ERGONOMICS ON-DEMAND!

Implementing Ergonomics

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IMPLEMENTING ERGONOMICS

Overview

Let's talk about opportunities.

What do you do with the information in ERGONOMICS ON-DEMAND to assist your clients in successfully implementing and sustaining an Ergonomics Process?

The answer of course, depends on you and the direction you're going with your practice.

I'm Mark Anderson. I'm a Certified Professional Ergonomist and Physical Therapist. I've worked in the ergonomics field for more than 35 years.

In the ***Implementing Ergonomics Track,*** I'll offer you some thoughts about collaborating with your clients, ergonomics problem solving strategies, developing and presenting ergonomics training, and some possible next steps in your ergonomics journey. Here's an overview of the modules.

Client Collaboration

Ergonomics, in my experience, is best realized as a collaborative process. As you work with ergonomics as part of your practice, you'll very likely become part of the ergonomics team that includes Health and Safety, Management, the Workforce, Engineering, Medical, Facilities and other stakeholders.

In the ***Client Collaboration Module,*** we'll delve into the dynamics of the essential role you can play in promoting and implementing ergonomic practices with your clients. I'll offer you some strategies I've used over the years to add value to my collaboration with clients.

Ergonomics Problem Solving

Ergonomics is all about problem solving! The ***Ergonomics Problem Solving Module*** details specific caveats to understand and make use of when applying ergonomics principles as part of the ergonomics assessment process.

In the ***Introduction to Ergonomics Track*** we made the case that, ***'Ergonomics is about changing the circumstances to change the result!'*** Change being the operative word. We all know how difficult change can be for many! I'll offer thoughts about adapting circumstances to achieve desired outcomes and offer insights into overcoming resistance to change.

Present Like a Pro: Develop and Deliver Dynamic Presentations

Effective training in ergonomics is essential for fostering awareness and compliance among employees.

In this module, ***Present Like a Pro: Develop and Deliver Dynamic Presentations,*** I'll offer you a structured approach to consider when developing and delivering comprehensive ergonomics training programs tailored to your client's needs.

We'll go through a step-by-process to develop customized training that is informative and engaging.

Your Ergonomics Journey

My journey as an ergonomist began in Physical Therapy and evolved into a full-time ergonomics consultancy.

I'll share insights into the practical applications of ergonomics in clinical and corporate settings and I'll ask you to consider your next steps in your ergonomics journey.

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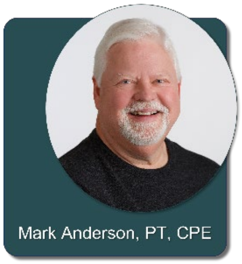
Client Collaboration



Hi everyone, welcome to the ***Client Collaboration Module*** of ***ERGONOMICS ON-DEMAND!***

In my ergonomics practice, I've worked closely with many clients to implement ergonomics processes. As a health care professional, you may have already worked with clients to implement ergonomics in the workplace. Or perhaps you're relatively new to working in the ergonomics field and are looking for ways to expand your ergonomics practice. Either way you can add noteworthy value for your clients.

I'm Mark Anderson. As a Certified Professional Ergonomist and Physical Therapist, I've had the opportunity to work in ergonomics over the past 35 years in a wide variety of work environments ranging from manufacturing plants to offices to warehouse distribution centers and many things in-between.

Definition and Significance of Ergonomics

Please refer to the other tracks in ***ERGONOMICS ON-DEMAND!*** for detailed and specific information about ergonomics foundations and applications. In overview, ergonomics is the study of how to design workstations, tools, equipment, products and systems to best fit human capabilities and limitations.

Employee Health, Safety and Productivity

Ergonomics plays a key role in safeguarding the health and safety of employees. Poor ergonomics can lead to musculoskeletal injuries, fatigue and stress. On the flip side, a well-designed ergonomic workplace can reduce the risk of injuries, alleviate physical strain and contribute to the overall health and well-being of the workforce.

Beyond health benefits, ergonomics interventions have a direct impact on productivity, quality and job satisfaction. Employees working in ergonomically sound environments are more likely to experience reduced fatigue, improved concentration and increased job satisfaction. This means higher levels of productivity and efficiency.

Ergonomics is not a one-time fix but an ongoing commitment to creating a culture that values the well-being of employees. You can play a critical role in integrating ergonomic principles into the organizational culture. This involves fostering an environment where ergonomics considerations become second nature in decision-making processes related to workplace design and work processes.

Training Objectives

In ***Client Collaboration,*** I'll cover aspects of the crucial role that I believe you can play in the on-going success of ergonomics processes at clients and the value you can add to help accomplish the objectives. I know from experience when collaborating with clients, you can be instrumental in being part of a true win/win situation to create ergonomics workplaces that enhance the health, safety and productivity of the workforce.

Opportunities

Over the years I've worked with many clients on a regular basis on-site at the workplace providing ergonomics consultation and training services. Let's list the opportunities you have to assist clients and then I'll offer ideas of how to capitalize on these opportunities. For example:

- You can become the primary ergonomics resource for ergonomics information.
- You can be part of the Ergonomics Team.
- You can conduct ergonomics assessments and help develop solutions.
- You can provide ergonomics training and education.
- You can address individual employee needs through ergonomics job coaching.
- You can encourage a culture that embraces change and help to accomplish that change.

Now that we've touched on a number of opportunities you have to help ensure a workforce that is healthy, safe and productive, let's talk about how you can specifically assist your clients.

Primary Source for Ergonomics Resources

Boy, I wish I had a dollar for every time a client asked me, ***'What height do you think we should put that workbench?'*** or ***'How much weight do you think a person can lift?'*** or that ubiquitous question, ***'Do you have any ideas how we can make this better for my employees?'***

Providing information about ergonomics is an ongoing process. Tools and equipment can change. New work processes may be implemented. Through ongoing involvement with your clients, your knowledge of their specific issues will grow and you'll become their 'go-to' resource for ergonomics.

You can provide guidance on compliance with applicable laws and industry best practices. For example, in my home state of Minnesota, the legislature recently passed a statute that states:

Subd. 2. Ergonomics program required.

(a) *Every licensed health care facility, warehouse distribution center, or meatpacking site in the state shall create and implement an effective written ergonomics program establishing the employer's plan to minimize the risk of its employees developing or aggravating musculoskeletal disorders. The ergonomics program shall focus on eliminating the risk. To the extent risk exists, the ergonomics program must include feasible administrative or engineering controls to reduce the risk.*

Clients in these specific industries are seeking resources to help them develop and implement their ergonomics program. Keep abreast of what is going on in your area.

Now a really good question is, ***'How do you establish that client relationship?'***

Your answer, of course, will vary depending on your situation. Here are some strategies I've used over the years to initiate and develop client relationships.

Clinic

Perhaps you're working in an occupational medicine clinic with Worker's Comp patients. This clinical involvement provides an entrée to the patient's workplace. An essential part of your treatment plan is

to understand the functional elements of the job demands your patient will be facing when they return to work. In this situation, I would request an on-site visit so I could see the job tasks firsthand.

You'll have the opportunity to meet the supervisor and establish an initial relationship. This will be of benefit to not only the current employee who is your patient but also for other employees who may need your services down the road. The supervisor will start to see you as a resource to help them get that employee back to productive work and for future issues that pop up.

Assessment

The purpose of the on-site visit is to do an ergonomics assessment of the job tasks of your patient.

This may be a rudimentary assessment but may point to the need for a more in-depth assessment that you can provide as part of the return to work process.

As this relationship continues to evolve, the supervisor will start to see you as a resource not just for the return to work scenario but also proactive assessments of jobs they have identified as problem areas.

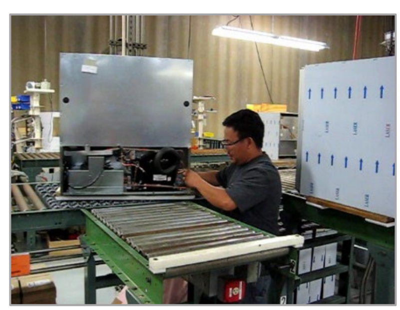
Walkthroughs

Now that you're on-site, this provides an opportunity for what I call a ***'walk-though'*** of the department or area where the employee works and perhaps even beyond.

My experience has been that when you, ***'walk-through'*** with the client you'll observe a number of ergonomics issues. Issues that you could perhaps tactfully point out to the supervisor and for which you can offer some potential recommendations.

I know this may seem like you're giving away information for free. And you are! But remember you're looking for opportunities to add value to your relationship with the client. My experience is that *'What goes around, comes around!'*. Later when the client is looking for answers for ergonomics problems, they will remember you as a resource.

Ergonomics Assessments and Recommendations

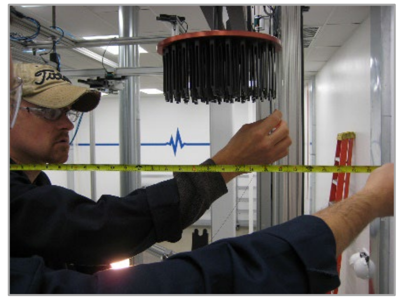


As we've discussed you can help clients identify potential hazards and make recommendations for improvements, such as adjusting equipment or changing work processes.

You can provide on-site support to provide immediate advice and assistance to clients on ergonomics concerns. You can assist in investigating incidents, conduct inspections and offer guidance on implementing corrective measures, ensuring prompt and effective response to ergonomics issues.

For specific information about performing ergonomics assessments and offering feasible and realistic recommendations in manufacturing and office work environments please refer to the **Manufacturing Ergonomics** and **Office Ergonomics Tracks**.

Job coaching



I'm often asked to provide job coaching for specific employees who have ergonomics related issues. This is a great opportunity to provide one-on-one assistance to address their unique situation. Many times the recommendations you make for the individual can be expanded to include other employees doing the same or similar jobs.

Ergonomics Training

An important aspect is ergonomics training and guidance. An educated and knowledgeable workforce is a proven method to create and maintain a healthy and safe work environment.

You're in a position to customize training programs tailored to meet the specific needs of clients to ensure the content is relevant, relatable and directly applicable to the daily tasks of the workforce. Incorporating ergonomics into the onboarding process for new employees starts the process off on a good footing. Ergonomics training that is part of the new employee orientation program sets the foundation for healthy work habits from the beginning of the employee's tenure.

Check out **Present Like a Pro! *Develop and Deliver Dynamic Presentations*** in the **Ergonomics Implementation Track** for a comprehensive resource.

Macro Ergonomics

My ergonomics consulting process evolved over the years of practice. Initially I was performing ergonomics analysis and consultation for specific patients and clients. Then I was also providing ergonomics training to company representatives including health and safety, engineering, management and workers.

As time went on, I was now working with companies more at a macro level. I was asked to facilitate the development and implementation of Ergonomics Teams and Ergonomics Programs. Depending on where you want your practice to go that may well be something for you to consider.

Bottom Line

Through your interactions and relationships with your clients, you're an integral factor in helping to create a workplace that is truly healthy, safe and productive!

Ergonomics Problem Solving

Are you a 'Problem Solver'?

Recognizing we can sometimes get into trouble when we assume something; let me begin by making an assumption. I assume you are, by nature, a 'Problem Solver.'

Based on my past experiences with professionals who have your health care background and on my own healthcare background as a Physical Therapist, I think my ***'Problem Solver'*** assumption is a pretty good bet. Why do I think this is true? Well, take the poll and let's see what you think.

Problem Solver Poll

Poll Question: Are you a problem solver? (Check all that apply)

- ☐ You gain personal satisfaction from coming up with a viable solution.
- ☐ You like to 'fix' things that are 'broken'.
- ☐ You like to exert control over your environment.
- ☐ You enjoy sharpening your level of critical thinking.
- ☐ You tend to think 'out of the box'.
- ☐ You see problems as 'opportunities' rather than just problems.
- ☐ You think solving problems is fun!

How many did you check? I bet it was at least 5, maybe even 6 and I suspect some of you checked all 7!

My experience tells me you gain satisfaction from delving into a problem and producing viable solutions. You enjoy the challenge and while there probably are some headaches along the way to the solution, the sense of accomplishment you feel is a powerful motivating factor in solving the problem!

Welcome

Welcome to the ***Ergonomics Problem Solving Module.***

I'm Mark Anderson. I'm a Certified Professional Ergonomist and Physical Therapist. I've worked in the ergonomics field for a while, at last count it was more than 35 years.

Thinking out of the box!

Let me tell you about two workers who were responsible for overpacking. Overpacking is where smaller boxes are put into a larger overpack box for shipping and also sometimes where small boxes need to be removed from the overpack box.

To remove the small boxes, they would reach to the top layer of boxes by reaching over the side of the overpack. By the time they got to the bottom layer of the small boxes, they were having a very difficult time reaching all the way to the bottom to lift out the boxes.

They thought about it and came up with a solution. They discovered that by using a step stool, one of them could actually get into the overpack box and working together it was much easier for them to get the small boxes out!

You probably have heard about, ***'thinking out of the box'*** when problem solving. Well, these two literally got into the box to solve their problem! Long term we really did not want them climbing into and out of the overpack box. But they were sending us a message.

The long-term solution was to go to an overhead mounted suction lifting device to place and remove the smaller boxes. It's all about problem solving!

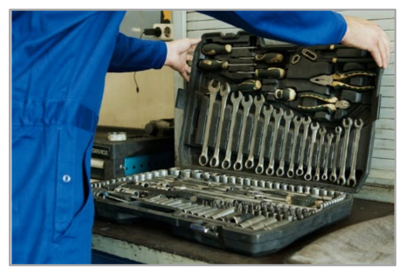
Ergonomics Problem Solving Caveats

Over my years of working in ergonomics, I've collaborated with many individuals and organizations as part of the ergonomics problem solving process.

I've seen the process work very well and honestly sometimes when the process has not worked all that well.

I'd like to share with you what I've learned over the years. Here are important caveats to improve the success of ergonomics problem solving.

Design Dictates Performance



In the ***Introduction to Ergonomics Track*** we placed ergonomics squarely in the realm of ***Systems Design***.

For example, putting a toolbox on the ground promotes poor technique to remove the tools; this technique is ineffective and increases physical stress into the worker's body.

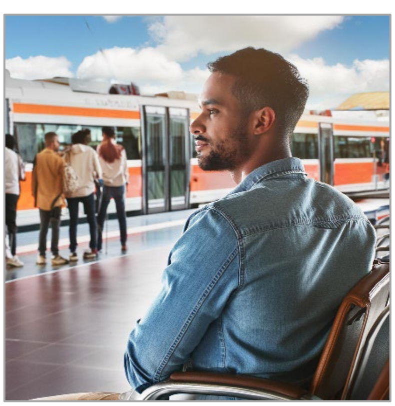
We recognize it doesn't work to tell the worker to be '***really, really careful when they bend over at the waist'*** to reach to the toolbox.

We defined ergonomics as, ***'Changing the circumstances to change the response!'*** The successful response in this case involved repositioning the toolbox to waist height on a platform to promote the desired technique.

Whatever the workplace, we understand we can apply the ***Ten Principles of Ergonomics*** we introduced in the ***Introduction to Ergonomics Track,*** as part of the ***Systems Design*** approach to designing workstations, tools, equipment and work processes that result in safe and productive workplaces.

Design dictates performance. Good design of the workstation, tools and equipment leads to effective and safe work processes. Poor design leads to the opposite. Our goal is to use ergonomics to improve the design of workstations, tools, equipment and work processes overall. It all starts with design!

Understand and Make Productive Use of Human Behavior



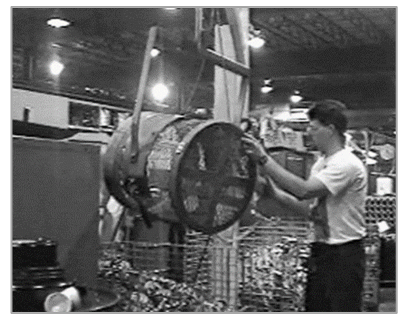
I think, by human nature, we are ***'people watchers'***. The next time you're sitting at a shopping mall or bus terminal waiting for your partner or the bus to come, I would be willing to bet, you're watching all the people coming and going.

You're wondering where they're going and what they're doing. We're fascinated by our fellow human beings!

Human behavior is a most fascinating field of study. However, it also can be quite frustrating. What do I mean?

There are reasons why we do what we do; sometimes we initially just can't figure out what they are! We need to dig a little deeper.

Container



I'll give you an example.

I was working with a company that manufactured oil filters. Part of the fabrication process involved dumping a container of scrap parts that were coming off of a conveyor.

The container was on a cart, that once full, was rolled over to and dumped into a larger palletainer. The technique used was to manually tip the container. It was physically demanding.

Further investigation revealed this had previously been identified as a problem and an overhead manual chain hoist had been installed to alleviate the manual handling aspect of the task.

How many people do you think used the chain hoist?

The answer was zero! Nobody used it.

Everyone knew it was there and they knew how to use it, but nobody used it.

Why not? What do you think?

List some reasons why you think it wasn't used.

1. ____________________
2. ____________________
3. ____________________
4. ____________________
5. ____________________

They knew it was there, they knew how to use it, management encouraged them to use it but didn't mandate its use. What was the reason why they didn't use it?

Well, I timed how long it took to dump it by hand and it took literally a few seconds; very quick.

I then timed how long it took to use the chain hoist. Quite a few steps were involved to secure the container to the strap system of the hoist, lift it up by pulling the chain, tip it into the palletainer, lower it back down, and release the straps to complete the process. How long do you think it took? More than a minute. Let's see, a few seconds compared to a few minutes. Seconds compared to minutes. They chose seconds over minutes. Most people would!

So, now we understood the ***'why'*** behind the behavior. Use of the chain hoist could have been mandated by management and this would have alleviated the physically demanding aspect. However, looking at this from the ergonomics design perspective, a much better solution was to re-layout the production line ***to eliminate the need*** to transport the container to the palletainer.

Successful problem solving means digging in deep enough to understand the true root cause of the behavior in question.

Human Behavior and Design Convention

From the ergonomics perspective we’ve discussed how important it is to understand and make productive use of human behavior. We discussed that you cannot depend solely on a person’s common sense to make good ergonomics decisions. As it turns out, we know in our study of population stereotypes that different people sometimes see and experience things differently.

But we also know that there is a set of Human Behavior and Design Conventions we can use to increase the level of consistent performance. If we offer a solution that is contrary to the nature of human behavior, the solution will not be effective.

Our goal is to understand and make effective use of human behavior as much as possible in the design and use of workstations, tools and equipment.

It’s All Going Great . . . Until It’s Not!

Have you heard the expression, ***‘It’s all going great . . . until it's not!’***

This really sums up how fast things can go south. So, what's this all about, and why does it happen? Well, when we're in our usual groove, everything seems okay. But sometimes, out of the blue, even the stuff we do routinely can go wrong and catch us off guard. Here are some examples.

Shoveling Snow: Starting out, shoveling snow might not seem too demanding, but with heavy, wet snow it can quickly escalate to a serious health risk. A heart attack may be the result if it's more strenuous than your body can handle.

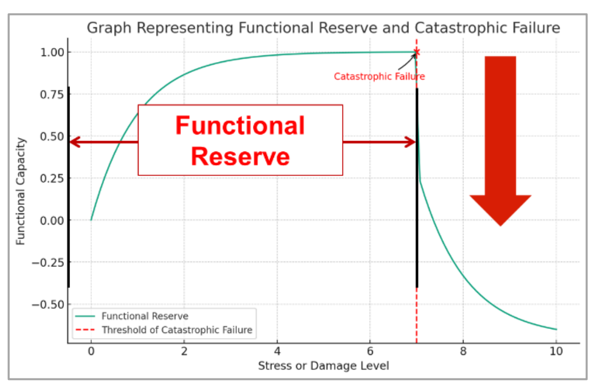
Repetitive Lifting: Repetitive, relatively lightweight manual lifting might not appear to be an issue at first, but we understand repetitive physical exertion can unexpectedly lead to a severe back injury, indicating you've pushed beyond safe limits.

Sustained Sitting: Sitting for extended periods might be comfortable initially, but then standing up might reveal the consequences, such as back and leg pain, due to poor posture maintained over time.

The Sudden Shift: Why It Happens

What’s going on? Let’s examine physiological and psychological factors that can help explain this sudden onset of the issue.

Physiological Factor – Functional Reserve



Our bodies have a ***built-in functional reserve*** that allows us to handle increasing physical stress up to a certain threshold. This reserve includes redundancy in systems like the musculoskeletal, cardiovascular, and nervous systems.

However, exceeding this functional reserve threshold can lead to catastrophic failure, such as heart attacks or severe musculoskeletal injuries. Sprains, strains, and repetitive strain injuries can develop gradually over time and don’t seem to be an issue until that one time

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when the functional reserve threshold is reached and failure occurs. The body basically says, ***'Today's the day I'm going to let you have it!'*** And it does!

We need to understand the impact that physical functional reserve can have to promote safe and effective job performance.

Psychological Factors

It's a common human tendency to overlook potential problems when things seem to be going well. This can be due to several psychological factors.

Cognitive dissonance

Cognitive dissonance is when we experience discomfort when our beliefs and actions are inconsistent, so we may ignore or rationalize potential problems to maintain a sense of consistency.

Employees might dismiss early symptoms of a repetitive strain injury or a musculoskeletal disorder as minor or temporary, underestimating the long-term health implications.

Optimism bias

We're subject to what is called optimism bias. We tend to overestimate the likelihood of positive outcomes and underestimate the likelihood of negative outcomes. This can make us less likely to recognize and prepare for potential problems.

Workers may not use the appropriate tool or equipment, believing accidents are unlikely to happen to them, which in turn can increase the risk of injury.

Confirmation bias

We seek out information that confirms our existing beliefs and ignore information that contradicts them. Termed confirmation bias, this can lead us to overlook potential problems that don't fit with our worldview.

A team may overlook minor ergonomic complaints during safety meetings, leading to larger issues.

Illusion of control

We often believe that we have more control over our environment than we actually do, which can lead us to underestimate the risks of certain situations and overestimate our ability to handle them.

Employees might rely on intuition rather than ergonomics guidelines to determine when to take breaks, potentially leading to fatigue and injuries.

Overconfidence

When we have an inflated sense of our own abilities and knowledge, we have overconfidence which can lead us to believe that we can handle any problem that comes our way, even if we don't have the necessary skills or experience.

New employees may not have received adequate safety training, relying instead on intuition in hazardous situations.

Ergonomics: What Can We Do?

So, as part of the problem solving strategy, we need to recognize these physical and psychological factors can be in play and employ ergonomics processes to counter them.

Regular ergonomics risk assessments: Identify potential ergonomics issues in the workplace and assess the risks associated with them.

Ergonomics recommendations: Based on the assessments, implement appropriate ergonomics recommendations for workstation, tool and equipment design.

Provide comprehensive training: Ensure employees have competency-based training in using ergonomics to their advantage.

By understanding and addressing the physiological and psychological factors that contribute to the sudden onset of problems, we can mitigate risks and foster a safer and more productive work environment.

Do not fix without adequate analysis!

All right so we're problem solvers and that is a good thing. However, many novice analysts (and sometimes experienced ones) cause themselves and others trouble because they try to 'fix stuff' without fully knowing why or what or when or who. We want to jump to the answer right away.

Sometimes just slowing down a little bit and ensuring an adequate analysis has been completed before offering recommendations will, in the long run, save time and make the whole analysis process better!

Do not 'fix stuff' without adequate analysis.

Look up and down stream!

Sometimes when we look at a job task, all we see is what is in front of us. We seem to have blinders on. Blinders can work well for horses to help calm them but not so well in ergonomics!

Let's say we have a ten-step assembly process. Due to reported issues at Step Five we're assessing Step Five, which makes sense because that is where the issue was reported.

But as it turns out, the process at Step Three is actually the culprit. The impact of Step Three was not identified until we got to Step Five. Or what if we make a change in Step Five but this has a detrimental effect on Step Nine!

It is imperative that we look both 'up and down stream' to see the context of a single work station or job demand within the overall production scheme. A change made at one stage of the process can have a detrimental impact at a stage later on. Take off the blinders!

Don't generalize from a sample of one!

One time working with an engineer on a project designing a new workbench, we needed to write the specifications for the workbench dimensions. We needed to determine the workbench height.

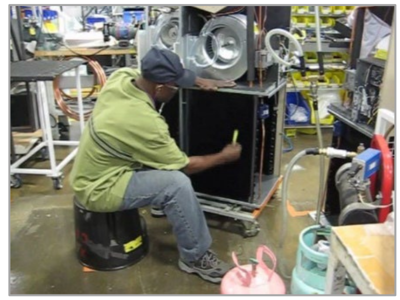
A suggestion was made to go out to the existing workbench with a tape measure in hand, stand at the workbench in the work position and measure from the hand height to the floor. This dimension would then give us the workbench height.

What do you think? Is this a viable method? Well, it could be if only the person who took the measurement would ever be the person using the workbench. This was going to be a multi-user workbench and for most everyone else this strategy would be an issue.

A common error is to make the assumption that just because it makes sense or works for a particular individual it will also work for the entire population. We don't want to generalize from a sample of one; particularity if we're the sample of one!

Recognize the diversity that exists in the user population and design to take this into account.

Scope of Influence



Ergonomics interventions, like everything else, have limits on what is possible to accomplish. The limits are typically resource related – money, time, knowledge and so on. As much as you can, identify these limits. You need to have a sense of what is possible. I call this knowing the 'scope of influence' of the situation.

If we offer a solution that is beyond the scope of influence of the individual, the department, or the organization, the solution will not work. We need to offer solutions that are reasonable and feasible.

Now, this doesn't mean to not think 'big' sometimes in terms of long term change. But offer a range of solutions. Short term solutions that can be implemented quickly. Mid-range solutions in the weeks to months range that may require additional resources, and the long term solutions in the range of months and even longer. Understand the 'scope of influence'.

Creating Positive Change

True or false statement, ***'In most cases most people like change, they embrace change!'***

Now, it is true that every once in a while, you may find someone who truly does like change and maybe that person is you. However, we know that most people have a very hard time with change.

The expression, ***'We're creatures of habit.'*** is quite apt.

Recall what we want to accomplish with ergonomics. We want to '***CHANGE the circumstances to CHANGE the response!'***

In fact, in my experience in many cases, identifying the ergonomics issues is fairly straight-forward. The really interesting part, the challenging part is to try to get people to accept the recommended changes.

When we introduce change, we have to do it in a very careful way, otherwise the solutions will not work. How can we facilitate change? Creating positive change is truly the core of any successful ergonomics process. Work through this exercise. Pull from your own experiences with change. First list all the reasons you can think of why people resist change and then list ideas of how to counter that resistance. Why do people resist change?

Why do people resist change?	How to facilitate change!
1.	1.
2.	2.
3.	3.
4.	4.

5.	**5.**
6.	**6.**
7.	**7.**

Facilitate Positive Change

What did you come up with? Here are some thoughts about why people resist change and some potential ways to facilitate change.

Fear of change!

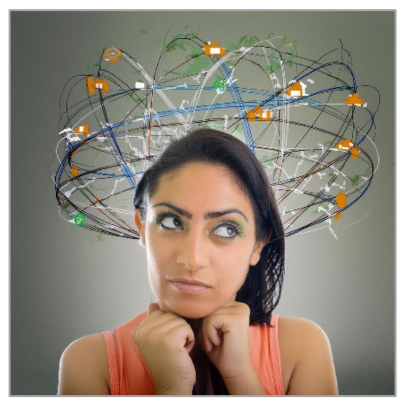
Change is a great unknown. Instinctively we have a fear of the unknown and generally for good reason. Have you ever been home alone on a dark night and all of sudden you hear a noise in the garage? What was that? A burglar?

Something had changed and we were fearful of it. This is an instinctual protective response. What do we do next? Well, that depends. We might call 911 or we might go investigate. If we do go investigate, we may find out, ***'Oh, it was just the cat that knocked over the broom'***.

With this new knowledge we've alleviated our fear. In the workplace how can we help alleviate the fear of change? My experience has been that providing knowledge associated with competency-based training is a potent mediating factor.

Habits!

Understanding and Changing Habits



Habits play a huge role in our lives. Think of them as our brain's own cruise control system – some habits keep us running smoothly, while others might need a bit of tweaking. Interestingly, for better or for worse our brains wire themselves based on these habits,

Can we change a habit? How many New Years's resolution are made January 1st and how many are actually kept by the end of January? Not many!

However, with consistent practice over time, we can establish new habits and modify existing ones. To facilitate this change, a process involving recognition, practice, feedback, modification, and integration provides a structured approach to creating lasting changes.

Six Step Change Process

Take the workplace, for example. Maybe a specific tool has been used in a particular way. It's comfortable, right? But what if there's a new tool that's ergonomically designed to be better? Shifting to it might seem tough at first. But here's the good news: it's entirely possible with the correct practice and amount of time to rewire our brains. That's why ***providing competency-based training*** is one of our key ergonomics principles. Here is an overview of the process:

1. **Recognize**: First, recognize there's a habit that's an issue.
2. **Change**: Pinpoint practical, achievable changes. No need to overhaul everything at once!
3. **Practice**: Consistently practice these new behaviors. Repetition is our friend here.
4. **Feedback**: Get input on how it's going. Is the change effective? If not, figure out why.

5. **Modify**: Use what's been learned to fine-tune the approach.
6. **Integrate**: Make this new behavior a natural part of the routine.

Practice is very important! Vince Lombardi, the legendary Green Packers football coach had one of the best sayings I've ever seen about practice. He said:

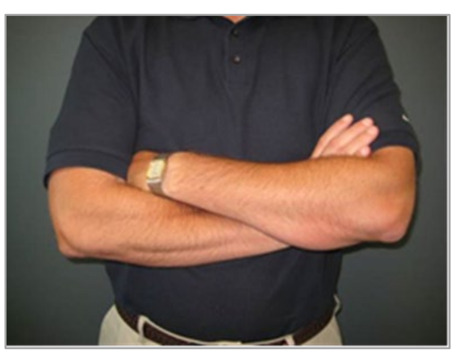
'It isn't practice that makes perfect, it is PERFECT practice that perfects!'

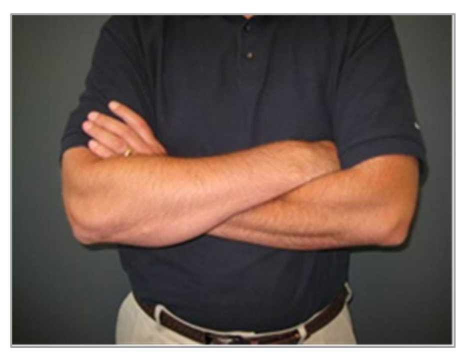
If you practice it wrong, you'll get very good at doing it wrong!

Let's go through an example of the change process to implement a counterbalanced inline driver at a workbench in a manufacturing setting. Here's how each step of the change process can be applied:

1. **Recognize**: Workers at the workbench reported fatigue and lower productivity due to the continuous use of standard screwdrivers for assembly tasks. An ergonomics assessment indicated that the repetitive motion and the need for constant force application were major contributors. The workers contributed to the assessment process and understood the symptoms were related to use of the standard screwdriver.
2. **Changes**: To alleviate these issues, the collaborative decision was made to introduce a counterbalanced inline driver. This tool was designed to reduce the strain on the arm and wrist by balancing the weight of the driver, allowing for easier handling and operation.
3. **Practice**: Once the new drivers were installed at the workbenches, workers were given hands-on, competency-based training. They learned how to adjust the tool balancer according to the specifics of the tasks they were performing.
4. **Feedback**: After a few weeks of using the new tools, feedback was collected from the workers to evaluate their experiences. This included whether they had noticed a decrease in physical strain and any improvements in job satisfaction and productivity.
5. **Modify**: Based on the feedback, further adjustments were made. For instance, some workers found the default settings of the counterbalance were too light or too heavy, additional customization options were explored and implemented.
6. **Integrate**: With the optimized settings and configurations in place, the use of counterbalanced inline drivers was fully integrated into daily operations. Regular check-ins and maintenance ensured that the tools continued to meet the workers' needs effectively, and new workers were trained as part of their orientation.

The Change Process





Try out this quick example and see what you think. First, please just cross your arms. Pay attention and you'll notice that one arm is tucked under the other arm. Right over left or left over right. Which way are you?

Now, put your arms down to your sides. Next, cross your arms again, but this time switch which arm is tucked under the other arm. All right, be honest, how many of you are still trying to figure it out. Feels really strange, doesn't it?

Now for the crazy part of this little experiment. Let's say for some reason you decide it is to your benefit to switch how you cross your arms. You have just taken the first step.

RECOGNIZE: You recognized your current behavior is an issue. You also took the next step . . .

CHANGES: You identified the changes to be made; cross your arms the opposite way. Now you need to . . .

PRACTICE: You have to practice the new behavior correctly. And then you need to give yourself . .

FEEDBACK: It is working – yes/no, if not – why not? Based on your feedback, you may need to . . .

MODIFY: What lessons did you learn and did you need to modify your behavior based on the lessons you learned. And finally you . . .

INTEGRATE: Integrate the new behavior into your normal routine.

If, for some reason, you did decide to try this arm crossing switch thing and were successful, if you try to go back to the old method that will now seem strange to you. You might recall we talked about this in the ***Manufacturing Ergonomics Track*** in terms of accommodation. We get used to whatever we do and it seems normal to us, even though it may cause us problems in the long run.

Ok, I've digressed. Let's continue our discussion about how we can facilitate change!

Do not recognize need for change!

If we don't appreciate the need for change, why in the world would we change! Here again is where knowledge associated with training is a potent factor in facilitating the change. Our goal is to help facilitate recognition of the need for change.

Do not know how to accomplish change!

It may be the need to change is appreciated but the actual, ***'how to accomplish the change'*** is in question. Once again education, training and then appropriate practice over time will make the difference.

Was not their idea!

Have you ever heard this one, ***'It is not my idea and I don't want to change!'***

This is sort of human nature coming to the forefront. How can we counter this? In my experience, ***'People support what they help to create.'***

We mentioned in the ***Introduction to Ergonomics Track*** that the best people to practice ergonomics are the workers themselves. I've had some of the most success with ergonomics when the workers are an integral part of performing the ergonomics analysis and in implementing the recommendations. We want to emphasize inclusion not practice exclusion.

Change is forced on them!

As humans we do not like it when we're forced to do something even if it may be for our good. This, of course, is where the expression, ***'Cut off your nose to spite your face!'*** comes from.

This may be a reflection of the organization's culture where the workforce has little input on how the work is accomplished. This can be a tough nut to crack. I've found that the best approach is to look for relatively small changes that can be accomplished in the organization and build on them. ***'Success breeds success!'***

I will be honest and say I once terminated my consulting work with an organization because of the organization's culture. I found out it was not compatible with my approach to accomplishing the success we wanted.

Once again, we want to emphasize inclusion and not practice exclusion. We want workers to be part of the solution.

No one else is changing!

Peer pressure is an amazing thing. We're influenced by what others around us are doing. For most of us, standing alone is a tough thing to do. We can use the positive impact of peer pressure by putting in place strategies that involve the group as a whole. Once again, we want to emphasize inclusion and not practice exclusion.

Here is a summary.

Resist Change	Facilitate Positive Change
Fear of change!	Knowledge to overcome fear
Habit!	Practice correct habit
Do not recognize need for change!	Education on how to recognize need for change
Do not know how to accomplish change!	Education, training and practice to accomplish change
Was not their idea!	Emphasize inclusion not exclusion
The change is forced on them!	Obtain group input with their involvement to promote 'ownership'
No one else is changing!	Emphasize peer group involvement

You're a Problem Solver!

No doubt about it; ergonomics is all about problem solving. I hope our discussion has been useful to you.

Some of the greatest satisfaction in my work as an ergonomist has come from collaborative problem solving. As you continue to use ergonomics principles and applications in your practice, I hope this is true for you as well!

Thanks for your time and attention!

Present Like a Pro: *Develop and Deliver Dynamic Presentations*

Have you had this question yet?

Have you had this question yet?

> ***'We really like what you've been doing for our Return to Work employees. We'd like to train all of our employees in ergonomics and injury prevention. Do you have any training you can provide to our employees?'***
>
> ***Joe Morgan, Route Manager***

I'm Mark Anderson. I'm a Certified Professional Ergonomist and Physical Therapist. I vividly remember when I was first asked this question. I was working in an Industrial Rehabilitation program with Worker's Compensation patients. One of our clients was a beverage bottler and distributor.

The Route Manager was interested in preventing further injuries and asked if I could provide ergonomics and injury prevention training for all of the route delivery employees.

This was early in my PT career and I had done some one-on-one training on basic ergonomics principles and body mechanics but nothing like a formal training session.

But I figured I could probably put some information together.

Interestingly enough, during summer breaks in my undergraduate college days I worked for a beverage distributor as a route delivery person.

I was familiar with the physical job demands and equipment used. In fact, I found out later from the Route Manager that one of the reasons I was hired for the training was I knew you had to pull a loaded two-wheeler up a flight of stairs and not push it!

At any rate, I put together what I thought was a dynamite 45 minute presentation. I had just finished a graduate degree in Physical Therapy and was kind of in an academic mindset.

In other words, I was kind of full of it! I included all this great theoretical information about anatomy, physiology and biomechanics.

I previewed it for the Route Manager and to put it frankly, he tore it to shreds.

He said it was boring, wasn't information his route delivery guys would relate to, and overall would not be effective.

Thankfully, that wasn't the end of the story.

He offered to help me with it and collaboratively we developed a dynamic, engaging and effective presentation!

And that started my journey into instructional design.

Whether you're a seasoned pro or just getting started, I'm here to share my insights and tools that can help empower you to create impactful content and deliver it with confidence.

Step-by Step Development Process

My plan is to take you behind the scenes to show you the step-by-step development process I've established over the years. Here is my development process:

Preparation

- Determine if it is a custom or generic presentation
- Understand the audience
- Determine the presentation format
- Develop the 'take aways'

'House Building'

- Develop the Asset Inventory
- Acquire the Presentation Assets
- Prepare the Presentation
- Review the Presentation

Presentation

- Practice, Practice, Practice
- Deliver the Presentation and obtain Feedback

Instructional Design Worksheet

To guide the development process we're going to use the ***Presentation Instructional Design Worksheet***. I've developed it from my years of experience in Instructional Design. Please take a moment and access it through the ***Resources Tab*** so you can refer to it as we go along.

Generic or Custom Presentations

At this point in my career, about 99.9% of the presentations I do are customized for the particular client I'm working with. I recognize you may be asked to do generic presentations rather than customized ones, so let's talk about generic versus custom presentations.

Generic Presentation

Have you had the situation where you had to sit through a generic presentation?

- How engaging was it?
- How much did you get out of it?

More than likely the answer is, 'Not Much!' I suspect you're picking up on my feelings about generic presentations!

Custom Presentation

From my very first experience in instructional design I learned the value of customizing presentation content. Your audience is much more engaged if they ***'see people they know, doing things they actually do'***.

In my mind the effectiveness of a customized presentation is huge. They are much more likely to recall and make use of the ***'take aways'***. We'll define what I mean by ***'take aways'*** a little later in our discussion.

When I'm initially talking with clients about training, we discuss generic versus customized options. Honestly, from your fee perspective, customized will cost more than generic. It takes time and effort to customize. Is it worth it?

Financial Perspective

Here is how I approach the generic versus customized conversation from the financial standpoint. Let's say the employer wants to put 300 employees through a 60 minute live presentation. They have a conference room large enough to accommodate 50 employees at one time, so I'm going to do 6 sessions. My current presentation fee is $350/session, so $350 times 6 is $2100. Now to customize it will typically involve 3 hours onsite to get the content I want and another 3 hours to prepare it. My office fee is $200/hour. So 6 hours times $200 is $1200.

Total for the 300 employees is $3300 for the customized version and if I do a generic version, it is $2100. So the difference is $1200.

What are the employee costs?

- Depending on the industry and location, average labor cost per hour might be about $28.
- 300 employees times $28/hour is $8400.

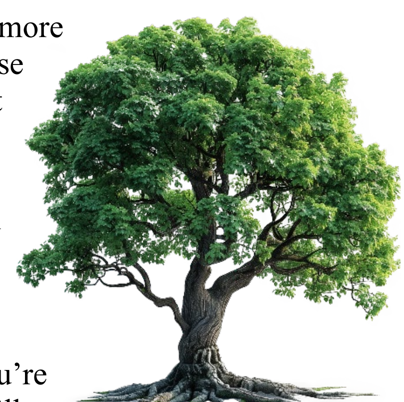
What is the cost per attendee?

- For the generic version the cost is $7.00 per person.
- For the customized version the cost is $11.00 per person.
- For an additional $4.00 per person they get a customized version.

The labor cost often far outweighs your presentation fees. Customized training is phenomenally more impactful than generic training. For generic training they probably should just show them a generic video!

In my experience, once they see how much more a customized presentation brings to the table, most employers recognize the value of customized training and are willing to pay the additional fee.

Tree Trunks, Branches and Leaves



Now one more point about customized training. As you develop more and more customized training, you'll start to see common elements in the content. I use the analogy of a tree. The ***'Tree Trunk'*** becomes the constant from client to client. You'll develop a solid foundation of content that you can use time and time again.

This will also include a number of ***'Branches'*** that you can add based on your ***'take aways'***. As you develop presentations you'll have ***'Branches'*** you can swap for other ***'Branches'*** as you need to. You graft whatever you need to the ***'Tree Trunk'***.

Then as you work to customize the presentation for a particular client, you're attaching ***'Leaves'*** that are unique to that client's particular situation. We'll discuss a little later exactly how to get the ***'Leaves'*** you need.

Presentation Development Case Study

As we explore the development steps, we're going to develop a ***Case Study*** presentation. Our client is the Safety Specialist for the Public Works Department.

He has asked for a 45 minute presentation on Ergonomics and Back Care to be presented to Public Works employees during their annual Safety Days.

The presentation will be repeated four times over the course of two days.

Understand your Audience

Before diving into content creation, it's crucial we understand the audience demographics, learn their preferences and their existing knowledge levels. How can we do this?

Well, it may be you've already been working with company employees and you have a good sense of their demographics. This is the situation for our Case Study. Our Audience consists of:

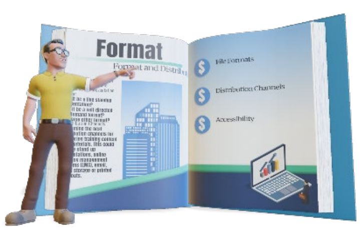
- Fleet Services Employees, including mechanics and general labor
- Gender mix of about 80% male and 20% female
- Age range in the early 20's to the late 60's
- Most have been in physically active jobs in their careers
- Many have had musculoskeletal issues over the years
- Each session will have about 30 to 40 attendees

What if you're not familiar with your audience? In this case, I request a ***'walk through'*** of the workplace to observe firsthand the job demands and have a chance to talk with future presentation attendees. Another option is to administer a specific needs assessment to identify specific learning goals and any knowledge gaps that need to be addressed.

Without a good understanding of your audience, my experience is that things don't go well. Spend the time and effort upfront, you'll find it is a critical component to a successful presentation or one that falls flat on its face. And that is not good for anyone!

We discussed the value of customizing presentations to greatly enhance effectiveness. A little later , I'll discuss the logistics of obtaining the video and still photos of pertinent job task examples that include employee interviews, before and after examples and other information.

Presentation Format



At this point, working with your client, you need to determine the presentation format.

- Will it be a live standup presentation?
- Will it be a self-directed on-demand format?
- Or some other format?

Well, the format of course will depend on the needs of the client and also your development skills.

For example, I have developed presentations that range all the way from live 10 minute ***'tool box talks'*** to '***self-directed, on-demand***' training programs that are a day long. Depending on the level of training material development you also may have to consider formatting and distribution.

File Formats

Think about choosing appropriate file formats for different types of materials, such as PDFs for printable documents, PowerPoint presentations for live sessions and SCORM packages for e-learning modules.

Distribution Channels

Determine the best distribution channels for delivering training content and materials. This could be live presentations, online learning management systems (LMS), email, cloud storage or printed handouts.

Version Control

Presentations will go through changes as you work with them. Version control measures to track changes and ensure that learners have access to the most current version of the materials are important.

Accessibility

You want to ensure the training materials are accessible to all learners, including those with disabilities. Use of clear fonts, appropriate color contrast, alt text for images and captioning for videos will be needed.

Case Study Format

I suspect most of you will be involved in live standup presentations using PowerPoint or perhaps some other presentation software. For our ***Case Study*** we're going to focus on developing a ***live standup presentation using PowerPoint***.

Another level of your involvement in training development may be as a ***Subject Matter Expert***. I've done this a number of times working with Instructional Design and Production professionals.

'Take Aways'

Now that we know whether the presentation is generic or customized, the format required and we understand our audience, we need to focus on the objectives of the training. What content do we need to meet the training objectives? What specifically does the client want to achieve? This is a collaborative effort between yourself and your client. I call these, ***'Take Aways'***.

Go to the End to get to the Beginning

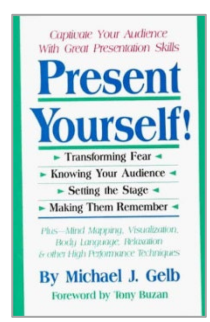
What are '***Take Aways'***? When I develop content, I go to the end to get to the beginning. What do I mean? Imagine your presentation is over, participants are leaving. If asked, what would be the three to five things you want them to be able to repeat back to you that they recall from your presentation.

These become your training objectives and your presentation needs to be developed, formatted and presented to accomplish them. One thing I've learned is, '***It's not what you know that is important, it is what your audience 'takes away'.***

Case Study 'Take Aways'

Let's work on the 'take aways' for our Public Works Department presentation. The general topic from the Safety Specialist is a presentation on Ergonomics and Back Care. That is quite broad and we could go in many different directions. How do we focus it? I use a process called Mind Mapping.

Mind Mapping



You might have heard of Mind Mapping. I first discovered it early in my instructional training development; I came across a book by Michael J Gelb called ***Present Yourself: The Simple Way to Give Powerful and Effective Presentations.*** I found it quite helpful in terms of five basic presentation guidelines that we will go through shortly. It is still in print and I would encourage you to pick up a copy. Gelb's book also included information about ***Mind Mapping***.

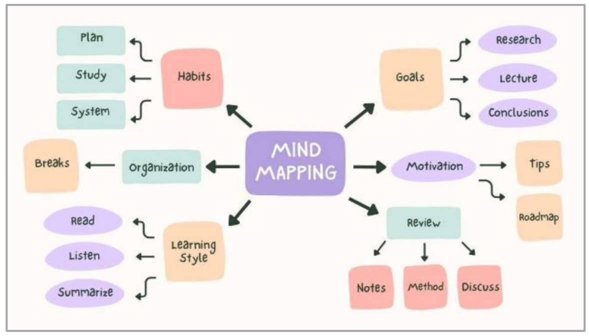
Mind Mapping has roots in the works of ancient philosophers and educators who used diagrams to visualize knowledge. However, the modern mind mapping technique that I discovered was popularized by British psychologist Tony Buzan in the 1970's.

Buzan argued that traditional note-taking methods were linear and restrictive and he proposed ***Mind Mapping*** as a way to harness the brain's capacity for imaging and association in a way that is more natural and effective. I tend to be a visual and spatial learner and this made a lot of sense to me.

Mind Mapping Basic Tutorial

To create a mind map, you would follow these basic steps:

Start with a central idea



Place the main concept or subject matter at the center of the page. This could be a word or an image representing the theme you're exploring.

Draw branches for major categories

From the central idea, draw branches outwards to represent major categories or themes related to your central idea. Use keywords or short phrases on these branches.

Add sub-branches for details

For each major category, draw sub-branches to break down the ideas into more specific details or subcategories. Continue branching out as needed to explore deeper levels of detail.

Use colors and images

To make your mind map more engaging and distinct, use different colors for different branches or themes. Incorporating images or symbols can also enhance the visual impact and effectiveness of your mind map.

Connect ideas

As you identify connections between different branches or ideas, draw lines or arrows to link them. This helps in understanding the relationships and dependencies between concepts.

To generate Mind Maps you can start with a piece of paper and colored pens. You probably have some software you can already use. For instance you can use Smart Art in PowerPoint. Also other apps are available for free or subscription. Search on 'Mind Map apps for free' for an idea of what is available. For our case study I will show you the method I currently use.

Tree Trunk, Branches and Leaves

You'll put together your ***'tree trunk and branches***, based on your ***'take aways'.***

For example, for a short presentation, 15 to 30 minutes, I might have three ***'take aways'***. As the presentations get longer and include more information, you'll identify more ***'take aways'***. I've developed presentations that are day-long and even longer; for these you will have considerably more ***'take aways'***. I have to make sure the presentation has the content and structure that facilitates the audience understanding, remembering and applying these ***'take aways'***.

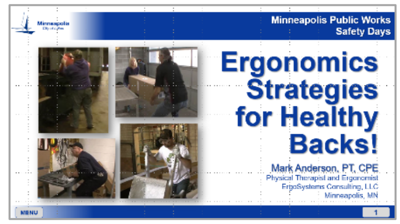
Title

At some point you'll need to come up with a title for your presentation. Typically I have a working title I'll use during the development period. Then when I'm done, I'll create an engaging title.

General Guidelines

Here are some general guidelines to help you create a compelling title for your presentation:

Be clear and descriptive: Ensure your title clearly reflects the topic and purpose of your presentation.



Engage curiosity: Use language that sparks interest and curiosity in your audience. Pose questions or tease intriguing points.

Promise benefits: Highlight the benefits or outcomes your audience will gain from attending your presentation .

Tell a story: Craft a title that suggests a narrative or story to captivate your audience.

Keep it concise: Aim for a concise title that is easy to remember and communicate. This can include the main title with a subtitle for more details. The examples below use this strategy.

- "**Empowering Employees Through Ergonomics:** Strategies for a Healthier, More Productive Workforce"
- **"Achieving Optimal Performance:** The Role of Ergonomics in Employee Safety and Productivity"
- "**Lift Smart, Stay Strong:** Proper Body Mechanics for Safe and Effective Lifting"

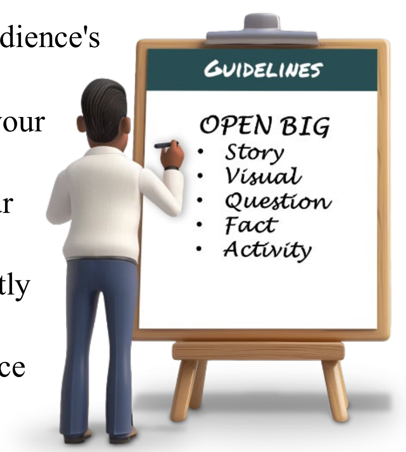
Five Basic Presentation Guidelines

Expanding on Gelb's book, ***'Present Yourself'***, I use five basic presentation guidelines when I develop any presentation:

1. Open Big!
2. Maximize Audience Involvement!
3. Emphasize in Unusual Ways!
4. Build in Redundancy!
5. Close Big with a Call to Action!

Open Big

Start your presentation with something memorable to grab your audience's attention from the get-go. Here are some ideas.

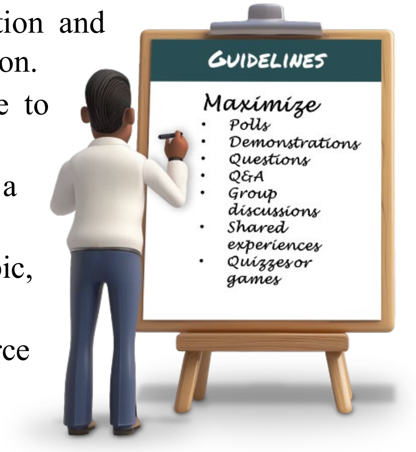


- Use a short, engaging story or anecdote that relates directly to your main message.
- Begin with a striking visual or video clip that directly relates to your topic, setting a vivid scene.
- Present a challenging question that provokes thought and directly involves the audience in the subject matter.
- Use a relevant, surprising fact or statistic that frames the significance of your topic in a new light.
- Start with a dynamic, interactive activity that directly involves the audience, making the experience immersive from the outset.

Maximize Audience Involvement

How long is a person's typical attention span? Two hours, an hour, 30 minutes? How about 10 to 15 minutes! That's what research tells us. My goal is to actively involve the audience about every 10 to 15 minutes to keep their attention and make the message more memorable. Here are some ideas.

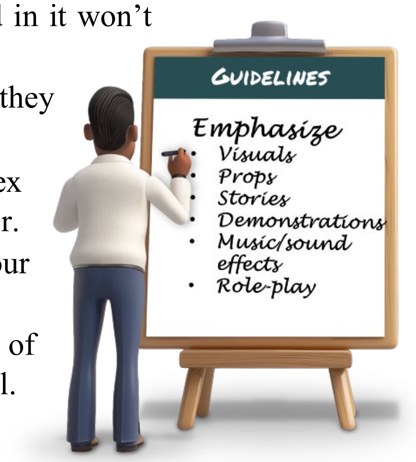
- Conduct a live poll on a topic related to your presentation to see where the audience stands and tailor your content accordingly.
- Ask for volunteers for a demonstration that illustrates one of your points.



- Use thought-provoking questions to encourage audience reflection and discussion, making the presentation more of a two-way conversation.
- Implement a real-time Q&A session, encouraging the audience to submit questions throughout the presentation.
- Break the audience into small groups for a brief discussion on a relevant question, sharing summaries afterward.
- Invite the audience to share their experiences related to your topic, creating a shared learning environment.
- Incorporate elements like quizzes or interactive games that reinforce your key points.

Emphasize in Unusual Ways

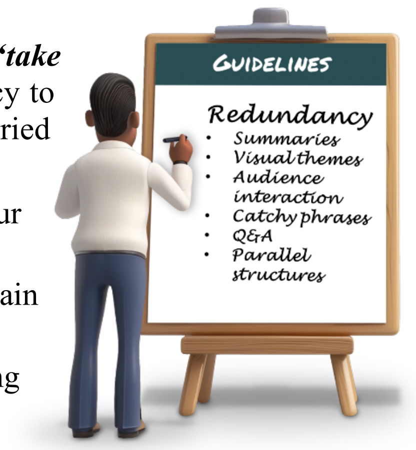
If nothing else, your goal is to make the presentation interesting to your audience. Now hopefully you're also imparting valuable information, but if they are not tuned in it won't matter anyway!



Highlight your key points in creative and unexpected ways to ensure they stick with your audience. Here are some ideas.

- Use a striking visual metaphor in your slides to represent a complex idea, making it easier for the audience to understand and remember.
- Incorporate a physical prop that symbolizes a major point in your presentation.
- Share a personal or historical story that parallels the main theme of your presentation, creating an emotional connection to the material.
- Use a live demonstration or experiment that visually represents a concept or problem.
- Incorporate music or sound effects that enhance and underscore key points or transitions.
- Create a role-play scenario that illustrates a point vividly.

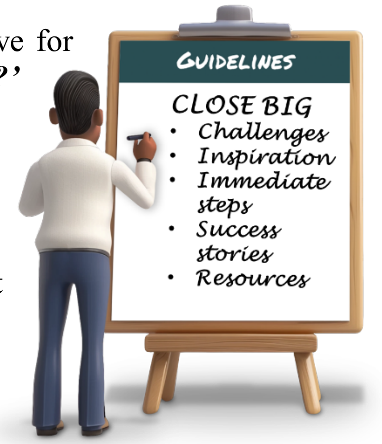
Build in Redundancy



Recall we're looking to have our audience be able to recite back the ***'take aways'***. Hearing something once will not do this. Build in redundancy to reinforce your message through repetition. Make sure you do this in varied and engaging ways. Here are some ideas.

- Summarize your key points at the end of each section of your presentation, but with different wording or perspectives each time.
- Use a recurring visual theme in your slides that ties back to your main message, subtly reinforcing it throughout the presentation.
- Revisit a critical point through audience interaction, such as asking them to share how they might apply what they've learned in their context.
- Integrate a catchy phrase or slogan that encapsulates your key message, repeating it throughout.
- Create a recurring Q&A moment after each section to recap and reinforce the information shared.
- Use parallel structures in your storytelling to reinforce the narrative arc of your presentation.

Close Big with a Call to Action

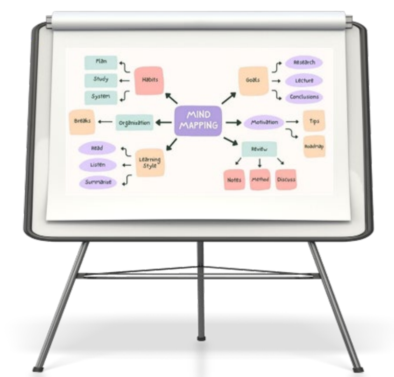


End your presentation with a powerful conclusion and a clear directive for your audience. Please do not say, ***'That's all I have. Any Questions?'*** Here are some better ideas.

- Challenge your audience to take a specific action that relates to your presentation topic, making it time-bound and measurable.
- Inspire your audience by sharing a vision of what could be achieved if the ideas presented are implemented, encouraging them to be part of that change.
- Provide a simple, straightforward step they can take immediately after the presentation.
- Showcase a success story of someone who implemented the advice or strategy you're advocating, illustrating the potential impact.
- Offer a resource, like a toolkit or guide, which supports the audience in taking the next steps, providing immediate value.

By diversifying your approach within these five steps, you can create a presentation that not only captures and retains attention but also motivates your audience to act, ensuring your message has a lasting impact.

Case Study Mind Map



Let's work on the Mind Map for our case study. When I first started using Mind Maps, I actually did them on a large pad of paper with different color pens. It worked pretty well, but the problem was it was analog. From there I would need to create an outline in Word that I would import into PowerPoint to complete the presentation slide deck.

What I've evolved to is to skip the paper pad and go directly to the power of ***Outlining in Word***. With proper formatting, this outline can be imported directly into PowerPoint so you can work on the actual presentation.

For many of my presentations, I also create manuals that complement the PowerPoint slide deck. Once you have the outline completed you can readily expand it to a narrative format for the manual. This is the process I've used to develop all of the content for ***ERGONOMICS ON-DEMAND!***

By no means am I saying this is the only way to accomplish this! I appreciate there are many development strategies available. Quite honestly, I also believe Artificial Intelligence applications like ChatGPT and others will revolutionize this whole process.

Outlining in Word

My intent here is not to go in-depth into showing you how to use Outlining. Other resources are available to you. With that said, here is a quick overview of how I use it. The Outline function allows you to create levels of an outline; Level 1, Level 2, Level 3, Level 4 and so on. You can format the font style of the heading levels.

Here is a sample of what it looks like.

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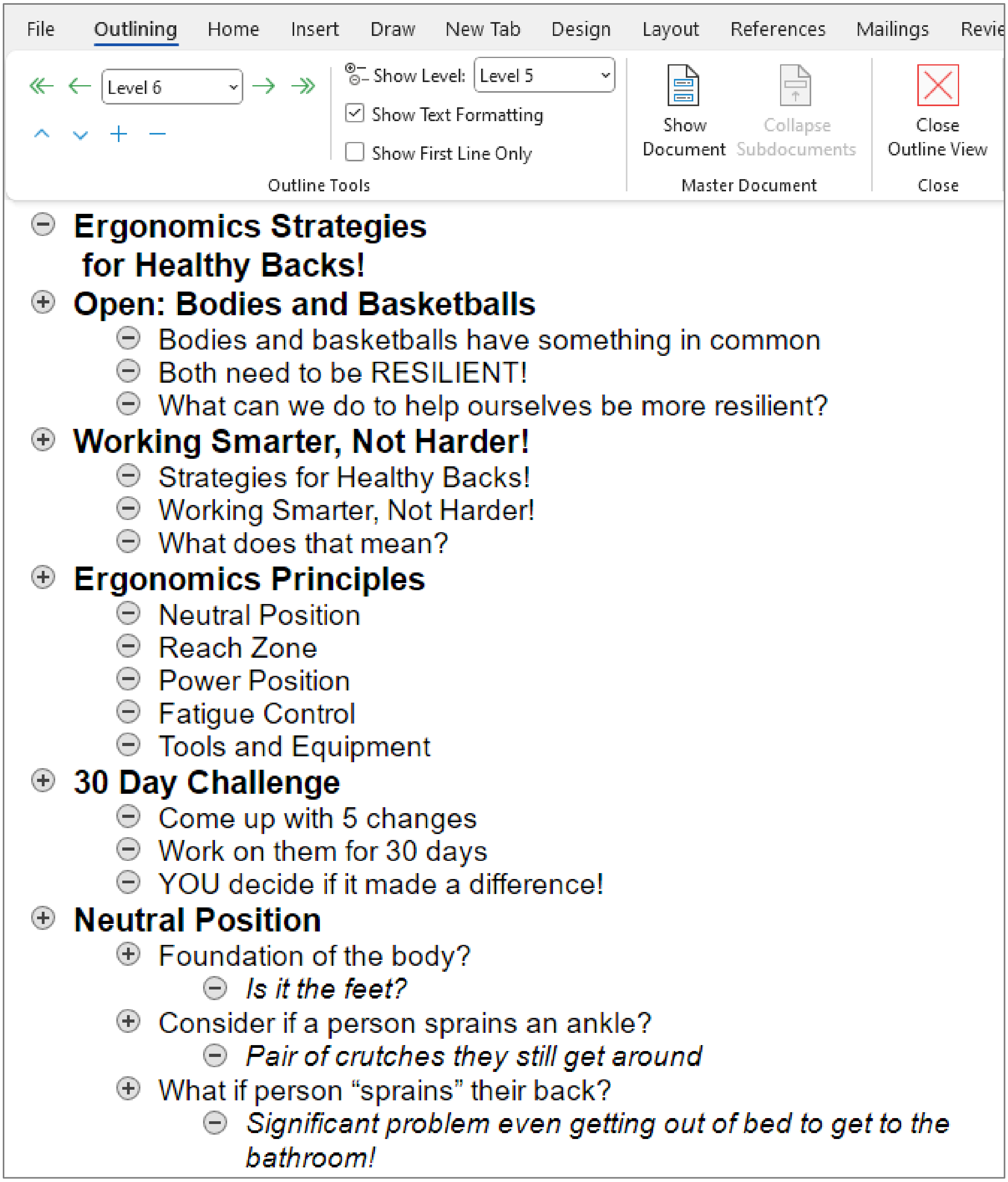

What works well for me is that when I import the properly formatted outline into PowerPoint, the outline levels are used to generate the slides. Each Level 1 heading becomes the title of the slide and the remaining levels are the headings and subheadings on the slide.

When we get to PowerPoint, I’ll also show you how I use Master Slides to very quickly design the slide format. But I’m getting a bit ahead of myself.

At any rate, for right now let's use the Mind Mapping strategy to pull together our thoughts for our case study presentation. I've included two Outlines as part of your training materials, the ***Mind Map Outline*** for Mind Mapping and the ***PowerPoint Outline*** for importing into PowerPoint. Please locate them in the ***Resources Tab*** to reference them and follow along.

Main Topic

Our main topic is **Ergonomics and Back Care**. The presentation title we're going with is, ***'Ergonomics Strategies for Healthy Backs'***. So in the Outline our first Level 1 heading is ***Ergonomics Strategies for Healthy Backs***. What topics do you think we could include that would support the main topic? Remember we also want to address the ***Five Basic Presentation Guidelines*** as we work on the ***'Take Aways'***.

Let's brainstorm on the major components of the presentation. These will become our ***'Take Aways'***. Based on your experience, list a number of objectives you could have.

1. ______________________________
2. ______________________________
3. ______________________________
4. ______________________________
5. ______________________________
6. ______________________________
7. ______________________________

Bodies and Basketballs

I'm going to jump ahead and show you how the actual ***Open Big*** slide looks. The completed PowerPoint presentation is found in the ***Resources Tab***. I encourage you to review it to get an overall perspective of the finished product.

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Here is how I open the presentation with this slide.

Bodies and Basketballs

We want to ***'Open Big'***. For this opening I hold up my model of the spine and a basketball. I ask the audience . . .

'What do Bodies and Basketballs have in common?'

'Aside from it being round what is the most important characteristic of the basketball?'

I then drop the underinflated basketball on the floor and of course it doesn't bounce! I then say.

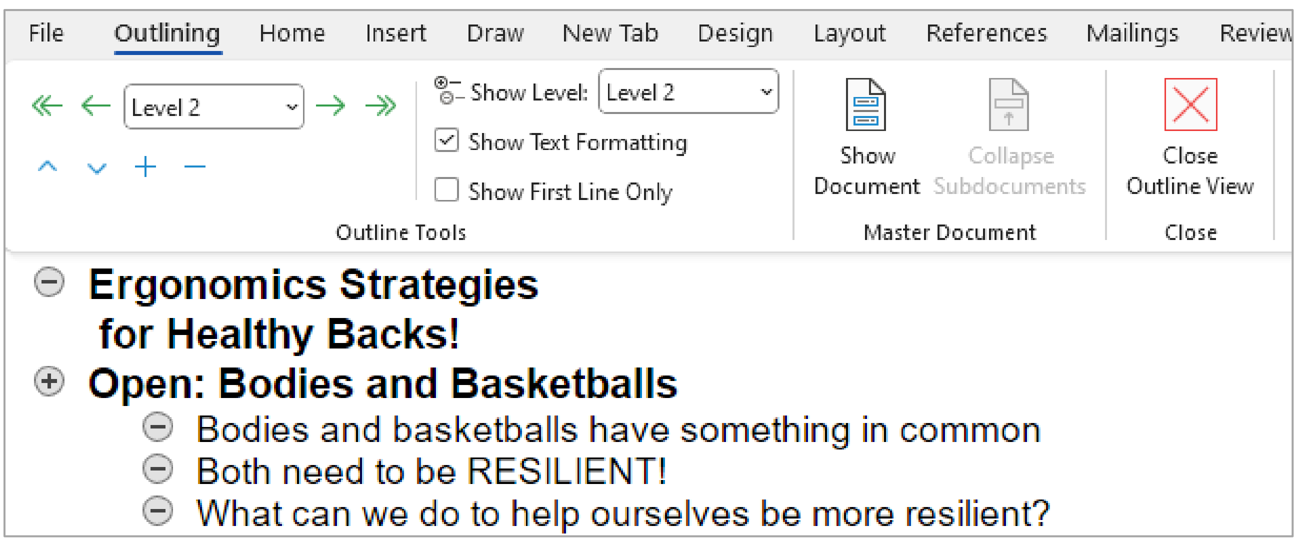
'Well, I guess this is going to go really well!'

'If this is the tool we're using to play the game, we need a basketball that has enough air in it to bounce!'

'It needs to be resilient!'

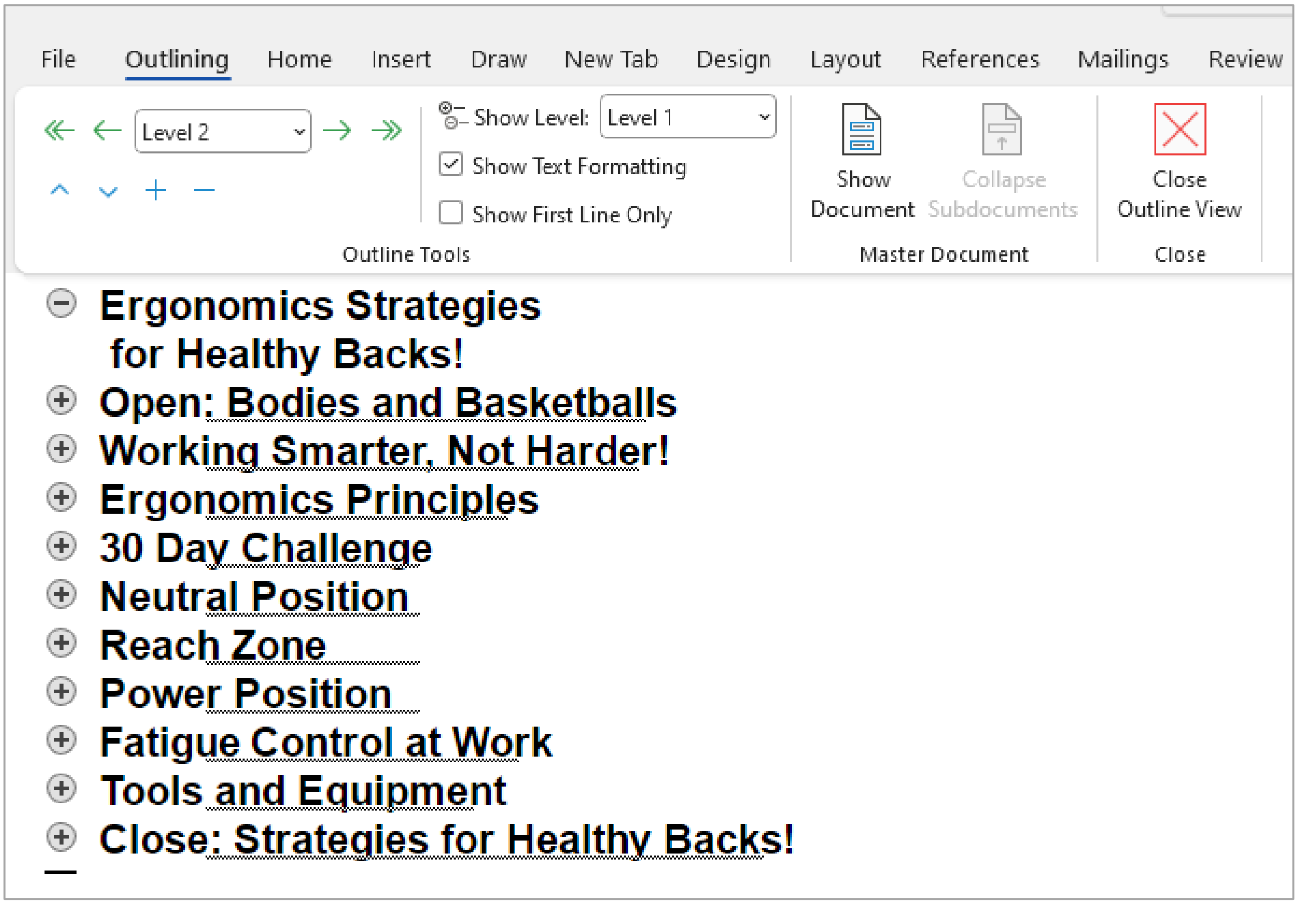
'Now think about what we ask our bodies to do day in and day out. We need bodies that are resilient as well. I'm not saying you should see how well you can bounce, but what I am saying is we're going to talk about a number of strategies you can use to help your body be more resilient!'

Here is the ***Mind Map Outline*** in Word for this slide (please reference it via the ***Resource Tab*** to look at it in the Word document). You'll see that **Show Level: Level 2** is selected**.** So we're seeing both Level 1 and 2.



Major Components

Here are the major components (Level 1 of the Outline) of the presentation I included. More than likely your list will have some common elements with mine and some others that are not in common. And that is fine; you can certainly use these elements but what is most important is for you to make your presentations yours!



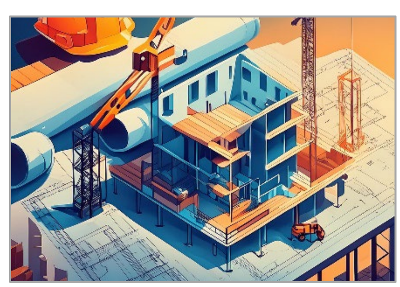
As you'll see, we're going to define ergonomics as ***'Working Harder, Not Smarter!'***, we'll preview the ergonomics principles, we'll offer the ***30 Day Challenge*** to make use of the principles over the next 30 days, we'll expand on the basic ergonomics principles of ***Neutral Position, Reach Zone, Power Position, Fatigue Control at Work and Tools and Equipment***. We'll close with a ***Call for Action*** on the strategies.

Expand the Major Components

At this point, please take the opportunity to look closely at the ***Word Outline***. You'll see I've expanded each major component to add detail. We'll need to do some more formatting to allow it to be imported into PowerPoint. Each separate slide needs to have a Level 1 heading and then the other lower level headings. I've included a second Word document (***PowerPoint Outline***) that does just this.

Now that we've the ***'Take Aways'*** in a conceptual format, the next step is to make it a reality.

'Build the House'



We've compiled the ***'blueprint'*** for the presentation, next we get to ***'build the house'***. That is the analogy I use; we're going to build a house, the presentation. Let's go through some overview concepts of ***'house building'***.

Storytelling

As long as there have been humans, there have been storytellers. Before the development of written language, storytelling was how we passed information to the next generation. And even to this day, storytelling remains a powerful mode of communication!

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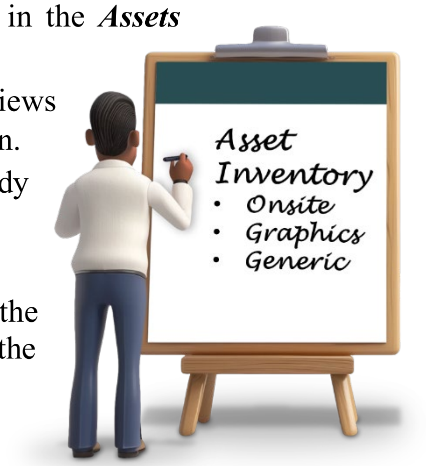
We want to use storytelling techniques to make the presentation relatable and memorable to our audience. We want to capture our audience's attention with dynamic and interactive content. We want to incorporate multimedia elements such as videos, images and graphics to enhance comprehension and retention.

Use your experience to add your stories to the presentation. As appropriate, bring in examples from your personal and professional life. Make the stories topical based on what is going on in your world!

Asset Inventory

As I develop the presentation content, I work with my client and other sources to develop what I call an ***Asset Inventory***. This is a list of the assets I need for the presentation. This will be based on the ***Mind Map*** we developed within the context of the five basic presentation guidelines. Also some of the assets may come from other sources. I'll provide more details in the ***Assets Acquisition*** section. For me this includes three categories:



- **Onsite –** Examples include video of specific jobs and tasks, interviews with employees, specific video that I can pull stills from and so on.
- **Graphics –** Graphics that I either need to produce or source already produced.
- **Generic –** Assets that are not unique to the client site.

Here is the ***Asset Inventory*** for our case study presentation. Refer to the ***Instructional Design Worksheet Case Study*** to see them added to the ***Worksheet***.

Onsite

- Cover shots of various employees doing typical tasks (I get these by pulling still frames from the video, I will talk more about this in the ***Assets Acquisition*** section.)
    - Head shots – pulled from video
    - Workbench/workstation
    - Tool and equipment use
    - Work processes

Video clips of the following scenes:

- Employee talking about the concept of ***'Working Smarter, Not Harder'***
- Me talking with an employee
- Before and after examples of using Neutral Position
- Employee holding an item at arm's length and close to the body
- Employee demonstrating the Operating Range
- Employee doing a task within their operating range
- Employee performing a task using the power position
- Employee talking about importance of 'Planning' as part of material handling
- Me demonstrating and teaching the Power Lifting technique to employees
- Employee demonstrating Power Lift technique
- Employees stretching at work
- Employees using tools and equipment (3 or 4 examples)
- Employees using mechanical handling equipment

- Employee talking about problem solving

Graphics

Here is a list of the graphics I need:

- Graphic of ***'Working Harder, Not Smarter'***
- Ergonomics principles graphic
- Side view of the spine
- A spring
- Power Position, Power Zone (Green, Yellow and Red)
- Three stretches (Back Bend, Power Squat, Large Arm Circles)
- Menu graphic

Generic

Now for the generic assets:

- Picture of a basketball
- Employee standing, close up of feet/legs
- Person using crutches
- Person experiencing back pain
- 'Ready Position' with sports
- Person using water fountain; 1. Back bent/straight leg and 2. Using Power Position
- Weight lifter using power lift technique
- Person sleeping in bed

Asset Acquisition

So, at this point we understand our audience, decided on the presentation format, determined our ***'take aways'*** and developed our ***Asset Inventory***. The next step is to acquire the assets to customize the presentation. These are the ***'Leaves'*** we talked about that you add to your '***Tree Trunk'*** and ***'Branches'***. Here is the process I use to obtain the assets.

Onsite

Put together your **Asset Toolbox**; it will have several trays.

Personal Protective Equipment

Ensure that you have the proper personal protective equipment and attire. At a minimum, you may need eye, foot, clothing, head, and hearing protection. Don't take it for granted; communicate with your client contact to understand what the company requirements are. Dress at the proper level based on the worker's level of attire. For example, do not show up in a suit on an assembly production floor, just as jeans, steel toe boots and a work shirt may not be appropriate for a boardroom.

Photographic equipment

I strongly encourage you to use video rather than still cameras, you'll pull freeze frames off the video to get the images you want. A word about video and cameras in general. Typically, you must get approval for the video and/or pictures from the appropriate individuals, including employees, clients, managers, etc. In a few cases a written release may be needed.

Why use Video?

I've been using video ever since I first started instructional design development. My thought is if a picture is worth 1,000 words, a moving picture (video) must be worth at least 5,000 words. With the Prosumer video cameras (prosumer camcorders combine professional-level features with ease of use for fast and discreet 4K and full HD filmmaking on the go) available you can get reasonable quality video and pull decent resolution stills from the video.

Video 'Secrets'

Don't be accused of making home videos, follow these guidelines.

- Use a camera with a flip-out view finder. This allows you to position the camera to get the shot and still see the view finder.
- Use enough light; low light causes grainy video that is hard to analyze. If you know you'll be in a low light area, see if you can obtain more light in the area.
- Use a tripod or monopod as much as you can. You'll get much better quality video.
- A monopod works very well to get overhead shots.
- A swivel ball head mounted between the camera and the monopod works well to position the camera and still see the view finder.
- A wide angle lens will allow you to work in close quarters.
- Always have a backup power supply; either additional battery packs or able to run off of wall current with the AC adapter.

Plan your video sequence. Use your ***Asset Inventory*** to know what shots you want.

- Use the zoom sparingly. Zooming in and out and in and out will drive your audience crazy.
- Use manual focus (if available) to stop the auto focus from searching.
- Pan (move from side to side) the camera about three times more slowly than what your eyes can track.
- After videoing a few seconds, check to make sure the camcorder is working correctly. I've learned this the hard way!
- In a loud environment, use a separate microphone to pick up audio from interviews.
- Be aware of your surroundings; don't walk into equipment, people, or off of a platform. I always try to have someone watching 'my back' to keep me out of trouble.

Effective Interview Tips and Techniques

An important aspect of the customization process is to obtain video clips that are concise and on point. Follow these tips for effective employee interviews.

Establish a conducive environment

- Try to limit background noise.
- Use an area that provides some privacy, so the person feels comfortable.
- Set up the camera at about head level within 2 or 3 feet of the person and close to you, that way the person can talk to you,

not the camera (it will still look like they are talking to the camera and not that weird looking off to the side look).

- Some people are just naturally more comfortable being on camera. If you have someone who is not, that is fine, just move on to someone else.
- I always tell them my intent is never to embarrass them, I will always put them in a 'good light' for their interview.

Prepare structured questions

- Have your questions in mind so you have a plan.
- Review the questions with them in advance to give them some time to think about answers and practice.
- I've learned to video the practice sessions, sometimes their first response is the most natural.

Practice active listening

- Pay full attention to the interviewee's responses, demonstrating engagement and understanding, I often nod at them as they are speaking to give them affirmation.
- I ask them to imagine I'm a new employee and they are helping me learn my job, people do well when they talk about things in which they are experts.
- Do not speak over them. when they finish a thought, let it 'breath' a little before you speak, otherwise it will be difficult to edit later.
- I always let them know we can do as many takes as we need to get what we want.

Ask probing questions

- Avoid asking only Yes/No questions, ask open-ended questions.
- Encourage them to elaborate on their experiences and provide specific examples.
- Provide clear and specific feedback to help them give an answer.
- Sometimes I will give them an idea of how they could answer the question to see if that helps them formulate an answer.

Some typical questions

- ***'Please tell me your name, what your job is and where we are.'***
- ***'Please take me step-by-step through the process you're showing me.'***
- ***'Based on your experience what three tips and techniques would you want a new employee to know?'***
- ***'What three things do you wish you knew when you started that you know now?'***
- ***'Anything else you want to add?'***

Reflect on your own performance

Identify areas where you can improve your interviewing skills. We all get better with practice.

Setups

To make it as realistic as we can, I try to video actual job tasks. Sometimes this will not work. Let's say you have found out what you really want on video is not currently in operation. Here are a couple of options.

First see if they can set up a reasonable simulation to make the points you want. This can work quite well to get content you can use.

If this is not possible, have them verbally tell you what the situation is; this gives you something you can use to bring up the point in the training.

Designing Visuals and Graphics

While this is not a course on graphics design, it makes sense to consider some basic graphics design principles as we build the PowerPoint presentation.

Contrast

Use contrasting colors, sizes, and shapes to draw attention to important elements.

- Use dark text on a light background for easy readability.
- Use bright colors for headings and key statistics.
- Use contrasting shapes to distinguish different types of data.

Balance

Distribute visual elements evenly to create a stable and harmonious design.

- Use symmetrical layouts for formal presentations.
- Use asymmetrical layouts for dynamic and informal presentations.
- Use empty space to balance heavy text or graphics.

Emphasis.

Highlight key information or sections to draw attention.

- Use larger fonts for headings.
- Use bold or italic fonts for important words.
- Place key elements in focal areas of the slide.

Movement

Guide the viewer's eye across the slide in a logical sequence.

- Use directional arrows or lines.
- Use animation to highlight transitions.
- Use a consistent flow of information from one slide to the next.

White Space

Leave ample space around slide elements to prevent overcrowding and improve clarity.

- Use margins around text and images.
- Use empty space to create focal points.
- Use white space to create a sense of calm and sophistication.

Proportion

Adjust the size and scale of elements in relation to each other to create a visually appealing design.

- Use larger fonts for headings and smaller fonts for body text.
- Use larger images for important visuals and smaller images for supporting information.
- Use consistent spacing between elements.

Hierarchy

Organize elements to reflect their relative importance.

- Use larger fonts for more important information.
- Use different colors for different levels of information.
- Use indentation or white space to visually separate different levels of information.

Repetition

Repeat visual elements throughout the presentation to create unity and consistency. Using Master Slides really help to achieve this visually. I'll talk about Master Slides shortly.

- Use a consistent color scheme throughout the presentation.
- Use similar fonts and typefaces for all text elements.
- Use repeating patterns or graphics to create visual interest.

Rhythm

Use repeated patterns or sequences to create a visual flow.

- Use alternating colors for rows of data.
- Use a consistent grid layout for multiple images or text boxes.
- Use repeated shapes or patterns to create a sense of movement.

Case Study

Let's work on our ***Case Study***. So far, we've determined our audience's background and training needs. Our presentation is a customized, live stand-up format using PowerPoint as the media. Using a Mind Map process we determined our ***'take aways'*** and developed the ***Mind Map Outline*** in Word to document it. We identified the assets we needed by generating the ***Asset Inventory***.

We've been onsite with the client and obtained the raw footage of the video and other information we needed. As we work on the presentation, we have some technical questions to answer.

- How to take the raw video footage and turn it into finished video clips?
- How to create the stills needed from the video?
- How to obtain the generic images?
- How to create the graphics?

I'm going to share with you the process I've developed over the years. It has worked well for me, but I also recognize there are many other methods available. You may very well use a different process; use what works for you.

Video, Image and Graphics Editing

Let's start with acquiring and editing the video. When I started with video as part of my presentations, VHS video tape was the format. I guess I really have been doing this a long time!

I had a VHS camera and with two VHS machines I would copy video from one to the other. Then digital video tape was the next evolution and now everything is HD video recorded onto cards.

Video Camera

You can spend thousands of dollars on a professional camera, but you don't need to. Many prosumer level cameras are available for between $500 and $1000. Prosumer camcorders combine professional-level features with ease of use for fast and discreet 4K and full HD filmmaking on the go.

Review my recommendations for camera features in the ***Assets Acquisition*** section. I'm not going to make a specific recommendation for a brand and model. Everyone will have different needs. Some of you may have video production services available through your employer. Here is a list of prosumer level cameras under $1000.

- Panasonic Lumix G7
- Nikon D5600
- Sony a6400
- FUJIFILM X-T30 II
- Sony 7 II
- Canon EOS RP
- Canon EOS 5D Mark III

Video and Image Editing Software

If you don't have any experience editing videos and images, I would encourage you to acquire some basic editing software and learn the basics yourself. Honestly, you're not going to be making videos that will win an Oscar and you don't need to.

My experience is you need to be able to take raw video and edit it into clips that you insert into the PowerPoint presentation. This is essentially a cut and paste process and you export the edited version.

Do a search on '***basic video editing software***' to see what is available. I use ***Adobe Elements. Adobe Elements 2024*** is the most recent version. It includes two main applications: ***Photoshop Elements*** and ***Premiere Element***s.

I have both ***Photoshop Elements*** and ***Premiere Elements*** and have found it pretty straightforward to edit video and photos for use in PowerPoint and other applications. Looking at the Adobe website you can get both for about $170. It is not a subscription; you own it outright. I'm not affiliated with Adobe, I am merely offering suggestions.

You may have other resources you can use if you decide to incorporate custom video and images into your presentation. I would encourage you to explore your options, for example some free video editing software includes:

- CapCut (https://www.capcut.com/my-edit?start_tab=video)
- Davinci Resolve (https://www.blackmagicdesign.com/products/davinciresolve).

Still images from Video

I use the media player from VLC to pull still images from video. VLC is a free and open source cross-platform multimedia player and framework that plays most multimedia files.

https://www.videolan.org/

You can take ***'Snap Shots'*** directly from the player.

https://www.howtogeek.com/831597/how-to-take-snapshots-in-vlc/

I've found it a very fast and efficient method to get still images.

Generic Graphics and Images

You'll certainly be using generic graphics and images in your presentations. I suspect you have already done Google image searches. Please be aware that while you're able to acquire images and graphics this way, they may be subject to copyright. I'm aware of situations where copyrighted images were used without permission and this created legal issues.

Here are a several options I've used to make sure I'm not in violation of any copyright laws.

- **Take** your **own** – I've developed my own library of generic images that I've personally taken and can use at my discretion.

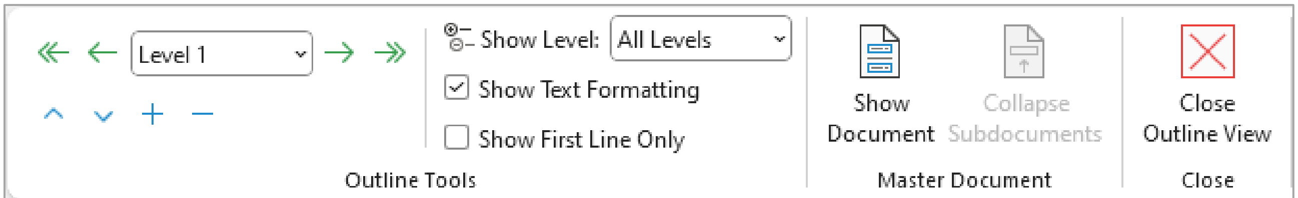
- Permission **from clients** – Occasionally I'm able to gain permission from clients to use images used in their presentations for other presentations.
- PresenterMedia – A subscription service for $50/year. You can create custom graphics, have access to PowerPoint templates and animation, clipart and more. I'm not affiliated with PresenterMedia.
  - https://www.presentermedia.com/dashboard
- **Purchase** images – Many resources are available on-line, where you can purchase rights to images. Do a search on ***'purchase stock images'***. I'm not affiliated with any of them.
- **Free** access **images –** Free to use images are available on-line.
  - Adobe Stock (https://stock.adobe.com/free)
  - Pexels (https://www.pexels.com/)
  - Conduct a search for others

PowerPoint Outline

Recall we used Outlining in Word as a ***Mind Map*** to develop our ***'take aways'*** and from that we created the ***Asset Inventory***. Now we have one more step to go through to turn the ***Mind Map Outline*** into a document we can import into PowerPoint. We call this the ***PowerPoint Outline***. You'll find it in the ***Resources Tab***.

Always remember to view the documents in Outlining View in Word so you'll see the document properly formatted in the Outline view.

When you import the properly formatted outline into PowerPoint, the outline levels are used to generate the slides. Each Level 1 heading becomes the title of the slide and the remaining levels are the headings and subheadings on the slide. To create the ***PowerPoint Outline***, for every individual slide I wanted, I used the Level 1 format for the slide title and then Level 2 and 3 for the Headings and Subheadings. Here is what it looks like.



- **Ergonomics Strategies for Healthy Backs!**
- **Bodies and Basketballs**
  - Bodies and basketballs have something in common
  - Both need to be RESILIENT!
  - What can we do to help ourselves be more resilient?
- **Ergonomics Strategies for Healthy Backs!**
  - Working Smarter, Not Harder!
- **Ergonomics Strategies for Healthy Backs!**
  - Working Smarter, Not Harder!
  - What does that mean?
- **Ergonomics Principles**
  - Neutral Position
  - Reach Zone
  - Power Position
  - Fatigue Control
  - Tools and Equipment
- **30 Day Challenge**
  - Come up with 5 changes
  - Work on them for 30 days
  - YOU decide if it made a difference!
- **Neutral Position**
- **Promote Neutral Position and Support**
  - Foundation of the body?
    - Is it the feet?
  - Consider if a person sprains an ankle?
    - Pair of crutches they still get around
- **Promote Neutral Position and Support**
  - What if person "sprains" their back?
    - Significant problem even getting out of bed to get to the bathroom!
- **Neutral Position: Spine and Pelvis**
  - Spine neutral position
  - S-shape (side view)
    - Inward curves in low back and neck
    - Outward curve in midback
  - Spring-like shape

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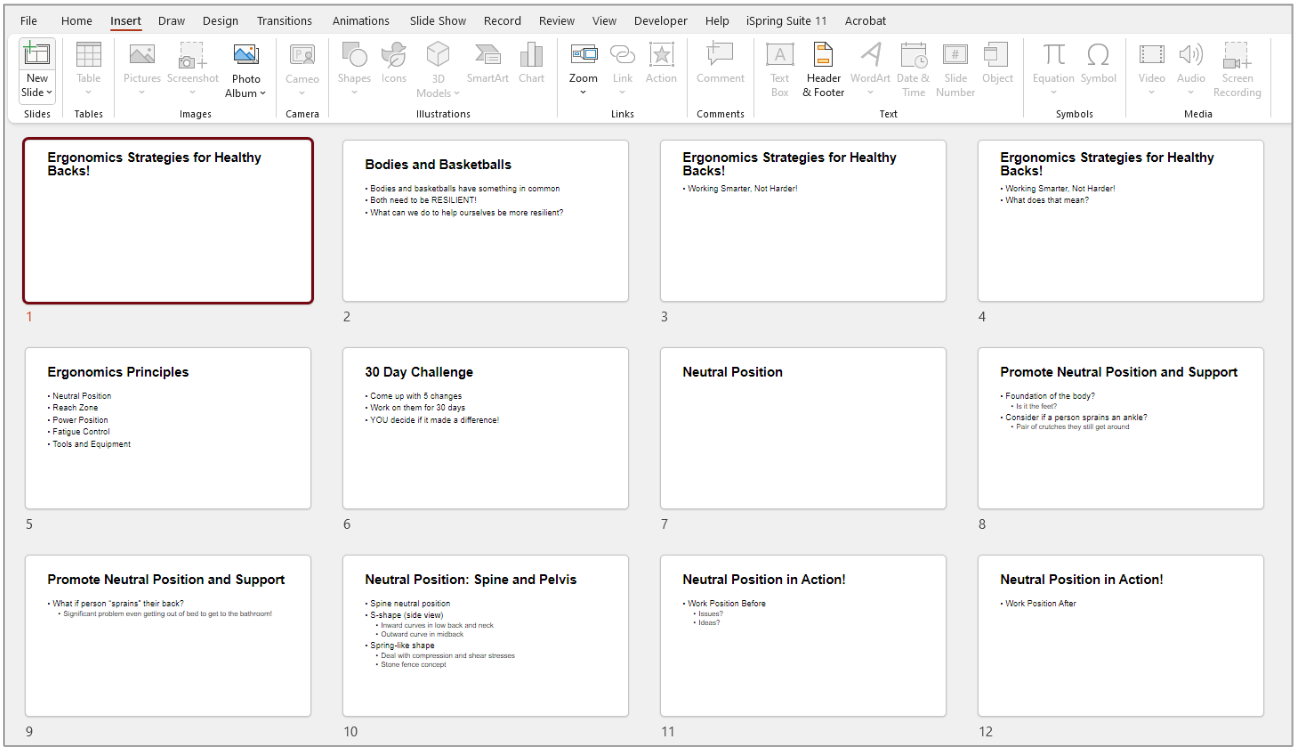
Import into PowerPoint

Now that we have the ***PowerPoint Outline*** formatted properly, we can import it into PowerPoint. When we import it into a new blank PowerPoint document, you'll see each Heading 1 has its own slide. However, we would have a lot of work ahead of us to make it look the way we want it to.

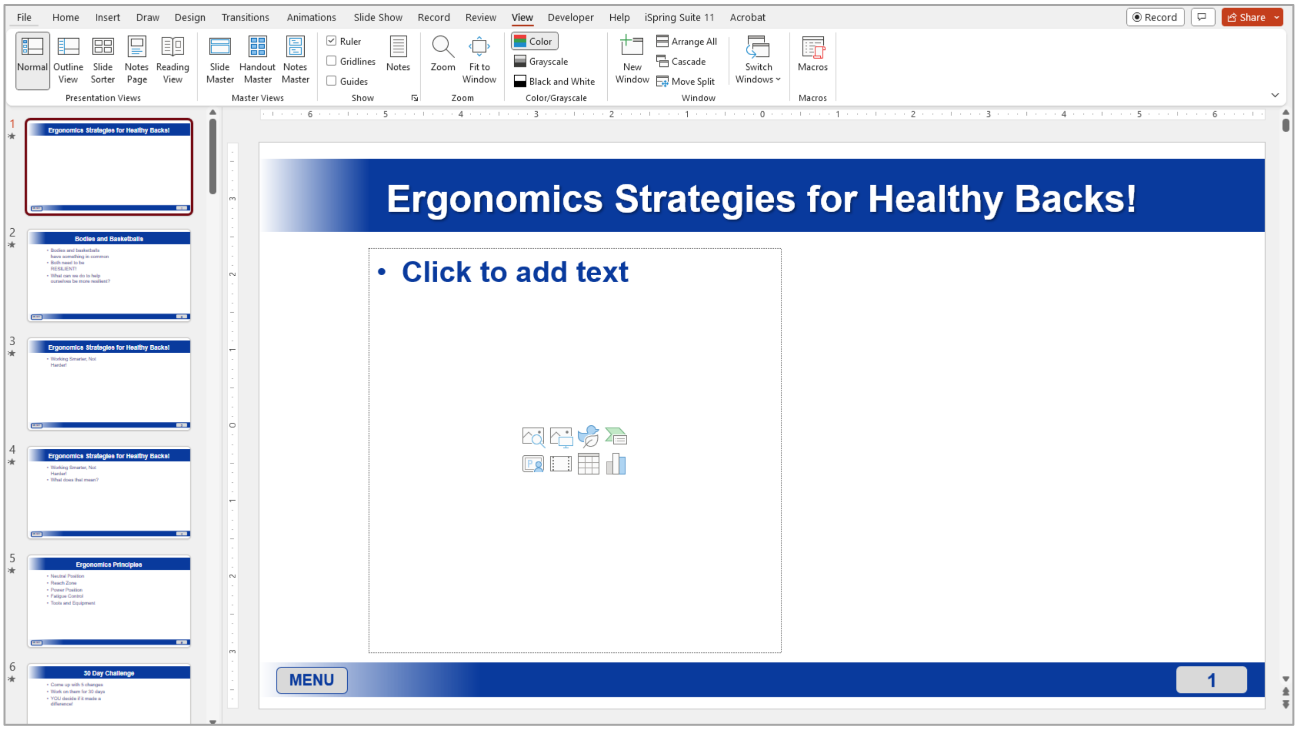


PowerPoint Template

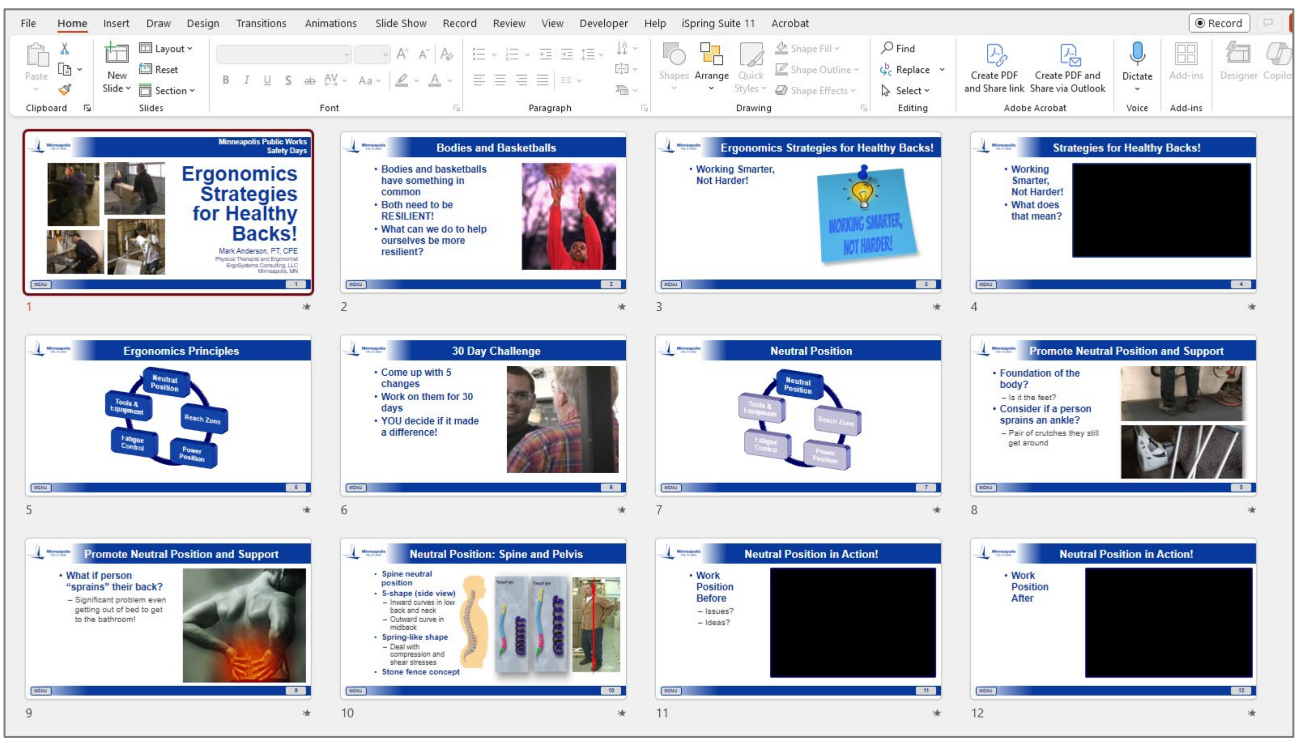
It would be great if we could use a PowerPoint template so we can get the look and feel we want for the presentation! I created a template that I used for the ***'Ergonomics Strategies for Healthy Backs'*** presentation that we'll use. The template uses ***Slide Masters.*** The PowerPoint template with the ***Slide Master*** and associated ***Layout Master***s are located in the ***Resources Tab***.

Slide Masters in ***PowerPoint*** are a powerful feature designed to help users create consistent formatting across all slides in a presentation. They control the overall appearance of your presentation, including the default layout, fonts, colors, and bullet styles. By editing the ***Slide Master***, changes are automatically applied to all slides, saving time and ensuring uniformity.

If you're not familiar with using ***Slide Masters*** and ***Layout Masters***, I encourage you to learn more about them. They will save you incredible amounts of development time. Look for tutorials on line. I've used the template to format the Outline we created. Here is what it looks like.



Now when add the assets we have the finished product.



Please review the included ***Case Study PowerPoint in Slide Show*** view to see the slide transitions and animations. See if you can identify use of the five ***Presentation Guidelines***.

- **Open Impactfully:** Start with compelling hook, create emotional connection.
- **Maximize Audience Participation:** Foster a collaborative atmosphere. Make use of demonstrations, props, polls and quizzes.

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- **Emphasize in Unusual Ways:** Use real-world anecdotes to clarify complex ideas. Put a different twist on the topic. Have them think you're going in one direction and then turn it on its head.
- **Incorporate Redundancy:** Recap key points; appeal to different learning styles. Remember we need repetition for the concepts to soak in.
- **Close with a Call to Action:** Motivate participants to apply the concepts. Use the ***30 Day Challenge***; try it for 30 days and then they decide if it's worth their time and energy. The main motivator of behavior change is self-benefit.

Review and Revision

Second Set of Eyes

Now that we've finished the draft presentation, before we preview it for our client, we might want some of our colleagues to review it for accuracy, clarity, and effectiveness. I've learned a second set of eyes can be quite valuable.

The presentation content makes good sense to me, because, well, I wrote it! Someone else may have a different take on it. Embrace constructive criticism, it will make for a better product in the long run.

For your first presentations, I would encourage you to do a pilot presentation with a small group of learners to identify issues and areas for improvement.

Self-Video

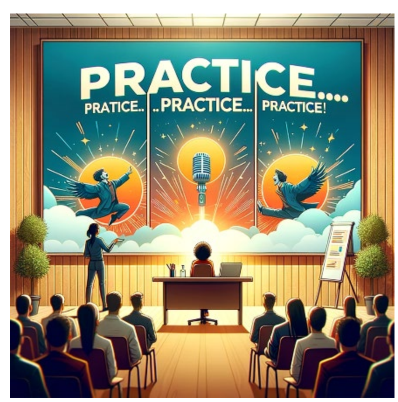
I also encourage you to video yourself presenting. I appreciate that most of us are not thrilled to see ourselves on video! However it is a fantastic feedback tool that will help you better understand how your presentation is viewed by the audience. You'll identify changes you can make to improve your presentation skills. Refer to the ***Presentation Skills*** section for specific details about what to look for.

Client Preview

Once you're ready, preview it for your client. Get ready to make some changes, because it is more than likely they will ask for them. My experience is that, as you get more experience with your clients, you'll better understand their concerns and anticipate their needs.

At this point, with my long time clients, they don't ask for previews. They know what the product will be and how I will present it.

Practice . . .Practice . . . Practice!



I really can't emphasize enough the need to ***Practice, Practice, Practice***!

With practice comes real familiarity with the content and that directly builds your confidence. Next let's focus on strategies to deliver the presentation with confidence.

Presentation Skills

With your professional knowledge and your preparation using the strategies we've covered, you'll do well!

With that said, let's cover topics about the logistics of the presentation, some pertinent presentation tips, some audience control strategies and how to get feedback.

Prepping the Room

Work to create a welcoming and inviting presentation environment to put the audience at ease and foster a positive learning experience. If it makes sense, the client may provide water, coffee or refreshments.

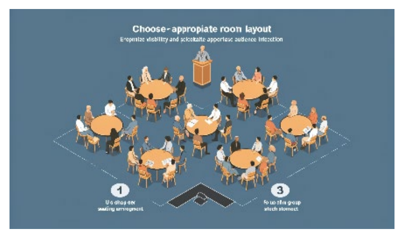
Work to ensure the room temperature is generally comfortable. Everyone has a different internal thermostat and you'll never get a group to all agree on the same temperature. My preference is a room that tends to be on the cooler side. A warm room particularly after lunch can be a tough room.

Set up equipment

Arrive early to set up and troubleshoot any issues. My general policy is to arrive at least 30 minutes before start time. Test all the equipment beforehand to avoid disruptions and ensure a seamless presentation. Hopefully the projector or screen is in a central location for optimal visibility. More than likely you'll not have control over this. Most modern training rooms have quite sophisticated AV set ups.

I recommend you have a remote wireless mouse to control the slides. This frees you from having to stand at the computer. The remote allows you to go forward and backward in the slide deck and many also have a laser pointer built in. Have backup batteries for the remote.

Choose an appropriate room layout



Optimize visibility and facilitate audience interaction by selecting the appropriate seating arrangement and stage position. Work with your client to set up a seating arrangement such as a U-shape or theater-style setup. If you're going to have small group activities, one technique is to set it up with tables and chairs so the groups can see each other and interact.

Room for micro-breaks

I always like to ***'practice what I preach'***. One of our basic principles of ergonomics is to promote regular and active physical movement. I use the micro-break concept. About every 20 to 30 minutes we do short, perhaps 30 to 60 seconds, of standup stretching. Make sure you have ample space for movement and any other planned activities.

Optimize lighting

With PowerPoint as your media format you'll be using a projector or monitor. Test the lighting controls in the room to adjust lighting to avoid glare on the screen or monitor.

Optimize acoustics

Depending on the room size you may be using a microphone and sound system for audio. If I need amplification, I prefer to have a lavalier microphone so I can move around the room. Test the acoustics to ensure speech is clear and audible.

Laptop or flash drive

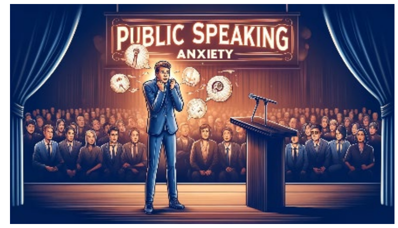
Depending on the set up, you may be using your laptop plugged into the client's projector or monitor. In some other situations you may need to bring your presentation on a flash drive and use the client's AV equipment.

Always have a backup of your presentation available. Believe me, at some point something will go wrong and you'll be very glad to have it.

Props and teaching aids

Check to make sure you have all the props and other teaching aids you need. You may want to create a checklist so you won't forget something. I know it seems like you won't but believe me I've been there and had to improvise a few times. A checklist can help to control your stress levels as you get ready.

Public Speaking Anxiety



Did you know that some sources claim that the fear of public speaking is more common than the fear of death? My thought is, if push comes to shove, I think just about everyone will choose speaking in public over dying. Now, that doesn't mean that many people have substantial anxiety speaking in a public setting. Here are strategies to consider so public speaking is less anxiety producing.

Practice regularly

The more you practice, the more confident you'll become. I relish the opportunity to practice. I've discovered it is much more rewarding the more often I give a presentation. New ideas and presentation techniques come to me as I'm presenting. I have the opportunity to immediately try them out to see what works and doesn't work with the audience.

Know your material

Solid knowledge of your material will give you a sense of confidence and authority. You're the expert! But here is a caveat with what I call, ***'What I know versus what they know'***. What am I talking about? At the end of the day it is not what you know that is important; it is what your audience learns and can actually make use of.

I learned if the audience doesn't walk away with the ***'take aways'***, I have in some way, failed at my job. I want to make sure that I'm doing the very best I can for them.

Visualize success

Before I start a presentation, I always picture myself driving away after the presentation is done. I imagine that I've given a successful presentation. It went well, I dealt with any issues that popped up and I felt good about the experience. This strategy helps me build positive expectations for the upcoming presentation.

I also use this same strategy when I know I have a very busy day coming up where I might be doing the same presentation 3 or 4 times. This is tiring and it takes a lot of focus and energy. Before I start the day, I just picture the day is over and I'm on my home. And then it seems, before I know it, I'm on my way home after a successful day. If you have not tried this, I would encourage you to do this exercise to see if it works for you.

Just as a postscript, the most times in one day I've ever repeated the same presentation is eleven. . They were 30 minutes long and covered a couple of shifts. I did learn not to ever do this again! My brain and body were fried; I got to the point where I lost track of what I had told the groups. It all melded together. Make sure you take care of your energy and focus needs.

Use controlled breathing exercises

Deep breathing is beneficial for controlling stress and anxiety, especially before public speaking, due to its impact on both emotional and physical health. It works by activating the body's relaxation response, helping to decrease feelings of stress or anxiety. Engaging in controlled breathing before and during a speech can provide a quick, discreet method to manage nerves and maintain composure.

Crowd Control

Let's talk about crowd control. Your goal is to facilitate the presentation and part of that is dealing with the audience if they throw up some distractions. Because your presentation was prepared with care and you incorporated the five basic presentation guidelines, this rarely occurs.

I've learned, however, that some people will like you no matter what you do and unfortunately some people will not like you no matter what you do. If I have an individual who does not want to pay attention and they are not disruptive, I basically ignore them.

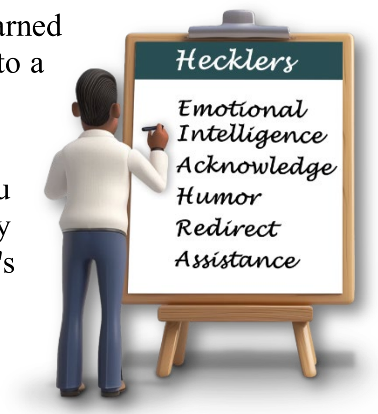
But what about the more active examples? What about those in the audience that won't stop talking over you or want to keep talking to their buddies or are just generally being disruptive? Here are strategies to handle these situations.

Invade their space

The most effective strategy I employ for crowd control is what I call, ***'Space Invasion'***. No it is not some sci-fi movie.

Let's say I have attendees at a table that want to keep chatting once I start speaking. All I do is to approach their space and keep talking. I may have a prop in my hand that I'm showing to the audience. I may be asking a question of the audience. Any number of interactive opportunities. The noisy group immediately recognizes the expectation I have which is to pay attention. And they respond positively. They and the rest of the audience know exactly what I've just done and we're good to go.

My experience is that the ***true heckler*** is very rarely an issue. But I've learned to never say ***'never'*** just like you never say ***'always'***! If you truly run into a true heckler here are some options.



Practice Emotional Intelligence

Understanding the potential motivations behind heckling can help you respond effectively. Some hecklers may seek attention, while others may have genuine concerns. Adjust your approach based on the individual's intentions.

- Observe body language and verbal cues
- Respond with empathy and understanding

Acknowledge without encouragement

You can politely acknowledge the heckler's comment, without giving it undue attention. This can help diffuse the situation and prevent them from gaining momentum.

- Avoid engaging in debates or confrontations
- Use brief and respectful language

Use humor to defuse

If appropriate, employ wit to turn the heckler's comments into a humorous moment. This can disarm the situation and bring the audience to your side.

- Keep your humor respectful and avoid sarcasm
- If the humor is not well-received, move on quickly

Redirect focus

After addressing the heckler, redirect your focus back to your presentation and the rest of the audience. This helps minimize the interruption and maintain the flow of your talk.

- Use transitional phrases or questions to smoothly shift attention
- Remind the audience of the presentation's purpose or key points

Seek assistance

If a heckler becomes persistently disruptive and refuses to respect boundaries, it may be necessary to involve additional help. This ensures the comfort and safety of all attendees.

In more than 30 years as a professional presenter and thousands of presentations, I've only had one instance when the individual was asked to leave. The supervisor was in the audience, recognized the situation and dealt with it appropriately.

- Inform the heckler that the situation will be handled by staff
- Remain composed and focus on your presentation

Analyze Real Time Audience Feedback

To optimize presentation delivery, analyze the audience feedback. Your audience has energy, it has a group dynamic that can help you do a dynamite job. You're there to share something valuable with them. Pay attention to what non-verbal cues signs they are giving you during the presentation that indicate engagement and understanding.

Observe body language and facial expressions

Observe the audience's posture, gestures, and facial expressions to understand their engagement and comprehension. Attentive listeners with positive body language indicate interest, while restlessness or disinterest may require adjustments.

Monitor engagement levels

Track audience participation through Q&A sessions, polls, or interactive activities. High engagement indicates the presentation is resonating, while low engagement may necessitate changes to make it more engaging or relevant.

Gauge verbal feedback

Seek verbal feedback through questions, discussions, or surveys. Positive feedback reinforces the effectiveness of the presentation, while negative feedback provides valuable insights for improvement.

Enhancing Delivery and Impact

How you deliver the content is just as important and dare I say, perhaps even more important than the content itself. I've sat through presentations that had really good content but the presentation delivery really got in the way.

Using PowerPoint as an aide

Avoiding Slide-Reading

The best advice I can provide about using PowerPoint is, ***do not just read your slides***. Your audience will wonder why you're there? They could just get the PowerPoint and read it themselves. When you avoid just reading the slides you preserve and enhance audience engagement.

Slides as cues

Slides should serve as visual aids for you and your audience. You use them to help you stay on track during your presentation and facilitate your flow of information. The slides should add to your narrative by being visually appealing both in terms of the aesthetic and the content. They allow the audience to see your verbal comments to reinforce the concepts.

Subject matter mastery

How to avoid just reading your slides? This comes through adequate preparation and practice so you'll present confidently and knowledgeably. Remember you're the subject matter expert. Let that come through.

Audience interaction

When you're not focused on reading your slides you can better maintain eye contact, move around the space and invite questions or comments. You create a more interactive and engaging experience, fostering a stronger connection with your audience.

Filler words

I recall listening to a presentation once and all I remember about it is counting the number of times the presenter used the word 'like' as a filler word. I believe in about a 20 minute presentation the count was over one hundred uses. To say the least it was very distracting!

Tips to reduce filler word use

To effectively minimize the use of filler words such as "you know," "like," "um," and others, it's crucial to first become aware of your speech patterns and the specific filler words you frequently use.

Practice speaking slowly and deliberately, allow yourself time to think and choose words carefully, which can significantly reduce reliance on fillers. I sometimes imagine I'm speaking to an audience where English is not their primary language; this helps me slow down and concentrate on my speaking cadence and word choice.

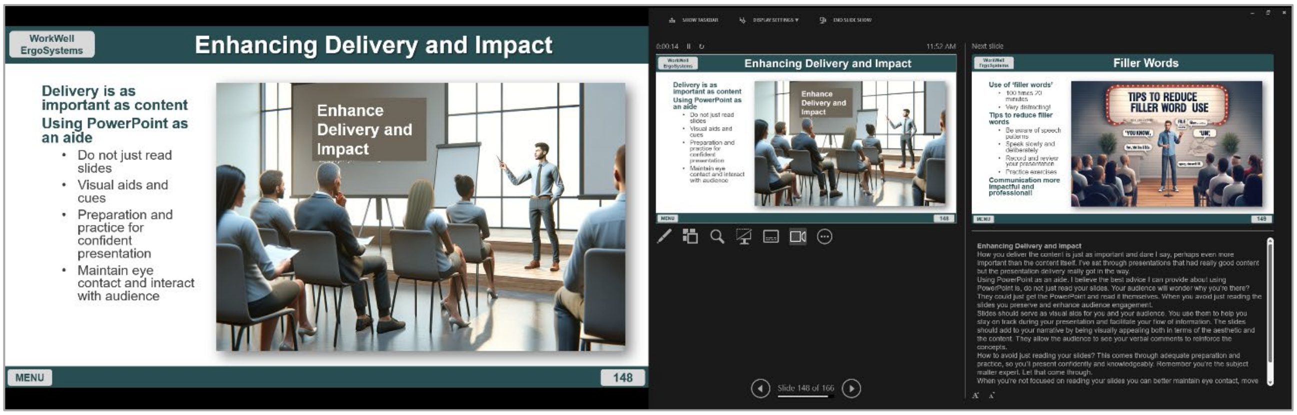
Recording and reviewing your speech will help you identify when and why you use filler words, so you can target your improvement. Work on practice exercises that focus on eliminating these words, such as speaking on a topic without using filler words or pausing instead of filling silence. Understand that occasional use of fillers is natural in conversational speech. Aim for improvement, not necessarily perfection.

Changing your speaking habits requires mindfulness and continuous practice, but with dedication, you can enhance your clarity and effectiveness as a speaker, making your communication more impactful and professional.

PowerPoint Presenter View

PowerPoint's ***Presenter View*** is a powerful feature that provides a more controlled and professional presentation experience. It's especially useful in settings where you're presenting to an audience using a projector or a second screen. ***Presenter View*** offers you a private view of your presentation, including your notes, a preview of the next slide, and a timer, while the audience only sees the current slide.

If you're not familiar with ***Presenter View*** in PowerPoint, check it out. It will enhance your presentation by providing a dual-screen setup. I have included more information in the manual about using Presenter View.



Here's how to use **Presenter View**:

Setting Up Presenter View

Connect to a Secondary Display: First, make sure your computer is connected to a projector or a second monitor.

Enable Presenter View:

- Open your PowerPoint presentation
- Go to the "Slide Show" tab in the ribbon
- In the "Monitors" group, check the box for "Use Presenter View".
- Choose the monitor you wish to display the presentation on from the "Monitor" dropdown if your setup involves multiple displays.

Navigating Presenter View

Once you start your slideshow with **Presenter View** enabled, you'll see your presentation through a special interface that includes several key features:

- Current Slide: The large area on the left shows the slide currently being displayed to your audience.
- Next Slide: On the right, you'll see a preview of the next slide, so you know what's coming up. This area may also show upcoming animations or multimedia that you've included in your presentation.
- Speaker Notes: Below the next slide preview, you'll find a resizable area where your speaker notes for the current slide are displayed. This allows you to refer to your notes discreetly during your presentation.
- Timer/Elapsed Time: At the top, there's a timer that shows the elapsed time since you started the presentation. This is helpful for keeping track of time without needing an external clock.
- Tools and Navigation: Across the bottom, you'll find tools for drawing or pointing on your slides, a magnifying glass for zooming in on details, and slide navigation controls to move forward or backward through your presentation.
- Tips for Using Presenter View
- Practice: Before your actual presentation, practice using Presenter View to familiarize yourself with its layout and features. This will help you navigate smoothly during your presentation.

- Adjust Your Notes: Make sure your speaker notes are concise and readable at a glance. Presenter View allows you to scroll through them, but it's best if you can mostly avoid having to scroll during your presentation.
- Use Tools: The pen, laser pointer, and highlighter tools can be particularly useful for drawing your audience's attention to specific parts of your slides. Practice using these tools as well.

Troubleshooting

If **Presenter View** does not activate automatically when you start your slideshow, it could be due to your display settings. Ensure your computer recognizes the projector or second monitor as an extended display, not a mirrored one. In Windows, you can adjust these settings in the Display section of your Control Panel or Settings app. On a Mac, use the Displays preference pane in System Preferences to arrange your displays and check the "Mirror Displays" option is not selected.

Practice Mode

PowerPoint's ***Rehearse with Coach*** and ***Rehearse Timings*** are two powerful features designed to help presenters prepare their presentations more effectively. These features aim at improving your delivery by practicing the timing and delivery of your presentation. Here's how you can use them.

Rehearse with Coach

Rehearse with Coach is an AI-powered tool available in PowerPoint for the web, Microsoft 365 versions of PowerPoint for Windows and Mac, and PowerPoint for Android and iOS. It offers real-time feedback on your pacing, use of filler words, culturally insensitive phrases, and more. Here's how to use it:

1. **Open Your Presentation**: Launch PowerPoint and open the presentation you wish to rehearse.
2. **Start Rehearse with Coach**:

- For PowerPoint for the Web, navigate to the "Slide Show" tab and select "Rehearse with Coach".
- For desktop versions, you might find it under the "Slide Show" tab or similar.

3. **Begin Rehearsing**: Once you start, the feature will listen to your presentation as you speak. Ensure your microphone is on and working.
4. **Receive Feedback**: As you present, Rehearse with Coach will provide on-screen guidance on your pacing, suggest avoiding filler words, and give feedback on readability and other verbal and non-verbal cues.
5. **Review Summary**: After you finish your rehearsal, a summary of the feedback will be presented, allowing you to review areas for improvement.

Rehearse Timings

Rehearse Timings allows you to practice the timing of your slides, ensuring that your presentation fits within a specific timeframe. This feature is available across various versions of PowerPoint. Here's how to use it:

1. **Open Your Presentation**: Open the PowerPoint presentation you wish to practice.
2. **Access Rehearse Timings**:

- Go to the Slide Show tab.
- Click on Rehearse Timings.

3. **Start Rehearsing**: The presentation will start in full-screen mode, and a timer will begin counting the time spent on the current slide.
4. **Navigate Through Slides**: Use the arrow keys, mouse, or any presentation remote to move to the next slide. The timer will automatically record how long you spend on each slide.
5. **Adjust Timings as Necessary**: If you need more or less time on a specific slide, simply stay on that slide for the desired duration during rehearsal. PowerPoint will remember these timings.
6. **Save Timings**: Once you've gone through all slides, PowerPoint will ask if you want to save the timings. If you save them, these timings will be used to automatically advance slides when you present in Slide Show mode.

Using these tools can significantly enhance the quality of your presentation, ensuring that your delivery is polished and your timing is on point. Remember to rehearse several times to get comfortable with the content and the flow of your presentation.

Voice Control

Your voice is a very large part of your presentation.

Vary your pitch, pace, and volume

I suspect you have attended presentation where the speaker spoke in a monotone voice. Really hard to stay tuned in, isn't it; it seems to put you to sleep. Something we're definitely trying to avoid! Use different pitch and pacing to emphasize key points, maintain interest and convey emotions.

Speak clearly and at an appropriate volume

Enunciate clearly, don't mumble. Ensure everyone can hear you without straining or shouting. Use amplification if that is needed in large rooms. Don't be afraid to speak loudly at times but also drop your volume to emphasize a particular point. You want to give your audience something to pay attention to.

Control your breathing

Work on your breath control to maintain a steady vocal tone and avoid shortness of breath. Consider voice coaching if you think that would benefit you.

Body Language

If your voice is a large part of your presentation persona, your body language is a huge part. A great deal of communication is nonverbal as demonstrated through your body language.

Effective body language is a crucial aspect of successful presentations, as it enhances message clarity, engages the audience and establishes rapport and confidence.

Non-verbal cues

Non-verbal cues, such as gestures, facial expressions, and posture, can emphasize key points, make information more memorable and help build a connection with the audience. By using effective body language, you can capture and hold attention, reducing the chances of the audience becoming disinterested or distracted.

Use appropriate facial expressions to convey emotions and engage your audience. Smile, nod, or raise your eyebrows to emphasize points. Specific gestures can greatly enhance the impact of presentations.

- Enumerating Gestures: Using your fingers to count points helps the audience track and remember information.
- Descriptive Gestures: Movements that illustrate shapes, directions, or motions make abstract concepts easier to understand.
- Emphatic Gestures: Deliberate hand gestures (fists, open palms, pointed fingers) emphasize important points.
- Comparative Gestures: Hand movements used for comparisons (e.g., high vs. low, close vs. far) make differences clear.
- Invitational Gestures: Open gestures (arms slightly spread, palms up) signal openness and encourage audience engagement.

When used appropriately, these gestures complement verbal messages, making presentations more dynamic and memorable.

Posture and Movement

Maintain an upright and confident posture. An upright posture signals confidence and purposeful movement around the stage maintains engagement. Adopt an open stance with your arms uncrossed and legs uncrossed or slightly apart. Stand or sit with your shoulders relaxed, chest out, and back straight. Avoid slouching or fidgeting.

Move around the stage or presentation area. This helps engage different parts of the audience and adds dynamism to your presentation. Make sure you control your movement; Move with purpose and avoid pacing or fidgeting. Understanding cultural norms is crucial, as non-verbal cues may vary across cultures.

Eye Contact

Establish and maintain eye contact with your audience. This conveys confidence and engages them actively. I rotate eye contact from audience member to audience member. This method helps that person feel the presentation is directed to them and will pull them into the presentation.

By being mindful of your body language and practicing non-verbal communication skills, you can ensure your body language complements and reinforces your verbal messages, enhancing the overall effectiveness of your presentations.

General Logistics

As part of your presentation, consider what you need to do in terms of general logistics like:

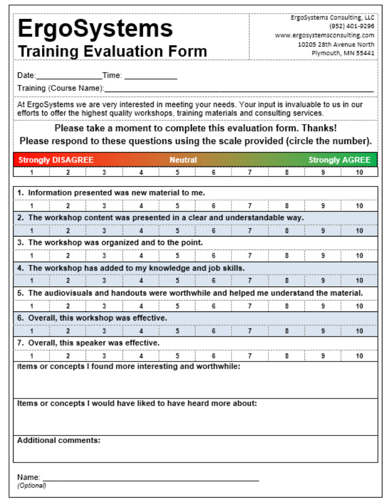
- Review the schedule make sure you show up at the correct time and location
- Will refreshments be provided
- How attendees will access participant materials if there are some
- Use participant name tags or tents them for longer presentations; I like to be able to address them by name when I talk with them
- Make sure they and you know the locations of Restrooms and Fire Exits

Determine if you’re going to do group introductions or not. Typically for shorter presentations, I’ll not do a formal group introduction. When I’m in the room before the presentation starts, I'll chat with people in the crowd. This helps to break the ice and you may find out some anecdotes you can incorporate into your presentation.

For longer sessions, particularly if I'm going to use small group sessions and I want to facilitate comments, questions, thoughts and opinions from them, I'll do formal group introductions. I ask them to introduce themselves, tell us what area they work in, a bit about their background and experience and how that experience relates to the session.

For example, let's say I am doing a daylong session on ***Ergonomics Analysis and Workstation Design***, I ask them to share their level of experience with the topic. This helps me understand how I might need to adapt my content to best structure it. It also is a good 'ice breaker' to get the audience more comfortable to speak up to ask questions and add comments.

Incorporate the Lessons Learned for the Next Presentation



ErgoSystems
Training Evaluation Form

ErgoSystems Consulting, LLC
(952) 401-9296
www.ergosystemsconsulting.com
10205 28th Avenue North
Plymouth, MN 55441

Date:____________Time: _________
Training (Course Name):____________________

At ErgoSystems we are very interested in meeting your needs. Your input is invaluable to us in our efforts to offer the highest quality workshops, training materials and consulting services.

Please take a moment to complete this evaluation form. Thanks!
Please respond to these questions using the scale provided (circle the number).

Strongly DISAGREE				Neutral					Strongly AGREE
1	2	3	4	5	6	7	8	9	10
1. Information presented was new material to me.									
1	2	3	4	5	6	7	8	9	10
2. The workshop content was presented in a clear and understandable way.									
1	2	3	4	5	6	7	8	9	10
3. The workshop was organized and to the point.									
1	2	3	4	5	6	7	8	9	10
4. The workshop has added to my knowledge and job skills.									
1	2	3	4	5	6	7	8	9	10
5. The audiovisuals and handouts were worthwhile and helped me understand the material.									
1	2	3	4	5	6	7	8	9	10
6. Overall, this workshop was effective.									
1	2	3	4	5	6	7	8	9	10
7. Overall, this speaker was effective.									
1	2	3	4	5	6	7	8	9	10

Items or concepts I found more interesting and worthwhile:

Items or concepts I would have liked to have heard more about:

Additional comments:

Name: ____________________
(Optional)

Follow up with key stakeholders

After the presentation reach out to key stakeholders to gather their specific feedback and perspectives. Their insights can provide valuable guidance for refining future presentations and addressing specific audience needs.

Analyze post-presentation evaluations

Distribute surveys or request feedback after the presentation to gather detailed insights into the audience's experience. This feedback can help identify areas for enhancement and measure the overall impact of the presentation.

Feedback Form

I've included a ***Feedback Form*** in the ***Resources Tab***. Please feel to modify and use it for your purposes.

Effective Instructional Design

Developing and presenting effective training materials requires careful planning, thoughtful design, and continuous refinement. Focus on the art of capturing attention, maximizing participation, emphasizing key points, building redundancy, and closing with a compelling call to action.

Enhance your delivery skills with expert tips on using PowerPoint, controlling your voice and body language, and managing general logistics. Embrace continuous improvement by incorporating feedback and refining your presentations for maximum impact.

I hope that this information will help you create engaging and impactful training materials that empower learners to achieve their learning goals.

Thanks for your time and attention!

Your Ergonomics Journey

Introduction to Ergonomics

I was first introduced to ergonomics in 1985. I was completing Physical Therapy graduate school and working in an Industrial Rehabilitation program primarily with Worker's Comp patients. I was trained in performing Functional Capacity Evaluations and the Work Hardening process as it was called back in the day.

One day, it occurred to me I needed to have a better idea of the job demands my patients were returning to as they completed the rehab process. I was able to arrange a tour of the workplace of one of my patients. This really was the first step in my ergonomics career.

Shortly after that I attended my first ergonomics course at the Center for Ergonomics at the University of Michigan in Ann Arbor. I found I was able to add the components of ergonomics workstation and tool design and analysis to my clinical practice and recognized this had value.

Evolution of Ergonomics Consultation

BOARD OF CERTIFICATION IN PROFESSIONAL ERGONOMICS

I continued my education and experience in ergonomics and in the early 1990's, I made a decision to move into a full time ergonomics consulting practice. In 1993, I went through the certification process of the Board of Certification in Professional Ergonomics (www.bcpe.org) to gain certification as a professional ergonomist.

My ergonomics consulting process continued to evolve; where initially I was performing ergonomics analysis and consultation for specific patients and clients, I was now working with companies more at a macro level.

I was providing ergonomics training to company representatives including health and safety, engineering, management and workers. I was asked to facilitate the development and implementation of Ergonomics Teams and Ergonomics Programs.

Collaborative Ergonomics

I was developing my philosophy of what I call 'collaborative ergonomics'. You might recall I mentioned this in the Ergonomics Manufacturing Track.

My experience taught me ergonomics is most successful when all the stakeholders – workers, management, supervision, health and safety, engineers, technicians, medical, facilities – come together in collaboration to identify the ergonomics issues, make appropriate recommendations and then work together to implement and follow-up on the recommendations.

What this has essentially taught me, in my experience anyway, is the value of Ergonomics Teams and Programs. To that end, I've provided an Ergonomics Program Plan example to give you a framework of an ergonomics program.

Please feel free to review it and use it as it benefits you.

Your Journey?

So, this has been my ergonomics journey so far; I've found it to be productive and rewarding! Now where will your journey take you?

I know of many health care professionals who have continued to work clinically and have incorporated ergonomics into their practices.

I know of some who have gone the more corporate route working with companies at the macro level.

Bottom line – many opportunities in many different formats are available for health care professionals. I wish you the best in whatever direction your unique journey takes you!

Thanks for your time and attention!