

One Hour Safety Presentation

The main goal of the Division of Safety & Hygiene is the reduction of accidents and illnesses in the workplace. Toward this goal, the *One Hour Safety Presentation* is designed to support the delivery of a presentation to co-workers in your workplace to help them understand and promote safer and healthier work environments. It is recommended that you take the DSH Training Center course as a background for using *One Hour Safety Presentation* to train others at your workplace. Call 1-800-OHI OBWC, option 2, 2, 3, for class dates and locations.

The *One Hour Safety Presentation* contains:

- **Transparency Masters** from which films can be made to use on an overhead projector,
- **Instructor Notes** which gives the instructor suggestions and script notations to use during the presentation, and
- **Student Handouts** which can be copied for those attending the presentation.

Materials are included for a one-hour presentation on each of these topics:

- ✓ Accident Analysis
- ✓ Bloodborne Pathogens
- ✓ Developing an Ergonomics Process
- ✓ Hazard Communication
- ✓ Lockout/Tagout
- ✓ Respiratory Protection
- ✓ Violence in the Workplace

Applications used:

- 1) Text documents (ending in **.txt**) can be opened with any word processing program.
- 2) Microsoft PowerPoint slides (ending in **.ppt**) can be opened with the Microsoft PowerPoint program. If you do not have PowerPoint and you do have Windows 95, 98, 2000 or Windows NT operating system, you can view the PowerPoint slides by downloading a free PowerPoint Viewer from the following website:
<http://office.microsoft.com/downloads/default.aspx?Product=PowerPoint&Version=95|97|98|2000|2002&Type=Converter|Viewer>
- 3) Adobe Reader document (ending in **.pdf**) contains the *One Hour Safety Presentation* in read-only format. It can be opened when you download Adobe Reader, which is available free of charge at the following website:
<http://www.adobe.com/products/acrobat/readstep2.html>

If you have comments or questions about these materials for *One Hour Safety Presentation*, please e-mail us: OCOSHTrng@bwc.state.oh.us

Transparency Masters

Ergonomics

Developing An Effective Process



Objectives

- The benefits of an effective ergonomics Process
- Discuss the elements of an effective ergonomics process.
- The importance of commitment from the union, employees, and the top management within the organization.

Cost And Benefits Associated With An Ergonomics Process

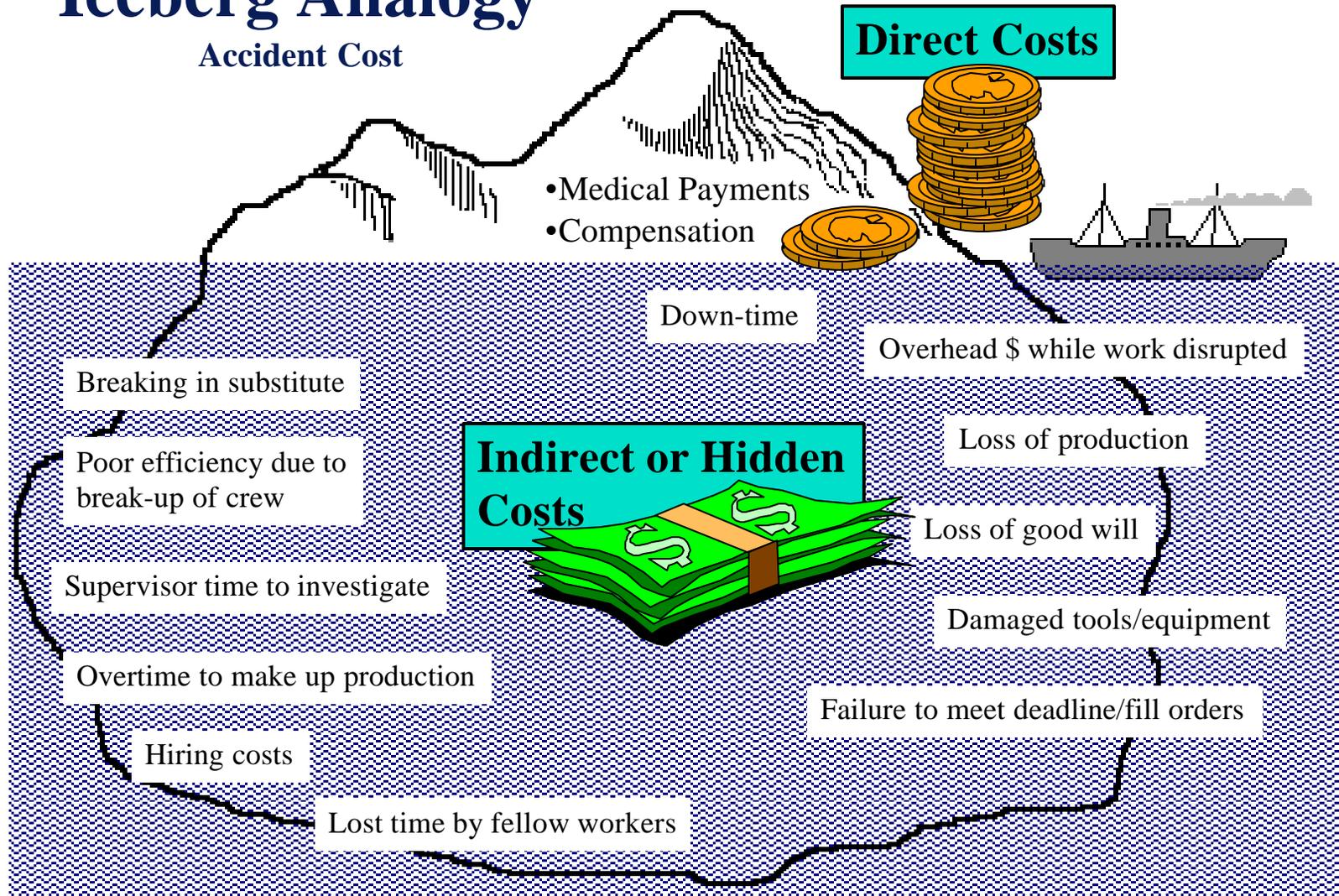


The Cost Of Injuries

- The direct cost of an injury includes the medical and indemnity costs
- Indirect costs of injuries are usually 1 to 4 times as much as the direct costs

Iceberg Analogy

Accident Cost



Costs Associated With The Development Of An Ergonomics Process

Costs

Team Meetings

Team Training

Staff Training

Forms & Communication Materials

Assessment Tools & Equipment

Ergonomic Projects

Medical Management

**Ergonomics
Process**

Benefits

Benefits Of An Ergonomics Process

Costs

**Ergonomics
Process**

Benefits

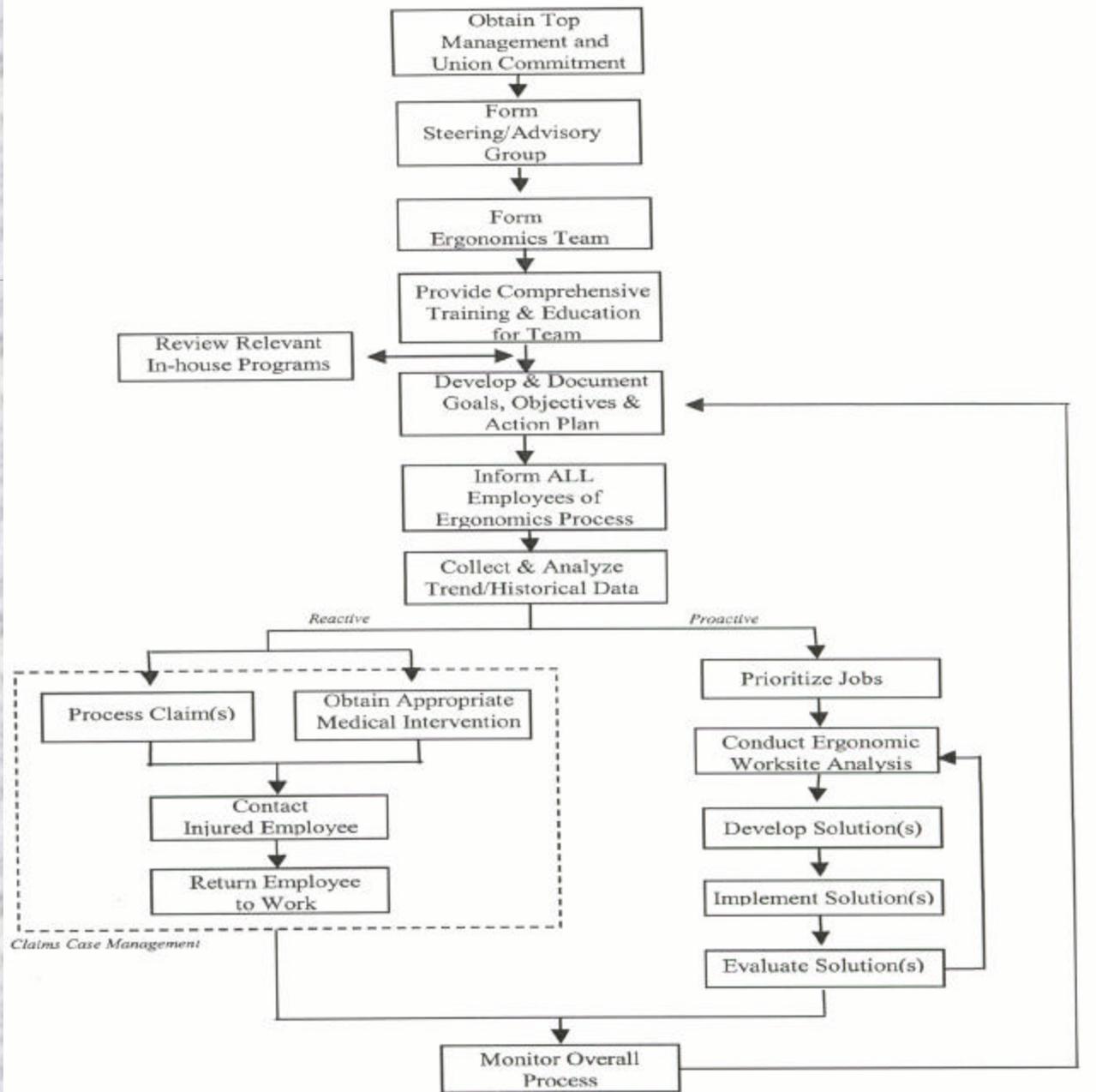
**Reduced Turnover
Reduced Replacement Costs
Improved Training
Reduced Absenteeism
Increased Productivity
Reduced Re-Work & Scrap
Increased Wages
Reduced Overhead
Reduce Injuries
Reduce Workers' Comp Cost**

Ergonomics Process Impact On Profitability

- To calculate an incident's impact on your profitability, you should use your profit margin to determine the amount of sales required to pay for the incident.

Ergonomics Process Flow Chart

Essential Elements



Obtain Top Management and Union Commitment

- Top management and the union must collectively agree to support and commit to the ergonomics process.
- Top management and union leadership should have joint meeting(s) to discuss the ergonomic process and its components.

Memorandum Of Understanding/ Letter Of Commitment

- If both parties agree to embark on the process they can show their support by drafting and signing a “memorandum of understanding” or “letter of commitment”.

Ergonomics Team

- Steering/Advisory Group role
- In general, most teams are comprised of 6-10 members.
- Some teams have an “open seat” or sub-teams.



Possible Ergonomic Team Members Should Be Considered From The Following Departments

- Management
- Union Representatives
- Supervisors
- Affected Employees
- Human Resource/Benefits Compensation Personnel
- Engineers/Facilities Planning
- Maintenance Personnel
- Plant Safety Representative
- Health Care Provider
- Purchasing Personnel

Develop & Document Goals, Objectives, & Action Plan

- In order to make your process a SUCCESS, the team must develop and document the structural components of the Ergonomic Process.
- The documentation will help establish
 - clear achievable goals
 - objectives
 - action plan

Blueprint For Success

- Team generates their written plan by discussing and documenting the answers to a series of questions located in the Blueprint for Success.
- The questions in the Blueprint for Success are discussed and answered using a who, what ,when, where, and why format.

Blueprint For Success Continued...

- The Blueprint contains example answers for each question .
- The examples are intended to guide the team through the process, and are to serve as discussion points by the team.
- The Blueprint is a fluid document; meaning that as modifications and changes are made to the process, the written plan should be updated to reflect those changes.

Collect & Analyze Trend/Historical Data

- What kind of data do you use to analyze ergonomic trends?
- Where do you find the data?

Trend/Historical Data

- Provides team with historical injury, illness, and production information.
- Data allows the team to identify trends in areas or departments that may pose ergonomic concern(s) to the workforce.
- Narrows the focus from the overall facility view to a department or job specific view.

Monitor Overall Process

- Monitor the overall ergonomics process to gauge its effectiveness and determine if the process needs modifications.

Instructor Notes

Thank you for your interest in teaching the basics of Developing an Ergonomic Process to your employees and for promoting self-sufficiency on behalf of the Division of Safety & Hygiene.

A few points to keep in mind while teaching this class to your employees.

Try to do everything you can to get your students “involved” with the information that you will be presenting. This means using actual work place examples wherever possible. Try to use your own cost figures, your own ergonomics forms, and certainly refer to your company specific jobs and procedures when at all possible.

If possible, incorporate some exercises into your training. These exercises might be as simple as small groups identifying potential ergonomic risks, or having people actually perform a job task inventory for their immediate work area. The key is to get your class involved so that they are not just listening to you lecture.

Encourage questions and repeat questions for clarity to be sure that everyone has heard and understood. Even if you know the answer, a good technique is to ask the class if anyone can answer the question. On questions where you’re not sure of the answer or there is disagreement within the class, tell the class that you’ll check on it during a break or as soon after the class as possible. Follow-up and make sure everyone gets the information.

Remember, your goal is to teach your employees to be safe and to provide accurate information about ergonomics and developing an ergonomics process for your company.

Ergonomics

Developing An Effective Process



Objectives

- The benefits of an effective ergonomics Process
- Discuss the elements of an effective ergonomics process.
- The importance of commitment from the union, employees, and the top management within the organization.

Briefly introduce yourself.

Go over objectives and ask if there are any questions.

Explain that some of the Appendices mentioned at the bottom of the overheads refer to the Ergonomics Process manual. Have your manual available if someone wants to review it in depth.

Cost And Benefits Associated With An Ergonomics Process



Here begin the discussion of why you are looking at an ergonomics process.

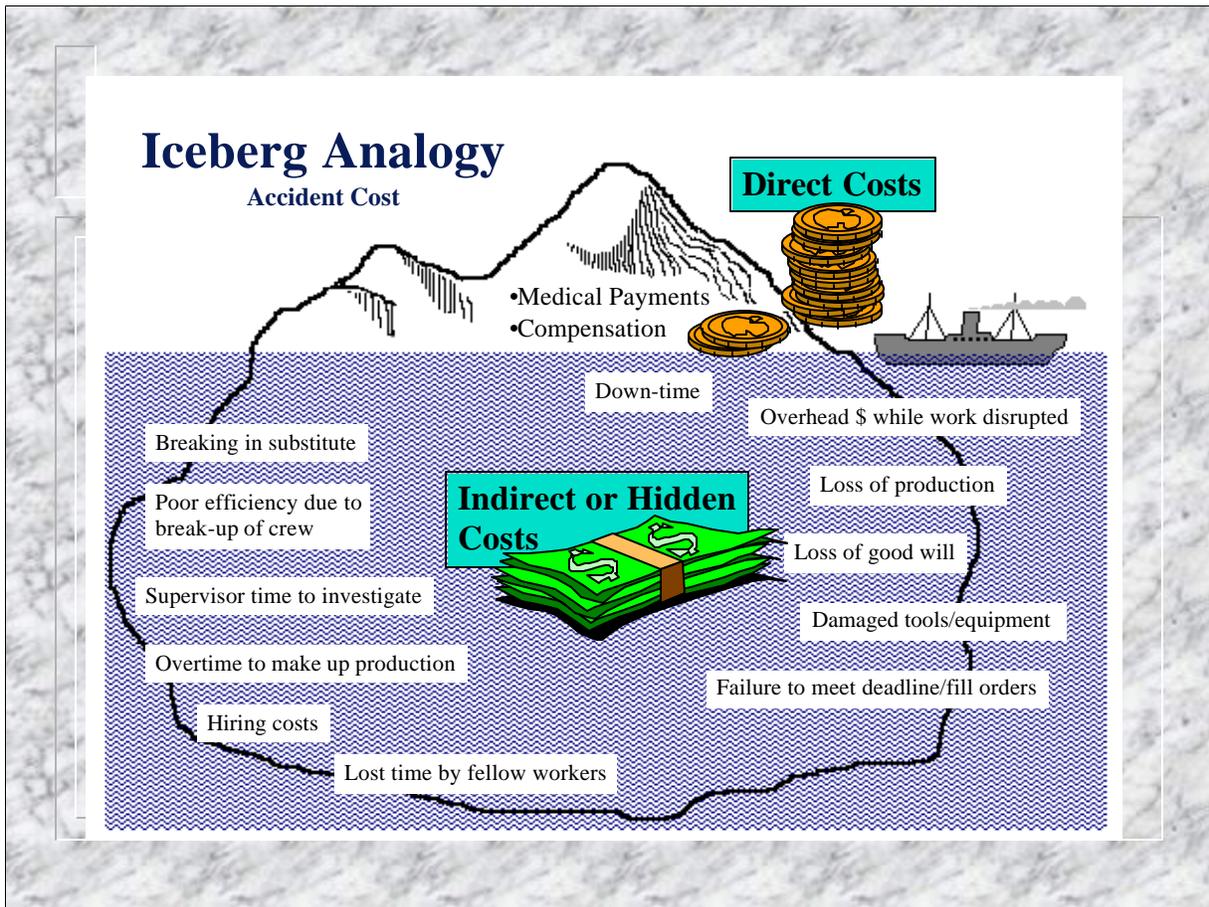
The Cost Of Injuries

- The direct cost of an injury includes the medical and indemnity costs
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Insert your real data. Let the people know how much ergonomic related injuries are costing the company. Most of the time they will be shocked!

Ask if anyone knows what indirect costs of injuries are.

If you have a flipchart or whiteboard available you might want to write down the answers.



Review the indirect or hidden costs shown and compare with the answers you received

Provide any available data on your company.

Costs Associated With The Development Of An Ergonomics Process

Costs

Team Meetings
Team Training
Staff Training
Forms & Communication Materials
Assessment Tools & Equipment
Ergonomic Projects
Medical Management

Ergonomics Process

Benefits

Briefly review the costs. Ask if anyone can think of other costs that aren't listed.

Customize a list ahead of time with estimates if you go ahead with the process.

Benefits Of An Ergonomics Process

Costs

**Ergonomics
Process**

Benefits

**Reduced Turnover
Reduced Replacement Costs
Improved Training
Reduced Absenteeism
Increased Productivity
Reduced Re-Work & Scrap
Increased Wages
Reduced Overhead
Reduce Injuries
Reduce Workers' Comp Cost**

Review the benefits. Note how many of the benefits account for what otherwise might be indirect or hidden costs from the iceberg example.

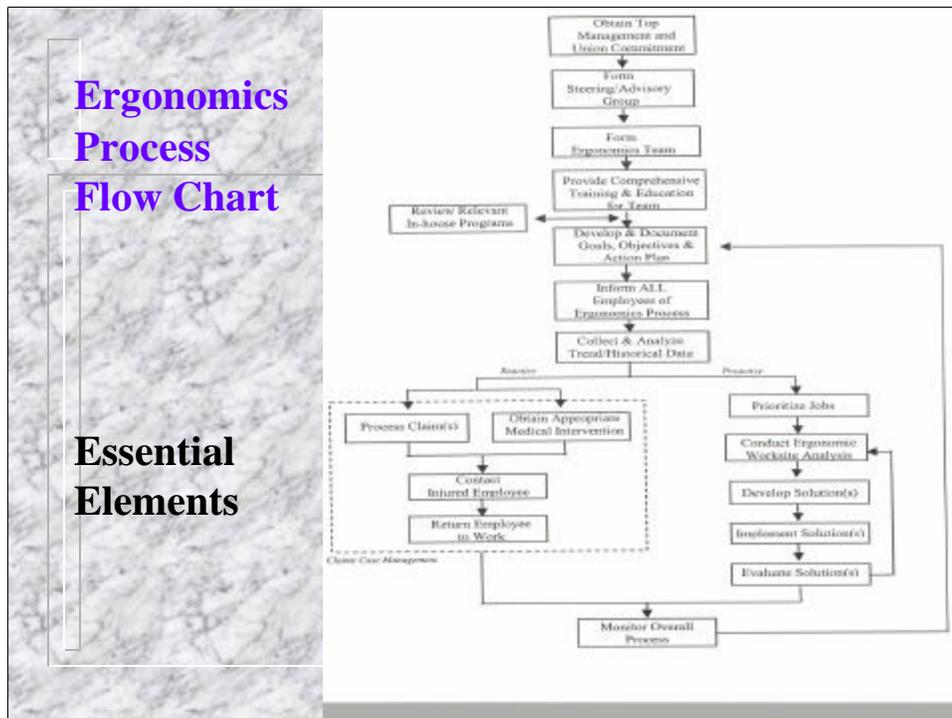
Give estimates here as well.

Ergonomics Process Impact On Profitability

- To calculate an incident's impact on your profitability, you should use your profit margin to determine the amount of sales required to pay for the incident.

Calculate the real data from the previous slides and discuss the practical implications of your numbers.

Point out that even though we might not know the specifics about our profit margins, the following examples will give us an idea of how profitability and an ergonomics process can be beneficial.



Before going into the chart in detail, ask the group for a definition of Ergonomics.

Answers will vary but basically should be something like fitting jobs and job demands to the capabilities and limitations of the population.

Point out that the major goal of Ergonomics is to reduce the frequency of injuries and illnesses in the workplace and the associated costs that go along with those injuries and illnesses.

Then step through the process to give the students an overview of the steps involved.

Each box in the flow chart represents a task that must be addressed and completed.

Remember: The flow chart is in sequential order but, you may find that your ergonomics team will not address the steps in this exact order.

Obtain Top Management and Union Commitment

- Top management and the union must collectively agree to support and commit to the ergonomics process.
- Top management and union leadership should have joint meeting(s) to discuss the ergonomic process and its components.

The ergonomics process goal is to reduce the frequency and severity of injuries and the cost of workers' compensation claims.

In order for a positive and effective process to occur, there must be a commitment between top management and the union. This commitment is shown through open communication, joint problem identification, and solution development.

Memorandum Of Understanding/ Letter Of Commitment

- If both parties agree to embark on the process they can show their support by drafting and signing a “memorandum of understanding” or “letter of commitment”.

Appendix B-1, B-2

If no union exists then top management can perform this function. The important point is that there is a visible show of support for the ergonomics process.

Ergonomics Team

- Steering/Advisory Group role
- In general, most teams are comprised of 6-10 members.
- Some teams have an “open seat” or sub-teams.



We've seen the importance of the ergonomics process from a financial point of view, now let's talk about the team itself.

The ergonomics team is the driving force of the process.

Ideally, an equal number of management and employee representatives should be on the team and although 6-10 members is a good manageable size for a team, this number may vary in accordance with the size of the company.

Possible Ergonomic Team Members Should Be Considered From The Following Departments

- Management
- Union Representatives
- Supervisors
- Affected Employees
- Human Resource/Benefits Compensation Personnel
- Engineers/Facilities Planning
- Maintenance Personnel
- Plant Safety Representative
- Health Care Provider
- Purchasing Personnel

Stress the importance of including members from all aspects of the organization. This helps with communication, gathering of solutions, and effectiveness of implementation. It also helps avoid duplicate or counter productive efforts.

Develop & Document Goals, Objectives, & Action Plan

- In order to make your process a SUCCESS, the team must develop and document the structural components of the Ergonomic Process.
- The documentation will help establish
 - clear achievable goals
 - objectives
 - action plan

Without a clear written program, ergonomics teams tend to encounter frustration, lack of interest, and will no doubt be doomed to failure.

The written document both ensures stability and protects the efforts of everyone since all duties and responsibilities are spelled out. This also allows for everyone in the organization to understand and assist with the process.

Blueprint For Success

- Team generates their written plan by discussing and documenting the answers to a series of questions located in the Blueprint for Success.
- The questions in the Blueprint for Success are discussed and answered using a who, what ,when, where, and why format.

Appendix D

To assist in the documentation, a Blueprint for success was developed by the BWC Division of Safety & Hygiene.

You can either have a copy of Appendix D to pass around or you can make multiple copies to hand out.

The Blueprint is designed to guide the ergonomics team through the process as well as provide discussion points as the process develops.

Blueprint For Success Continued...

- The Blueprint contains example answers for each question .
- The examples are intended to guide the team through the process, and are to serve as discussion points by the team.
- The Blueprint is a fluid document; meaning that as modifications and changes are made to the process, the written plan should be updated to reflect those changes.

Appendix D

You may want to talk through the first two or three steps in the process to give everyone an idea of just what the Blueprint is and how it is to be used.

Collect & Analyze Trend/Historical Data

- What kind of data do you use to analyze ergonomic trends?
- Where do you find the data?

Appendix E

Ask questions of the participants. General answers should include: injury and illness records, production information, and personnel records.

Specific data should include: internal safety and accident reports, OSHA 300 logs, Workers' Compensation records, first aid logs, quality control records, production records, turnover rates, etc.

See how many different examples the participants can come up with.

Trend/Historical Data

- Provides team with historical injury, illness, and production information.
- Data allows the team to identify trends in areas or departments that may pose ergonomic concern(s) to the workforce.
- Narrows the focus from the overall facility view to a department or job specific view.

Appendix E

All of the information taken from various sources can help us establish a baseline from which we can monitor and evaluate our ergonomics process.

The data can also help us to prioritize those areas requiring ergonomic interventions.

Monitor Overall Process

- Monitor the overall ergonomics process to gauge its effectiveness and determine if the process needs modifications.

Monitoring the effectiveness of an ergonomics process can be done in a variety of ways using a variety of measures.

Some of the measures are:

- number of lost workdays for ergonomics reasons;
- OSHA 300 log ergonomics related cases;
- first aid for ergonomics reasons;
- medical costs for ergonomics reasons;
- compensation costs for ergonomic reasons;
- number of people trained on ergonomics principles;
- number of ergonomics projects implemented;
- number of suggestions received;
- production impact due to ergonomics interventions;
- quality impact due to ergonomics interventions.

Can you think of any other measures that we might want to consider?

ERGONOMICS FREQUENTLY ASKED QUESTIONS

What is ergonomics?

Ergonomics is the science and practice of designing jobs or workplaces to match the physical and psychological capabilities and limitations of the human body. Ergonomics also helps employers identify jobs and tasks in the workplace that may pose a hazard for work-related musculoskeletal disorders (WMSDs).

What are work-related musculoskeletal disorders (WMSDs)?

Ergonomic injuries (WMSDs) are among the most common and costly occupational injuries and illnesses in U.S. They include disorders and injuries of the muscles, nerves, tendons, ligaments, joints, cartilage and spinal discs. They do not include injuries resulting from slips, trips, falls or similar accidents. Examples include carpal tunnel syndrome, tendinitis, sciatica, herniated disc, back strain, and low back pain. They result in more than 50,000 workers' compensation claims each year and cost \$411 million annually.

What causes WMSDs?

WMSDs occur most often when the physical demands of work cause harmful wear and tear on the body. Symptoms include pain, motor weakness, sensory deficits and restricted ranges of motion. For example, applying excessive force, lifting heavy loads, working in awkward postures or performing certain repetitive motions over time can lead to injury.

How serious a problem are work-related MSDs?

According to OSHA, work-related musculoskeletal disorders account for more than 1/3rd of all occupational injuries and illnesses that are serious enough to result in days away from work. These injuries cost business over \$15 billion in workers' compensation costs each year. Total direct costs may run as high as \$45 billion or more. Women suffer high rates of work-related MSDs because of the types of jobs in which they often work. A large number of women work in jobs associated with high levels of repetitive motions, heavy lifting, awkward postures, and other

physical work activities such as lifting patients in nursing homes, sewing clothing and other apparel, or using a keyboard.

What are the solutions to eliminate or reduce WMSDs and related costs?

WMSDs are often easy to prevent. Adding a book under a monitor, or padding a tool handle are typical of the fixes used in ergonomics programs. Solutions that fit the work to the worker are achieved by companies that implement an ergonomics program.

Ergonomic solutions may include:

- Adjusting the height of working surfaces to reduce long reaches and awkward postures.
- Putting work supplies and equipment within comfortable reach.
- Providing the right tool for the job and the right tool handle for the worker.
- Varying tasks for workers (e.g., job rotation).
- Encouraging short authorized rest breaks.
- Reducing the weight and size of items workers must lift.
- Providing mechanical lifting equipment.
- Using telephone headsets.
- Providing ergonomic chairs or stools.
- Supplying anti-fatigue floor mats.

Is there scientific evidence that ergonomics will solve musculoskeletal problems?

Yes. Scientific research on the effectiveness of ergonomic solutions, known as intervention studies, have been done in a number of different industries, including manufacturing, food processing, computerized offices and health care. Equally convincing evidence comes from employers themselves. There are examples of companies in a broad range of industries that have benefited from ergonomics.

What kinds of controls can employers use to fix jobs?

Employers may use any combination of engineering, administrative and work practice controls to reduce hazards. Employers are also free to supplement these controls with personal protective equipment (PPE), such as vibration-reduction gloves or palm pads, at no cost to employees. However, PPE can only be used alone where other controls are not feasible.

Are exercises important during a work day?

If you take just two to three minutes every hour to perform some very simple stretching exercises, the likelihood of you feeling pain at the end of the day greatly decreases. Exercise helps restore blood flow to working tissues, allowing the muscle greater endurance to perform the work at hand.

Do stretching exercises help prevent work-related musculoskeletal disorders?

Modifying jobs to eliminate risk factors is more effective than relying on stretching exercises. Stretching can be helpful in maintaining flexibility and warming up muscles so they work more efficiently. However, stretching alone will not adequately protect against injury.

How frequent and long should rest periods be?

Studies on the effectiveness of rest breaks at work have shown that short breaks taken more frequently are more beneficial than a few breaks of longer duration. Shorter frequent breaks give the tissues of the body time to recover immediately after use. Think of these breaks as "recovery" breaks rather than "rest" breaks. Recovery breaks are more likely to happen if an employer designs them into jobs rather than just telling employees to take breaks. Supervisory and peer pressure could discourage taking recovery breaks unless they are an integral part of the work process.

My body is not in any great pain after working at a computer for the last five years. Why should I change my work habits now?

Many injuries that develop at a computer are Microtrauma injuries. This type of injury is the result of repeated small stresses over a period of time. Suddenly, the day comes when you're in a lot of pain. This type of injury is not like a broken arm or leg, which happens suddenly. You might not feel any pain now but you could easily be on your way to a repetitive stress injury. It is important to realize this and to change your work habits now before it is too late.

I find computer work very stressful. Can this be causing the muscle knots in my neck?

You could do absolutely nothing physical all day with the exception of thinking stressful thoughts and the likelihood of you obtaining a muscle knot in your neck is

just as great as if you work in front of a computer all day. Combine the two together and you have big problems. Stress decreases the blood flow to your muscles causing irritating waste products to accumulate. If the stress is not stopped, the muscle has no time to rest and repair.

Why do you get neck and shoulder pain?

A Forward Head Posture causes a decreased blood supply to the neck region and increases the weight of the head on the postural muscles of the neck threefold. Rounded Shoulders Posture compresses the tendons in the front of the shoulder, causing pain in the shoulder and arm.

Why do frequent headaches occur during and after working at the computer?

The Forward Head Posture can be the result of the computer monitor being placed too far away. As a result, computer users move their heads forward over their neck to see the screen. Visual glare from a computer monitor can also cause headaches.

Is it okay to have the computer monitor off to my left side?

Having the monitor off to the left will cause the postural muscles on the left side of your neck to tighten and on the right side to elongate. This muscular imbalance will eventually lead to difficulty turning your head to the right. Pain and discomfort may also result if a nerve impingement ensues.

Why do hands hurt from using a computer?

Typing and using a mouse involve repetitive movement at the wrists and hands. This results in decreased blood supply to the muscles of your hands and wrists, causing them to cramp. It can possibly lead to Carpal Tunnel Syndrome.

How does one diagnose Carpal Tunnel Syndrome?

If you experience pain, tingling and numbness in the thumb, index and middle fingers or weakness and swelling in the wrist and hand, please consult your Physician, or Physical Therapist.

Are wrist splints effective in reducing injuries? Can they be used as personal protective equipment?

No. Wearing a wrist splint in jobs with risk factors may transfer the stress to the elbow or shoulder and cause injury. If a person wears a wrist splint and the job still requires wrist motion, bending will still occur. Now, however, the person has to bend the wrist against resistance (the splint), causing increased stress on the wrist joint. Wrist splints are not considered personal protective equipment. They should only be worn if prescribed by a medical practitioner. The most effective way to reduce incidence of wrist injuries is to eliminate or reduce the need to bend the wrist.

Why should I use a wrist rest?

When positioned correctly, a wrist rest helps encourage a neutral wrist position where the forearms, wrists and hands are in a straight line. Most experts recommend keying or typing with the wrists elevated off the rest, and resting the wrists and palms on the rest during pauses. If they don't have a wrist rest, people often rest their wrists on a sharp desk edge or on the hard edge of a keyboard tray. This can actually create pressure points that aggravate hand and wrist problems.

How do I know if I need lumbar support?

Everyone should have lumbar support. The lumbar region of your back is the area just above your waistline where your spine gently curves inward (sometimes called the small of your back or your lower back). If the backrest of your chair doesn't support this area, you should consider adding an auxiliary lumbar support.

I have the perfect chair to sit in, yet I still get muscle aches and pains. How should I sit while working?

The most perfect chair is useless if you do not sit in it properly. Always try to sit tall with a slight arc in your low back and your chin tucked in. Do not slouch nor round your shoulders and head forward.

Are back belts effective in reducing injuries? Can they be used as personal protective equipment?

No. Scientific studies examining the effectiveness of back belts in preventing back injuries are inconclusive. For this reason, the Department of Labor does not consider back belts to be personal protective equipment. The most effective way to reduce incidence of back injury is to eliminate or reduce the lifting hazard.

What is the best way to relax the muscles of my lower back after a long, hard day's work?

The least stressful position for the body is lying on your back with your hips and knees bent at a ninety-degree angle. Lay on the floor with your calves and feet on the seat of a chair. This is a great way to reduce the stress of a long, hard day.

How do I know if I need a footrest?

If your chair is adjusted to the proper height and your feet aren't flat on the floor, you should consider using a footrest. Foot rests can also help individuals who have experienced problems with their lower backs keep positioned against the back rest of their chair. That way the chair back, instead of their lower back muscles, is providing the support they need.

How do I know if I need an office air cleaner?

If you are one of the estimated 20% of the population who suffers from allergy problems or you are concerned about the indoor air quality in your area, an office air cleaner can significantly help reduce the concentration of allergy-aggravating particles in your office air.

After looking at a computer screen my eyes start to hurt. What can I do to prevent this pain?

You can either place a protective screen over your computer or periodically change the monitor angle to reduce glare.

If I work at a computer, how often should I have my eyes checked?

At a minimum, once every two years. When you make an appointment with your eye care professionals, you should mention that you work at a computer and ask if

they need any further information. They may want to know how much time you spend at the computer and how far your monitor is from your eyes. If you are a heavy computer user, they may offer you glasses that are optimized for computer work.

What is the best way to organize my workstation?

You should keep the most frequently used items within easy arms reach and on the side of your dominant hand. For instance, if you spend a lot of time on the phone and are right-handed, you should have your phone within easy arm's reach on the right side of your workstation. Avoid awkward reaching, bending, or stretching to reach frequently used items.

If my monitor is too high or too low according to the ergonomic guidelines, what can I do?

If you are the only one using your equipment, you can raise the monitor using telephone books, monitor blocks or reams of paper. If you share your equipment, you should consider using an articulated monitor arm that easily adjusts the monitor position to meet each person's requirements. People who need to lower their monitors typically have them sitting on top of their computers. Placing the monitor directly on the work surface usually solves that problem.

Do I need to sit in the same perfect posture all day?

No. You should try to vary your activities and position during the day to stimulate circulation and rest overworked muscles. Find a couple of low-risk positions that offer support and comfort and shift between them. If you plan to do a repetitive task such as work at your desk for an extended period, many experts feel that you should take frequent mini-breaks of a few minutes each hour. During these breaks, you could do some filing, sort your mail, do some stretches, tidy up your office, or walk to the copier and make copies.

If I maintain a perfect posture will all aches and pains go away?

Even perfect posture is not good if it is maintained all day. Sustained posture, although perfect, will cause the postural muscles to fatigue because the muscles never receive a break from posturing the body all day. If you sit all day, occasionally stand or adjust your seat or desk height ever so slightly to change the postural position of the body.

I just started sitting with better posture and my muscles now hurt. Why is this?

Do not be alarmed. Whenever muscles work in a different fashion it takes time for the specific muscles to adapt to a different work demand. Pain and soreness may occur initially. However, once the muscles get used to sitting with your improved posture the pain and soreness will go away.

Why do occasional muscle spasms occur?

A muscle spasm is a protective mechanism your body employs to prevent an injury from occurring. A spasm is caused by an insufficient blood flow to the working muscles. It is your body's way of telling you to slow down or stop what you are doing in order to rest the muscle.

Is proper nutrition important to avoid aches and pains?

If you eat a proper diet your blood flow will be rich with the necessary vitamins, minerals and nutrients to take away the irritating waste products that accumulate and help repair any damaged muscle. If your diet is filled with fatty foods the blood supply will no longer be like the supreme gas you fuel your car with. Your body will now be fueled by cheap unleaded gas. Use the good stuff. It will improve the effectiveness and efficiency of your blood supply.

I smoke frequently. Can this affect the endurance of my muscles?

Smoking places poisonous carbon monoxide in your blood stream, decreasing the ability of your body to supply an adequate amount of blood to your muscles. Smoking also decreases the strength of the connective tissue in muscles, increasing the chance for muscle injury.

Student Handouts

Ergonomics Developing An Effective Process



Objectives

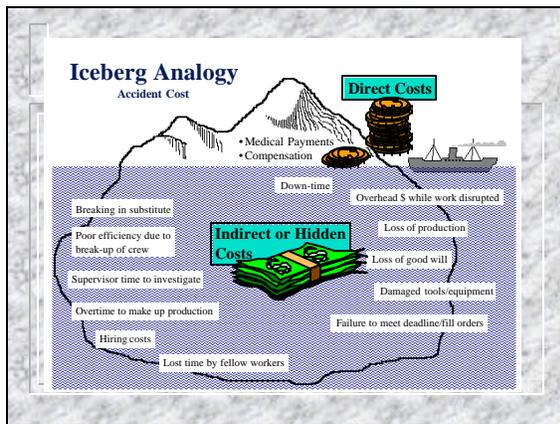
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- Assessment Tools & Equipment
- Ergonomic Projects
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Ergonomics Process

Benefits

Benefits Of An Ergonomics Process

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Reduced Turnover
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Memorandum Of Understanding/ Letter Of Commitment

- If both parties agree to embark on the process they can show their support by drafting and signing a “memorandum of understanding” or “letter of commitment”.

Appendix B-1, B-2

Ergonomics Team

- Steering/Advisory Group role
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- Health Care Provider
- Purchasing Personnel

**Develop & Document Goals,
Objectives, & Action Plan**

- In order to make your process a SUCCESS, the team must develop and document the structural components of the Ergonomic Process.
- The documentation will help establish
 - clear achievable goals
 - objectives
 - action plan

Blueprint For Success

- Team generates their written plan by discussing and documenting the answers to a series of questions located in the Blueprint for Success.
- The questions in the Blueprint for Success are discussed and answered using a who, what ,when, where, and why format.

Blueprint For Success Continued...

- The Blueprint contains example answers for each question .
- The examples are intended to guide the team through the process, and are to serve as discussion points by the team.
- The Blueprint is a fluid document; meaning that as modifications and changes are made to the process, the written plan should be updated to reflect those changes.

Appendix D

Collect & Analyze Trend/Historical Data

- What kind of data do you use to analyze ergonomic trends?
- Where do you find the data?

Appendix E

Trend/Historical Data

- Provides team with historical injury, illness, and production information.
- Data allows the team to identify trends in areas or departments that may pose ergonomic concern(s) to the workforce.
- Narrows the focus from the overall facility view to a department or job specific view.

Appendix E

Monitor Overall Process

- Monitor the overall ergonomics process to gauge its effectiveness and determine if the process needs modifications.
