

Save me-Save you!

Ergonomics and Effective Patient Care

8:00-9:30 am • 1.5 CEU Sacramento District Dental Society February 10, 2017

What is 'Ergonomics'?

Ergonomics is a discipline that involves arranging the environment to fit the person in it. When ergonomics is applied correctly in the work environment, visual and musculoskeletal discomfort and fatigue are reduced significantly.

In recent years, CDC's Office of Health and Safety has identified repetitive motion injuries as a factor in employee injuries. These injuries are caused by excessive and repeated physical stress on the musculoskeletal system - the hands, wrists, elbow, shoulders, neck, and back.

Following ergonomic principles helps reduce stress and eliminate many potential injuries and disorders associated with the overuse of muscles, bad posture, and repeated tasks. This is accomplished by designing tasks, work spaces, controls, displays, tools, lighting, and equipment to fit the employee's physical capabilities and limitations.

<http://www.cdc.gov/od/ohs/Ergonomics/ergodef.htm>

Factors associated with increased injury

Force

- . Grip is 65% reduced when wrist is flexed or extended instead of in neutral position

Repetition

- . Repeated performance of a task can increase the risks of injury

Posture

- . Injury risks increase whenever work requires a person to perform tasks with body segments outside of their neutral range in a deviated posture

Ergonomics and the Dental Care Worker Denise C Murphy, DrPH, COHN 1998

Time Management

- . Control the Appointment from beginning to end

Physical complications

Create a Work Envelope

"Keep all frequently used instruments within a range of about 20 inches to maintain a neutral work envelope."

<http://www.scif.com/safety/print/DentalOffice.html>

(State Fund Compensation Insurance)

Visual Enhancement Systems *The better to see you with, My Dear!*

Benefits

- Improved Visual Acuity
- Quality of resolution

Musculoskeletal Protection / Ergonomics

Accuracy and Options of measurements

Product choices:

Through the lens ~ most popular / customized

Flip up ~ very rarely used

Prescriptions ~

Can they be done and how are they done?

Illumination:

Foot candle illumination / varying intensity

Hours of charge

Consistency of illumination

Warranty ~

Very important to ask the right questions

Purchasing

Trial Period? Payment plans ~ Interest? Return policy?

Q-Optics

Designs for Vision

Orasoptic

www.q-optics.com

www.designsforvision.com

www.orasoptic.com

Instrument Selection

Weight / Diameter / Coordination for efficiency

Anatomically coded handles

Instrument designs

Everedge 2.0

Sharpening Cards

Hu-Friedy Mfg. Co, Inc.

www.hu-friedy.com

Xdura

Nordent

www.nordent.com

Flexplorer

Mini Sickle

Sharp Diamond instrument

LM-Dental

Furcator KS

“Bananas”

Sharpen Free

www.lm-dental.com

NEW !! ~

Cavitron Touch™ with Steri-Mate® 360 Ultrasonic Scaling System
Dentsply Professional (now DentsplySirona) www.cavitronsystems.com

Titanium tipped Implant Scalers

ImplantPro™
Brasseler www.brasselerusa.com

Implamate
Nordent www.nordent.com

ErgoMix with exchangeable tips
LM-Dental www.lm-dental.com

Subgingival Air Polishing

AIR-N-GO Easy: supra and sub-gingival air polisher
Acteon www.acteongroup.com

Clinpro™ Glyciene Prophy Powder
3m www.3m.com

AIR-FLOW Handy 3.0 Premium
Hu-Friedy www.hu-friedy.com

Instrument Maintenance

ReSURGE™ Instrument Cleaning Solution
Sultan Healthcare www.sultanhc.com

Cleaning Monitors for Instrument Washers and Ultrasonic Cleaners
Enzymax Earth™ Dual Enzyme Ultrasonic Detergent
Hu-Friedy Mfg. Co, Inc. www.hu-friedy.com

Other Items!

Protects the mirror's surface, allows disinfectant solution to wash over the mirror head and flush debris out of the slots on the sides of the cover
Mirror Gear www.mirrorgearusa.com

Blue Boa Suction tubing to HVE
Blue Boa www.TheBlueBoa.com

Hands-Free Perio Charting using a rheostat type device
Dental Rat www.dentalrat.com

Opra Gate Latex-free lip and cheek retractor
IvoclarVivadent www.ivoclarvivadent.us.com

Securetip The Locking Saliva Ejector
SecureTip www.securetip.com

Tweeners

Ultraform powder-free nitrile examination gloves SAMPLES@Microflex.com
 Ansell Healthcare www.ansellhealthcare.com

Delivery choices

- Operatory design

- Chairs
 - . Patient Chairs
 - Patient positioning

 - . Patient 'Demands' and how to hear them! ~ What to do!

- Clinician Chairs / Stools
 - . Body Support

 - . Positioning

 - . Arm / Elbow rests

Crown Seating www.crownseating.com
 Evolution Chair www.evolutionchair.com
 Posiflex www.posiflex.ca
 Productive Practices www.ProductivePractices.net

Good ergonomic design is the solution to prevent musculoskeletal injuries

1. Educate and involve employees
2. Take a look at all of the available data to find problems
3. Encourage early reporting of problems
4. Find quick fixes to get momentum going
5. Some problems are more complex than others
6. Focus on eliminating the risk factors if possible
7. Don't just throw money and equipment at the problem
8. Make ergonomics part of purchasing and planning
9. Expect results, but be patient
10. Ask for help

Washington State Department of Labor and Industries
<http://www.lni.wa.gov/Safety/Topics/Ergonomics/ServicesResources/10Tips/default.asp>

Suggested Reading

Articles on Magnification
January 2003
August 2016

www.professionalinsightsinc.com

Article on Elbow Supports
August 2008

Mind your Body-Pilates for the Seated Professional Juli Kagan, RDH

www.mindyourbodybook.com

Pain Free at Your PC

Pete Egoscue, Roger Gittines

Posturedontics/ Bethany Velachi, PT, MS

www.posturedontics.com

OSHA

www.osha.gov/SLTC/ergonomics/index.html

Self Help Questions

Ask yourself these questions:

- Are you in awkward postures that allow you to flex or deviate the wrist from neutral?
- What is the height of the clinician in relation to the patient?
- How is your posture and rotation of the body trunk to the lower body when providing service to the patient?
- Do you ever, ever, ever have any pain in your shoulders, neck, hands, fingers, lower back, legs?

Is it 'ergonomically designed'?

- Does the design of the product make intuitive sense given the goal of the design?
- Does the product feel comfortable to use?
- Does the product put the user in a more neutral posture?
- Can the manufacturer / designer clearly articulate what the ergonomic objectives are for specific design elements? (Explain why the products are designed this way.)
- Does the manufacturer have any research evidence to demonstrate that their product works? How good is this evidence? What published evidence is there that the product works?
- Can the manufacturer give contact for others already using the product?
- Is there a trial period of at least 30 days?

Educational grant provided through ~

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www.q-optics.com