

Laptop Ergonomics



Together with NEXTEL

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1981 – First Two Laptops produced in America; The Osborne 1 and the Epson HX-20. Cost - \$1700.



1982 – Someone Introduced a Laptop Prototype to the Tandy Corporation. In 1983 Radio Shack Started Selling the Microsoft TRS 80 Model 100 Laptop. Cost = \$1099



Laptop History....

1986 – Radio Shack Introduced the TRS Model 200.

1987-1988 – Compaq and NEC introduced their laptop versions. NEC called their laptop the NEC Ultralite.

1989 – through the 90's - Apple, Macintosh, Zenith and Compaq introduced various lighter weight laptops.

1990s – present - every major computer manufacturer sells laptops with millions sold each year and everyone trying to have the largest capacity, lowest cost and lightest weight laptop.



So What Do We Know About Laptops?

- Most everyone has or uses one.
- We carry them everywhere - work, home, vacation.
- Sometimes lost
- Frequently stolen
- They slow us down at airport security lines.
- Some of us have forgotten them at airport security lines.
- Many think they are wonderful.
- Those needing a break from work think they are not so wonderful.
- We transport them many different ways.
- They have changed the “landscape” of work.
- They have created some ergonomic challenges.

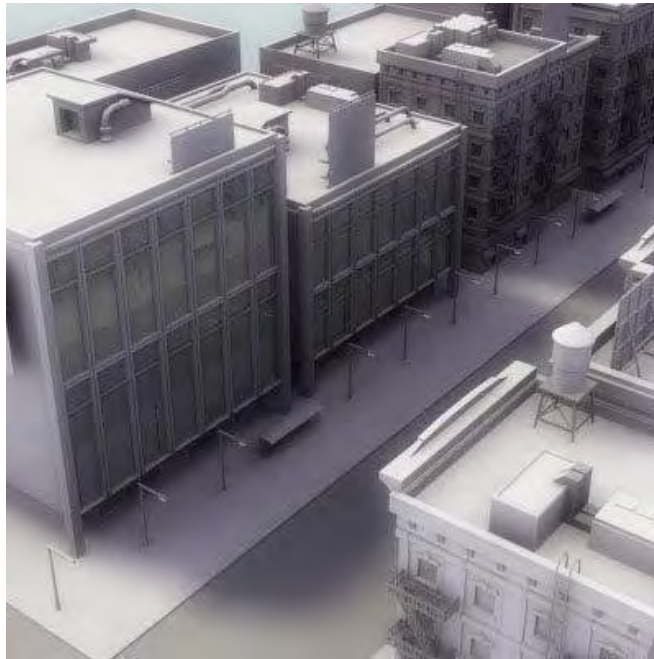


The Focus of My Presentation Today:

- A brief review of how laptops have changed the work landscape?
- The ergonomic concerns and recommendations regarding use of laptops



How Have Laptops Changed the Landscape of Work? Consider the Following...



The Portability of Laptops Has Allowed Flexible Work Schedules and Improved Quality of Family Life



Because of Laptops, Mobile Monitoring is Now Standard Practice in Many Wireless Service Operations.



Laptops Help our Sales and Marketing Forces Work Faster and Smarter From Their Cars...



Due to the Portability of Work Made Possible by the Laptop, Our Real Estate Teams Continue to “Right Size” Work Areas and Sometimes at the Expense of Ergonomics!



Real Estate "Right Size"...(Con't.)



Regarding Real Estate “Right Sizing” , Are Some of These Terms Familiar?

- Anchored/Non Anchored Employees
- Work Anywhere employees
- Quiet Zones
- Collaborative Spaces/Huddle Zones



Since the Work Landscape Has Changed - What is the Ergonomic Impact?



Laptops May Be Provided as the Primary Desktop Asset Resulting In...



Employees Working w/o Remote Keyboard, Mouse and Monitor.



The Mobility Aspect of Laptops Dictate they Will be Used Anywhere Anytime with Limited Opportunity to Accommodate for Health and Comfort



Awkward Postures Can Result...



Smaller Keyboard Area Can Create Pain Fatigue Symptoms Resulting in CTDs



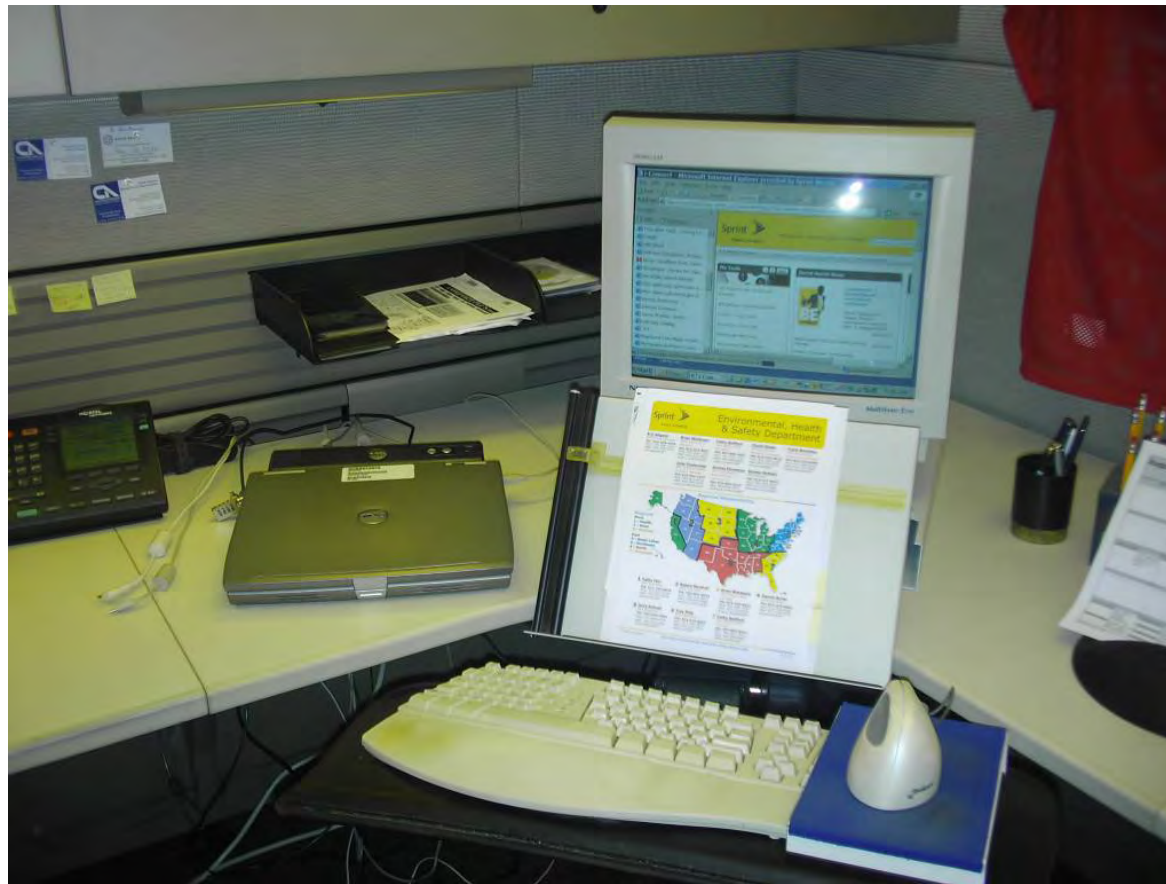
Mobile Monitoring – Are There Ergonomic Concerns Here?



We Have Reviewed How Laptops Have Changed our Work Landscape and Accompanying Ergonomic Concerns. Let's Finish by Reviewing Recommendations...



Recommendation #1: If using a laptop as a the primary desktop computer, use a remote keyboard, mouse and monitor...i.e., use a docking station.



Recommendation #2: Include in Your Supply Chain Process, the Ability for Employees to Order Unique Peripheral Accessories for Laptops



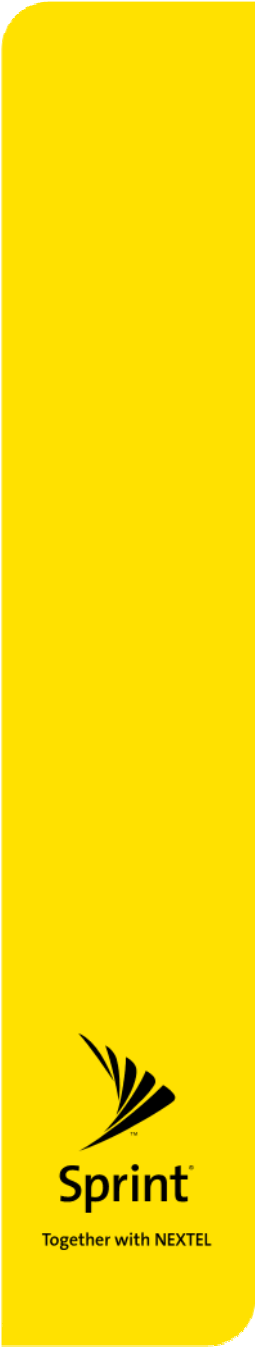
Recommendation #3: When Working in Non-Traditional Spaces – Use The Same Ergonomic Guidelines Which Apply to Desktop Configurations

- Adjust seating so hands and wrists are in neutral posture
- Maintain comfortable viewing angle of the screen
- If the chair is too low sit on a pillow or place the laptop on a pillow on your lap or place the laptop in your lap
- Switch positions often
- To the extent possible remain symmetrically neutral (squared up) with your laptop – avoid twisted and awkward gaze angles.



Observe How Employees Carry Their Laptops and Be Aware Some May Develop Traumas/Pain Fatigue Symptoms in Their Shoulders/Upper Body...







Recommendation #4: Provide and Teach Employees the Health and Comfort Benefits of Using Rolling Bags and Back Pack bags vs. Single Shoulder Bags



Recommendation #5: Socialize Laptop Ergonomic Concerns Within Your Organization

Addressing the Following Points:

- Establishing a partnership with your IT/Asset Distribution team and sensitize them to the ergonomic aspects of using laptops.
- Establish a process which addresses unique needs and scenarios concerning use of laptops i.e., vehicles, home offices, other non traditional work spaces.
- Partner with your Supply Chain and IT Departments setting standards for laptop carrying cases.
- Provide education and awareness to employees concerning general safety and ergonomic guidelines concerning use of laptops.



As a Final Note...In 2007 The NTSP Ergonomic Panel Added a Laptop Ergonomic Module to the NTSP Ergonomic Guidelines Manual. That Manual and the Laptop Module is Available at: www.telsafe.org

Ergonomic Guidelines for Common
Job Functions Within The
Telecommunications Industry

Using a Laptop Computer

Job Function: Using a Laptop Computer

Description of Work Environment

The laptop computer has become more commonplace in the office environment. For many computer users, the laptop has replaced the traditional desktop personal computer due to its compact design and ease of portability. However, the very characteristics and benefits that make a laptop so convenient can also create certain limitations. These limitations may result in worker discomfort over prolonged periods of usage when the application of ergonomic principles and external peripheral equipment are missing.

The amount of time spent using a laptop as well as the environment, varies widely depending on the individual and his or her job responsibilities. In general, laptop users perform the same type of job functions found in the standard office environment (typing, mousing, sitting and viewing the monitor). Therefore, the recommended solutions provided for traditional desktop computers apply to laptops as well. However, laptops present some additional, unique challenges and those will be the focus of this job function.



Employee placed computer in lap while working on an airplane.



Employee using a laptop while seated at a conference table.



The small design of the integrated keyboard may cause discomfort over prolonged periods of time.

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E - 39



The End – Questions?



To my darling husband,

Before you return from your business trip I just want to let you know about the small accident I had with the pick up truck when I turned into the driveway.

Fortunately, not too bad and I really didn't get hurt, so please don't worry too much about me.

I was coming home from Wal-Mart, and when I turned into the driveway I accidentally pushed down on the accelerator instead of the brake.

The garage door is slightly bent but the pick up fortunately came to a halt when it bumped into your car.

I am really sorry, but I know with your kind-hearted personality you will forgive me. You know how much I love you and care for you my sweetheart.

I am enclosing a picture for you.

I cannot wait to hold you in my arms again.

Your loving wife.

XXX



