



INNOVATIVE  
WEARABLE  
TECHNOLOGY  
TO IDENTIFY &  
VERIFY RISKS &  
RECTIFICATION

**JointAction<sup>®</sup>**  
Prevention of musculoskeletal injury.

**MUSCULOSKELETAL DISORDER  
PREVENTION AND MANAGEMENT  
REDEFINED**

# How Does Joint Action Auto Work?

JointAction Auto's patented technology helps employers to simply and readily protect employees, reduce costs, maintain productivity and the hassles of human resource management. Using wireless sensor technology, an easy to use yet powerful app and access to a highly sophisticated database of worker risks, the company can readily identify risks to workers objectively and then work with OH&S or OTs to modify activities and minimise risks in real time.

Designed by highly qualified and credentialed industry professionals with hundreds of years' experience and a team of technologist, doctors and clinicians, JointAction Auto will Assess High Risk Activities objectively against a sophisticated database in real time. Verifiable results with instant feedback ensure the data is useful.

JointAction Auto accesses wireless sensor and real-time video to identify risks against a powerful injury database to provide objective analysis and feedback. Stop guessing, start measuring.

Users log into the JointAction Auto app on an iPad and synchronise with wireless sensors attached to the employee in 5 locations around the body.

Operators can apply perceived loads and repetitions to the task to better simulate the work shift being undertaken for a more realistic measure of impact on the worker over an entire shift.

We offer a range of

suitable sensors from a number of suppliers to monitor activity based on your need.

As the sensor technology improves, JointAction Auto includes these drivers to allow the collection of more sensitive data as well as different load types.

With JointAction Auto you won't be trapped by old technology. Today, JointAction Auto works with a variety of sensors accepted world wide.

The sensor technology is the easy bit. Analysing the data to identify the levels of risks and monitor an individual's performance is the critical advantage of the tool.

Users have the ability to input additional information such as load, repetitions and shift duration to calculate risks across a task, a job or a shift.

JointAction Auto is ideal for:

- Injury prevention analysis
- Employee recruitment
- Injured worker rehabilitation
- Prevention of disabling surgery
- Case study management

With JointAction Auto you obtain objective and verifiable data that can be repeated after changes to report and validate change. The traditional manual analysis only provides subjective data that cannot conclusively demonstrate risk reduction.

JointAction Auto's patentent Consequential Scoring report gives you immediate feedback on the risk profiles of tasks. This allows businesses to make changes in work practices and validate the benefits without delay.

The user portal empowers users to develop real outcomes and manage projects with ease. Let us show you how.



## Make Data Useful With Consequential Scoring

# Key Benefits To Your Business?

Measuring risk is a key component of good management. Injury prevention has direct and indirect benefits to your organisation. Further, when you are returning staff to the workplace, the ability to monitor, measure and validate can help your business avoid the higher costs of rehabilitation or even surgery.

The JointAction Auto tool set enables employers to directly, or with the specialist Ergonomist, OT and Physiotherapy consultants, to:

1. Keep employees safe
2. Reduce Workcare claims costs
3. Reduce the requirement for training new employees to fill a position
4. Reduce rehab and other medical costs
5. Demonstrate to employees that their welfare is your concern
6. Work with your insurer to demonstrate a risk reduction action plan
7. Minimise exposure of both the company and directors to expensive litigation

JointAction Auto is an exciting new automated hazardous manual handling/MSD risk analysis platform using wearable sensors to monitor tasks in real time and then analyse which tasks are of the greatest risk.

There are other tools in the market, but JointAction Auto has some unique features that allow businesses to score risks against a database of potentially dangerous actions rapidly.

JointAction Auto has several points of difference and includes the following features:

1. Quicker than a conventional risk assessment
2. Costs saved developing risk control at your workplace
3. Engagement of the people exposed to risk
4. Enables workers to better manage risk
5. Real-time feedback is now possible with immediate modifications and reassessment
6. Enables more risk assessments to be performed in the workplace - simple and reliable tool

The resultant consequence score is specific to your workforce and site of work. This creates a risk analysis with meaningful data helping manage risk better in your workplace and for your workers. JointAction Auto promotes an upstream model of care resulting in a prevention focus by assessing and changing task specific risk in your workplace and workforce.

Contact us today to learn more.

## Physical Ergonomic Risk Assessment\*

Risk Score	Recommendation	Result
> 400	Very High Risk; Discontinue Operation	
200 - 400	High Risk; Immediate Correction Required	
70 - 200	Substantial Risk; Correction Needed	
20 - 70	Possible Risk; Attention Indicated	
< 20	Risk; Perhaps Acceptable	

Date: 1 July 2018

Location: Warehouse 1 - Dandenong Plant

Task Description: Picking from shelving including reaching and bending back to place cartons and bundled cartons into cardboard bulkie in order picker.

Task done for 4 hrs on day and afternoon shifts and for 8 hrs on night shifts.

### Objects handled - cartons in plastic wrapped bundles

Extra-large: cartons 120 x 80 x 200mm; bundle of 2 = ~4kgs ~22% time on task  
Special: cartons 115 x 75 x 160mm; bundle of 3 = ~5.5 - 7 kgs ~11% of time on task

Mediums: cartons 75 x 75 x 160mm; bundle of 2 = ~kgs (tba) ~67% time on task

### Risk Assessment Score four hours per shift: 80

D1-D6 REPETITIVE OR SUSTAINED Sub-score: 71  
D7-D9 HEAVY LOADS OR HIGH FORCES Sub-score: 8  
D10-D11 DIFFICULT OR AWKWARD LOADS Sub-score: 1  
D12 VIBRATION Sub-score: 0  
D13-D14 OCCUPATIONAL OVERUSE SYNDROME (OOS) Sub-score: 0

### Risk Assessment Score eight hours per shift: 166

D1-D6 REPETITIVE OR SUSTAINED Sub-score: 146  
D7-D9 HEAVY LOADS OR HIGH FORCES Sub-score: 18  
D10-D11 DIFFICULT OR AWKWARD LOADS Sub-score: 2  
D12 VIBRATION Sub-score: 0  
D13-D14 OCCUPATIONAL OVERUSE SYNDROME (OOS) Sub-score: 0

### \* Sample Report

ADVISER NOTES: The grasp width and weight need to be reduced to control this risk which occurs with single hand use





# FACT CHECK

Musculoskeletal Disorders (MSDs) are a common and costly problem for people and businesses.

- Of all claims 50% are MSD & 25% back related. These figures haven't changed in 25 years.
- MSDs are the single largest category of workplace injuries and are responsible for almost 30% of all worker's compensation costs. (source: BLS)
- U.S. companies spent 50 billion dollars on direct costs of MSDs in 2011. (source: CDC)
- Indirect costs can be more than five times the direct costs of MSDs. (source: OSHA)
- The average MSD comes with a direct cost of almost \$15,000. (source: BLS)

## MSD PREVENTION AND MANAGEMENT IS MORE THAN JUST TECHNOLOGY

As a member of the JointAction family, you not only gain access to leading technology, you also have access to vital information on how to minimise MSD risks to your staff.

JointAction Group can provide consulting services to help you achieve your goal or, even better, work with your existing provider, to develop real time solutions to your business needs.

### Manual handling

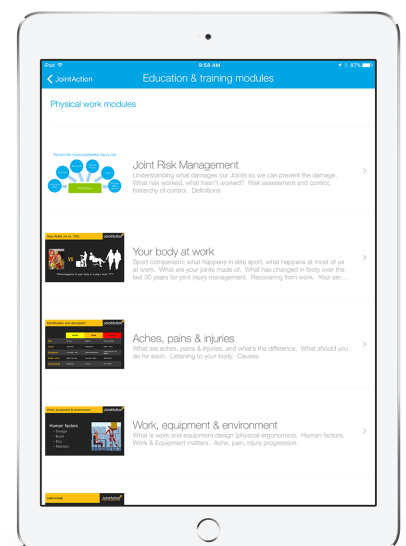
- Manual handling is like food we all need enough but too much or the wrong kinds are bad
- Too little movement and physical work is unhealthy (underloading)
- Too much and/or the wrong kinds of movement and physical work are unhealthy (overloading)
- We need to promote healthy manual handling and minimise or eliminate unhealthy manual handling.

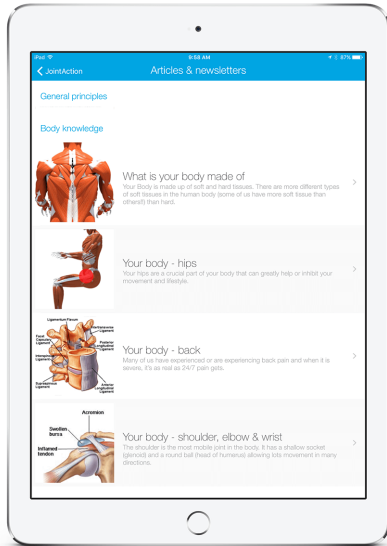
### Preventing joint injuries is not all about manual handling

- Preventing musculoskeletal injuries and disorders (joint injuries, for example; back pain, knee injuries, shoulder injuries) is not all about manual handling
- Manual handling is part of it but by itself is not the only thing leading to injuries
- We need to find and fix all the factors leading to musculoskeletal or joint injuries to make a difference

### JointAction Auto helps you identify process changes to:

- Identify smooth and easy movement
- Keeping the natural curve (lordosis) in the small of the worker's back.
- Avoid work with combinations bending and twisting
- Keep toes and nose pointing the same way as much as possible
- Keep toes under your nose as much as possible.
- Keep repetitiveness and/or heavy work between mid-thigh and shoulder height and as close as possible.
- Keep your shoulders back, down and relaxed.





## What to do about preventing joint injuries

- Talk to your health & safety manager and supervisor and workmates about improving your work methods and equipment.
- Good ergonomics is good for people and production.
- Move
- Protect your joints
- Talk about it



## Why choose JointAction?

### Industry and elite performance experience

We have extensive experience in heavy physical industries in both clinical and worksite environments. Additionally we are experienced in top level professional sport. This combination motivates participants and provides best practice scenarios.

### Work should be healthy and fun

We operate on the philosophy that physical work and movement can be healthy and fun. We provide the support structures to maximise the potential benefits of physical work and movement whilst limiting the negatives.

### Be your own ergonomist

We are highly focused on education. We use a whole of company approach. We use plain language and top quality educational media to

help every worker and manager better understand their body and its safety in the workplace.

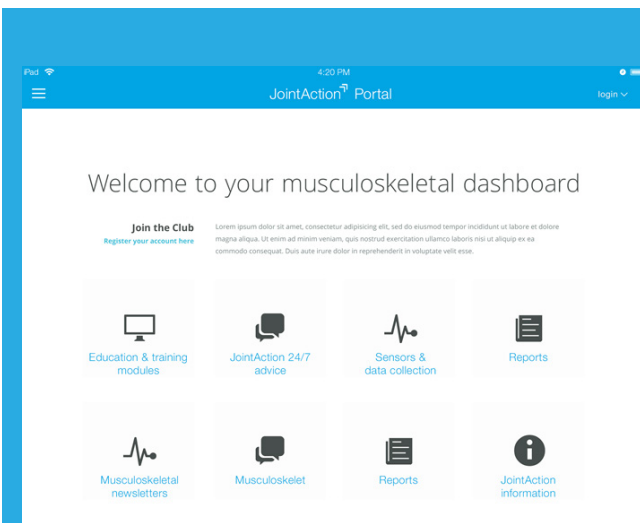
We involve management and workers in program implementation so that the program has a lasting effect on operational design and practice.



## JointAction Portal

The JointAction Portal is a key component of injury prevention for organisations large and small. Your subscription to the portal provides management and staff with access to a full array of injury prevention tools and training modules.

Each organisation has access to their unique set of worker tools including injury prevention posters, latest techniques, industry bulletins and more.



## THE TEAM BEHIND JOINT ACTION GROUP

JointAction Auto was developed by a highly specialised team of health and IT professionals whose studies and experiences led to the development of innovative technology that eliminated subjective analysis and relies on objective analysis from vast databases of injury data.

### Michael Lawrance

Sheep shearer turned Occupational Therapist

Michael has worked in safety, injury prevention, injury management and ergonomics in mining, horse racing, shearing, construction, manufacturing, transport and health for 20 years.

With a background of having worked hands-on in heavy manual handling and high-risk industries Michael trained in occupational therapy (physical and psychological training), ergonomics and safety; then did research in workplace design and hazardous physical work injury prevention.

His first 20 years of working life as a shearer provided a good grounding in consistent physical performance while managing musculoskeletal health. Michael has worked in state and national industry injury prevention projects in shearing and horse racing and worked in senior safety management roles in underground mining.



### David Bick

Physiotherapist to the sports stars

An award-winning Sports Physiotherapist, David has committed his career to inspiring Australians from early development up to elite athlete level. He is a recognised specialist in tendonopathy, running clinics and lectures educating other physiotherapists from around the country. For seven years, David has traveled the world as Team Physiotherapist to our Australian Rugby Union Team – the Wallabies. And as a former Australian Under 21 representative himself, David's private clients read like a who's who of Australian Champions – George Gregan (Rugby), Ian Thorpe (Swimming), Matt Shirvington (Track and Field), Jamie Dwyer (Hockey), Alyson Annan (Hockey) and Melanie Roche (Softball) just to name a few.



David traveled domestically and internationally for two years as Team Physiotherapist for NSW rugby team The Waratahs, twelve years with the Olympic men's and women's Track and Field, Softball, Gymnastics, and Hockey Teams, and another eight years as Team Physiotherapist at the NSW Institute of Sport for Softball, Gymnastics and Track and Field. In 2000 David was awarded the Australian Sports Medal for service to Sport by Her Majesty the Queen. JointAction is David's passion, using his knowledge, experience to teach everyday Australians and their employers the secrets to looking after themselves in the workplace.

Wearable sensor technology to capture data!

**So what?**

JointAction's Consequential Scoring, real time reports and the ability verify changes, take the "So What" out of injury prevention data collection and management

## John Pryor

International Rugby Strength & Conditioner

John has provided services to elite sporting organisations in Australia and Japan in the areas of fitness training, strength training, nutrition, biomechanics and injury management for over 15 years. His most recent role in sport was as the strength and conditioning coordinator for the all-conquering 2015 Japanese National Rugby team. John has also worked for the ACT Brumbies, NSW Waratahs, the Brisbane Broncos, the Qantas Wallabies and Suntory Japan.

He has completed a masters degree researching muscle mechanics and has international publications in sports medicine, ergonomics, biomechanics and strength training journals. He works extensively with all football codes as well as maintaining an ongoing role in occupational health.



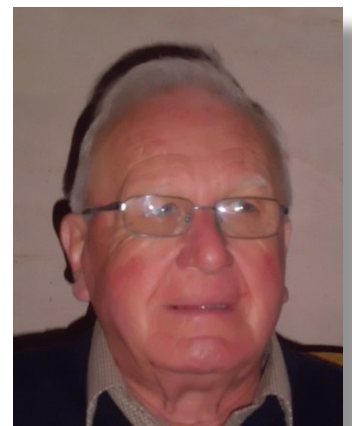
## Dr Forbes Smith MD, Ch.B, DA, RCS (Eng), R.C.P. (Lond)

Merchant Seaman/Medical Practitioner

Dr Smith is a Medical Graduate Aberdeen University Scotland. Anaesthetist, Dept. Of Anaesthesia Royal Infirmary of Edinburgh. Anaesthetist Assiniboine Anaesthetic group Winnipeg Canada. Medical Practitioner/Anaesthetist Australia, General and Spinal surgery.

As Founder and Medical Director Nabenet (national back evaluation network), a multidisciplinary post spinal surgery and occupational rehabilitation provider developed his passion in MSD injury risk minimisation. Dr Smith has been a pioneer in bringing MSD prevention to Australia.

His experience as a seaman and Midshipman/Navigating Deck Officer British Merchant Navy, serving in the Far East and being awarded the Borneo Medal, has well equipped him in the diagnosis and rectification of acquired injuries.



## Steve Cowley

PhD, BSc (Hons) (OHS), MSc (Occ Hyg), GCert(Ed), FSIA, IOSH

Steve has been an OHS practitioner & academic since 1983 in the UK, Australia and Asia and the South Pacific. His focus has been the practical application of hazard management and industrial hygiene principles in a wide variety of industry sectors ranging from mining, agriculture and construction through manufacturing and retail to emergency services and education.

He has worked on focused injury prevention projects in the shearing, thoroughbred horse racing and plastering industries. Other recent research projects have looked at the impact of increasing obesity on the safety of health care, emergency service and funeral workers; prevention of hazardous noise exposure; prevention of asthma in the motor vehicle smash repair (MVR) sector; and factors influencing PFD (life jacket) use among commercial fishers. His PhD explored strategies to market health and safety solutions and increase their adoption by business managers.

Steve is a member of the UK's IOSH, a Fellow of the Safety Institute of Australia Editor-in-Chief of the Safety Institute of Australia's Journal of Health & Safety Research & Practice, a visiting lecturer at Swinburne University and a visiting academic with Middlesex University.



# **MUSCULOSKELETAL DISORDER PREVENTION AND MANAGEMENT REDEFINED WITH USEFUL, VERIFIABLE DATA**

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