stand occurs, the cooler is laid flat in a parts fixture at approx. 37”/ 94 cm (this can vary with hand placement on the cooler), with a forward reach of ~12”/ 30.5 cm. Sometimes the part needs to be jostled to fit over the rivet mandrels.

ERGONOMIC ASSESSMENTS & ASSISTANCE

Injury Prevention Program

….. Our team provides a full circle of ergonomic services to complement and integrate ergonomic practices into every part of your everyday operations for a sustainable injury prevention program that supports your business objectives.

Ergonomic Assessments- Office & Industrial

….. From offices, assembly lines, operating rooms to mines, we can identify ergonomic job stressors from concepts to existing machines and workstations and propose recommendations to minimize risk to injury and maximize productivity for your team members.

Risk Analysis & Job Rotation Assessments

….. Risk Analyses are a great means of prioritizing your Ergonomic efforts and can be used with trend analysis to target areas of high incidence reports or high severity (cost) reports or where employee absenteeism or turn-over seems to be a problem.

….. Looking for an administrative control that; reduces monotony, achieves cross training, stimulates the minds of your team members and minimizes the exposure to ergonomic job stressors in specific tasks then Job Rotation may be an option that fits.

Workstation, Tool, & Equipment Design Reviews

….. Designing in good ergonomics at the blueprint stage where the cost to make modifications is 10% of what it would be after implementation. The most proactive and feasible approach you can take to tackling potential Ergonomic problems in your workplace is to do so before they arrive.

Job Hazard Safety Analysis & Safe Job Procedures

These task and workstation specific documents are an invaluable tool for your front line team members for communicating potential safety hazards, necessary PPE and preferred work practices to ensure they leave work the same way they arrived and minimize the risk to injury while meeting legislative requirements. Visual, easy to read and concise.

- Identify potential pinch points, exposure to noise, chemicals, extreme temperatures, bump hazards, repetitive movements, awkward postures, impact, vibration, unusual force or strength demands.

"Ergonomics for Manufacturing Inc provides excellent service. They are available in a timely manner and work independently as needed. Their interactions with my employees are always friendly and professional. The reports they produce are detailed while remaining concise."
Dawn Burnett, Energizer Canada

OFFICE ERGONOMICS

Office ergonomics can be as simple as adjusting and organizing current equipment and workspaces to a few key purchases to enable neutral work postures. Our team can educate, assess and recommend solutions that promote a healthy and productive office environment, just part of our 360° of Innovative Ergonomics™ for your workplace.

…. Identify ergonomic stressors, in a specific workstation or in the office space in general along with recommendations to remedy the stressors. Recommendations may be as simple as changing the desktop arrangement of a workstation and adjustment of a chair to neutralize work postures & maximize support & comfort to suggestions of some ergonomic purchases.

….. One-to-one job coaching on good work postures and work habits is an integral part of an individual workstation assessment, empowering the employee to control their own risk.

…. For large group assessments our team can prepare a concise table that details only what you need to know to make informed decisions on how to improve your workplace for your team members.

…. Compatibility assessments and return from STD, our team can complete the same comprehensive individual assessment with an accompanied detailed report of the team members areas of injury and recommendations to promote a successful RTW or discussion on the work relatedness of a claim to the work demands.

….. Team Training Lunch & learn; Perhaps group training regarding assessing & setting up their individual workstations to promote the use of neutral work postures with the adoption of good work practices such as preventative stretching, managing stress in a positive manner, and taking breaks is the starting point you are looking for

TRAINING PROGRAMS

The best of the best, training that's geared to your workplace, with site-specific examples. Our goal is to impart as much useable knowledge to your team members as possible so that your staff leaves feeling they can do something for themselves or their team members to create a safe, healthy and productive work place.

Ergonomic Awareness & Best Practices

….. Our 360° of Innovative Ergonomics Best Practices training is specific to each workplace and their unique workstations, we use specific worksite examples of what to do to encourage good work practices that minimize

- strain on muscles and joints,
- eliminate unnecessary extra handling,
- minimize exposure to impact or vibration,
- promote active muscle recovery during a work cycle and
- Teach team members how to counter the ill effects of less than optimal work demands with stretching
- Education for your team members to inform them on ergonomic stressors in the workplace and how to minimize their risk to injury.

Office Ergonomics

….. Does your team know how to adjust the ergonomic chair they have for maximum support and comfort? In 30 minutes our Certified Professional Ergonomists can walk your team members step by step through the principles of good workstation set up, good work methods and how to make simple changes to improve their comfort at their office workstation.

Ergonomic Design Guidelines for Engineers

….. Empower your Engineers with the knowledge to design user friendly equipment & workstations that promotes neutral work postures, minimizes handling frequency and strength demands, minimizing the frequency of incidents and injuries reported?
. With 1 or 2 day workshops to choose from, and the option to spread it out we can fit the on demand nature of your engineering team with our training.
Does your team have an ergonomic guideline/ checklist to reference for designing equipment and setting up workstations? We can help you with that.

Ergonomics for your JHSC/Ergonomics Committee

….. This 1-day workshop will teach your team members how to identify ergonomic job stressors, weed out root causes and prioritize solutions.
We will provide your team with the know how & tools they need to not only identify ergonomic job stressors but also quantify the relative risk to injury (for 75% of the working population) and strategies to identify and prioritize control measures to eliminate or reduce exposure to the ergonomic job stressors identified.

Remain @ Work & Return to Work Programs

….. Train your team members about the essential steps in developing a successful and timely Remain @Work or RTW program that works for your company, facilitating the management of incidents and injuries for a quick return to regular duties and containment of costs. Contact us to learn more

PRE-PLACEMENT POST OFFER SCREENING

Are your applicants "Fit for Duty"? Can they perform the bona fide essential demands of the jobs in your workplace? What pre existing conditions are they bringing to your workplace? Ergonomics for Manufacturing Inc.'s worksite specific, customized Pre Placement Post Offer Screening tool can answer these questions.

- Our customized PPPO screening tool is an essential administrative component of our 360° of Innovative Ergonomics™, it is a proactive tool used to determine an applicants' work readiness & suitability to fulfill the essential physical demands at your workplace before they are hired.
- Review of thousands of screenings indicates an average 10% failure rate with an end result of significantly reducing the number of MSDs reported in the first 2 years of employment.
- The screening tool may include tests of strength, endurance, range of movement, mobility, work simulation and dexterity as they directly reflect the "bona-fide" essential demands of the job or group of jobs an applicant is applying for. Our team members will develop a site specific testing protocol with written policies and procedures, test elements and forms to ensure the test remains both valid and reliable from one evaluator to the next. Following testing your Human Resource team will receive a summary sheet outlining the applicants "Fit for Duty" or not.

Example: **Pre-Placement Post Offer Screen Summary Sheet**

Name:_____ Date:_____

			Demonstrated Ability	Did not Demonstrate Ability
Grip strength testing results:			YES	NO
The applicant put forth **less than / full and consistent** effort on MVE testing as evidenced by RGE values and C.V. scores. Further it **can / not** be assumed that the test results presented here are a valid and reliable measure of functionality.				
Pinch Grip			YES	NO
Dexterity				
Workplace specific dexterity test			YES	NO
Comments:_____				
Minnesota Manual Dexterity Test			YES	NO
Strength:				
Lifting	(1)	(40 lb range 18-33-inches)	YES	NO
	(2)	(40 lb range 30-64-inches, 1X/minute, 5 min)	YES	NO
	(3)	(18 lb range 28-56-inches, 5X/minute, 3 min)	YES	NO
Pushing			YES	NO
Pulling			YES	NO
Range of Movement: Specific by body part and essential demands			YES	NO
Resisted strength testing:			YES	NO
Work simulation test (15-20 min):			YES	NO
Applicant demonstrated: Attention to detail Ability to follow instructions				
Overall			YES	NO
Limitations/ Comments:_____				

CLAIMS MANAGEMENT

Getting your team members back to productive work in a timely and safe manner that meets legislative requirements and minimizes your disability & injury costs.

Compatibility Assessments

… wondering about the work relatedness of a claim, our team can provide a detailed written professional opinion regaring the work relatedness of a claim by comparing the work demands to the mechanism of injury reported.

Remain @ Work & Return to Work program Development

… Create a tool for your Supervisors that identifies and lists jobs in your workplace that can be used for safe and suitable temporary accommodation of workplace injuries by body part injured.

… Do you have team members struggling with getting back to their pre-injury work, let us help to identify and plan for a timely return to pre-injury work, not only will we identify a safe and suitable plan but monitor and meet with your injured team member on a regular basis to ensure the plan is progressing.

Job Match Analysis & Accommodation

… Matching the abilities and medical restrictions of an employee to safe, suitable and productive work. We will provide you with a detailed report outlining the task demands of the job as they relate to the injured workers specific physical precautions, if your team members' not able to perform the essential duties as they exist, we'll provide suggestions for accommodation for your team to review.

Job Coaching

… Coaching regarding best work practices to avoid aggravation of an injury. This may involve instruction about posturing, work technique and habits, workstation arrangement, hurt versus harm and use of passive and active breaks, stretching, and heat and cold application for pain control.

Incident & Claim Trend Analysis

… Ever wonder where you should start, where to focus some corrective measures or what to tackle first? A retrospective analysis of your Company's incidents & claims can provide direction going forward for your ergonomic & health, safety and wellness efforts, tackle the areas or tasks with the highest incidence or highest severity (cost) to improve productivity and avoid future claims.

"I find the Ergonomists at Ergonomics for Manufacturing Inc. to be professional, knowledgeable, and have the excellent interpersonal skills required to be effective in their craft……Their insight into effective ergo recommendations to help the business reduce workplace injuries, especially RSI, in a cost effective way….They have also been helpful in participating in job coaching skills with injured employees returning to the workplace."
Leslie Knarr, HR Generalist

CLIENT LIST

Westons Bakeries • Dana Corporation • Tenneco Automotive • ATS Automation • Compass Minerals • Energizer, Canada • South Bruce Grey Health Centre's • Hobart Food Equipment • Precision Resource • Leeson, Canada • Hammond Manufacturing • Kromet International • Medike Leather Products • PPG • GE Securities • TG Minto • OTIP • Pillers Sausages and Delicatessens • Wescast Industries • Mitten Vinyl • MDL Doors & Windows • Trelleborg • McCarthur Tire • Taylor & Grant Specialties • Excellence in Manufacturing Consortium • Terra Footwear • Interforest Ltd • Larsen & Shaw Hinges • Aisin Canada • Spinrite • Xenopus Inc • P & H Foods • Kretschmar • VOA Canada • Transform Automotive • Campbell Soups • Qulliq Energy Company • Elementary Teachers Federation Office • Challenger Motor Freight • County of Grey • Bellwyck Packaging • Dollarama • Textron Automotive • Associated Packaging Technolgy • Chubb Edwards • Quadro Engineering • Golden Valley Farms • Conestoga Meats • Transfreight Automotive • Ledgerock • Power Workers Union • Berry Plastics • Warner Custom Coatings • Bogdon & Gross Furniture • Durham Furniture • Greentec • Meaford Long Term Care

"Ergonomics for Manufacturing has worked with our management team as an ergonomics consultant since 1999. As an integral part of our continuous improvement efforts, they have assisted with redesigning workstations to be more ergonomically friendly, completed PDA's & developed associated safe job rotation—not to mention, is a key part of our RTW program. They work well with the front line members and management alike, which is a result of their ability to relate technical knowledge in a way that suits the audience…."

Acey Kaspar, P. Eng. Plant Manager, Dana Power Technologies Group, Mt. Forest, ON