

PRACTICAL CLINICAL COURSES
*A Service of the Gordon J. Christensen
Career Development Program*

V4776
**Ergonomics – Reduce or Eliminate Pain from
Your Practice Day**

Gordon J. Christensen, DDS, MSD, PhD

Materials Included:
C.E. Instruction Sheet
Products List
Clinician Responsible
Goals & Objectives
Overview
Supplemental Materials
AGD Post-Test

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PRACTICAL CLINICAL COURSES

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PRACTICAL CLINICAL COURSES
Sources of Products Discussed in
V4776 Ergonomics – Reduce or Eliminate Pain from Your Practice Day
Presented by: Gordon J. Christensen, DDS, MSD, PhD

1. **Loupes and Headlamps**
Designs for Vision, Inc.
760 Koehler Avenue
Ronkonkoma, NY 11779
(800)345-4009
(631)585-3300
www.designsforvision.com
2. **Loupes and Headlamps**
Orascoptic
3225 Deming Way
Suite 190
Middleton, WI 53562
(800)369-3698
(608)831-2555
www.orascoptic.com
3. **Loupes and Headlamps**
SurgiTel
77 Enterprise Drive
Ann Arbor, MI 48103
(800)959-0153
(734)996-9200
www.surgitel.com
4. **Microscopes**
Global Surgical Corporation
3610 Tree Court Industrial Blvd.
St. Louis, MO 63122
(800)861-3585
(636)861-3388
www.globalsurgical.com
5. **Microscopes**
Zeiss USA
One Zeiss Drive
Thornwood, NY 10594
(800)442-4020
www.zeiss.com
6. **Nomad Pro 2**
KaVo Kerr Group/Aribex
11727 Fruehauf Drive
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(866)340-5522
www.kavokerrgroup.com

Product names, the products themselves, and company names change rapidly. Please contact the companies shown to confirm current information.

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PROGRAM

V4776 Ergonomics – Reduce or Eliminate Pain from Your Practice Day

CLINICIAN RESPONSIBLE:

Gordon J. Christensen, DDS, MSD, PhD
Founder and CEO, Practical Clinical Courses
Senior Consultant & Previous CEO, CR Foundation
Practicing Prosthodontist, Provo, Utah

GOALS & OBJECTIVES

At the completion of this video presentation, viewers should be able to:

1. Define the word ergonomics overall and as it relates to dentistry.
2. List the advantages of working in a good ergonomic environment.
3. List the commonly occurring health challenges of dental personnel.
4. Identify the worst ergonomic health challenge related to dental practice.
5. What are the major reasons for ergonomic health challenges?
6. List the ergonomic challenges that are beyond your control.
7. Discuss the seriousness of potential ergonomic health challenges for dental personnel.
8. List what you can do to improve ergonomics in your practice environment.
9. List several misconceptions concerning ergonomics in dentistry.
10. Compare the ergonomic effect of sitting vs. standing.
11. Discuss how to determine the height of countertops.
12. Discuss sink location in operatories.
13. Discuss the alternatives for operating lighting.
14. Discuss how and where to deliver radiation in your office.
15. Describe proper operating chair characteristics.
16. Describe proper posture while operating.
17. Describe clinician and assistant stools.
18. Describe proper position of the stools.
19. Discuss magnification in relation to ergonomics.
20. Discuss headlamps in relation to ergonomics.

OVERVIEW

V4776 Ergonomics – Reduce or Eliminate Pain from Your Practice Day

The primary purpose of this presentation is to alert dental personnel to the dangers of working in a non-ergonomic environment and to change their behavior relative to their work environment and work habits. The following and other topics are included in the presentation:

1. Definition of ergonomics
2. Advantages of working in a good ergonomic environment
3. Commonly occurring health challenges for dental personnel
4. The worst challenge – musculoskeletal disorders (MSD)
5. Reasons for health challenges
6. How serious are the health challenges for dental personnel?
7. Factors beyond your control
8. Your overall health
9. What can you do about ergonomics in your environment?
10. Misconceptions concerning ergonomics in dentistry
11. Move your body!
12. Sitting vs. standing
13. Designing your operatories around your body - personalizing your operatories
14. Patient care delivery systems
15. Rear delivery
16. Side delivery
17. Over-the-patient delivery
18. Over-the-head delivery
19. Size of your operatories
20. Entry to your operatories
21. Fixed and removable countertop height
22. Sink locations
23. Operating lights
24. Radiation tube head
25. Patient chair characteristics
26. Patient positioning in the chair
27. Clinician stool
28. Your posture while operating
29. Assistant stool
30. Posture of your assistant
31. Four- and six-handed dentistry
32. Location of computer workstation and operator monitors
33. Magnification – loupes and microscopes
34. Headlamps

SUPPLEMENTAL MATERIALS

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1. Park HS, Kim J, Roh HL, Namkoong S. Analysis of the risk factors of musculoskeletal disease among dentists induced by work posture. *J Phys Ther Sci*. 2015 Dec;27(12):3651-4. doi: 10.1589/jpts.27.3651. Epub 2015 Dec 28.
2. Tirgar A, Javanshir K, Talebian A, Amini F, Parhiz A. Musculoskeletal disorders among a group of Iranian general dental practitioners. *J Back Musculoskelet Rehabil*. 2015 Dec 2;28(4):755-9. doi: 10.3233/BMR-140579.
3. Jodalli PS, Kurana S, Shameema, Ragher M, Khed J, Prabhu V. Posturedentics: How does dentistry fit you? *J Pharm Bioallied Sci*. 2015 Aug;7(Suppl 2):S393-7. doi: 10.4103/0975-7406.163463.
4. Bethany Valachi. 4 evidence-based strategies to save your dental career. *Dental Products Report*, Jul 2015. Web. 10 Feb 2016. <www.dentalproductsreport.com>.
5. Shirzaei M, Mirzaei R, Khaje-Alizade A, Mohammadi M. Evaluation of ergonomic factors and postures that cause muscle pains in dentistry students' bodies. *J Clin Exp Dent*. 2015 Jul 1;7(3):e414-8. doi: 10.4317/jced.51909. eCollection 2015.
6. Jessica Bosch. Ergonomic challenges - Registered Dental Hygienist. PennWell Corporation, 2015. Web. 10 Feb. 2016. <www.rdhmag.com>.
7. Steven White. Ergonomics...How does dentistry fit you? – DentistryIQ. PennWell Corporation, 2015. Web. 10 Feb. 2016. <www.dentistryiq.com>.
8. Pîrvu C, Pătrascu I, Pîrvu D, Ionescu C. The dentist's operating posture - ergonomic aspects. *J Med Life*. 2014 Jun 15;7(2):177-82. Epub 2014 Jun 25.
9. Dable RA, Wasnik PB, Yeshwante BJ, Musani SI, Patil AK, Nagmode SN. Postural Assessment of Students Evaluating the Need of Ergonomic Seat and Magnification in Dentistry. *J Indian Prosthodont Soc*. 2014 Dec;14(Suppl 1):51-8. doi: 10.1007/s13191-014-0364-0. Epub 2014 May 4.
10. Gupta A, Bhat M, Mohammed T, Bansal N, Gupta G. Ergonomics in dentistry. *Int J Clin Pediatr Dent*. 2014 Jan;7(1):30-4. doi: 10.5005/jp-journals-10005-1229. Epub 2014 Apr 26.
11. R Nutalapati, R Gaddipati, H Chitta, M Pinninti, and R Boyapati. Ergonomics in Dentistry and the Prevention of Musculoskeletal Disorders in Dentists. Internet Scientific Publications, LLC, 2013. Web. 10 Feb 2016. <www.ispub.com>.
12. Betty Finkbeiner. Ergonomics in the Dental Business Office. *Crest Oral-B*, Jan 6, 2011. Web. 10 Feb 2016. <www.dentalcare.com>.

SUPPLEMENTAL MATERIALS (CONT'D)

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13. Bethany Valachi. Positioning for Success in Dentistry: Ergonomic Guidelines for the Entire Dental Team. Posturedontics, LLC, 2010. Web. 10 Feb. 2016. <www.posturedontics.com>.
14. Hayes M, Cockrell D, Smith DR. A systematic review of musculoskeletal disorders among dental professionals. *Int J Dent Hyg.* 2009 Aug;7(3):159-65. doi: 10.1111/j.1601-5037.2009.00395.x.
15. Valachi, B. Practice Dentistry Pain-Free. Portland, Oregon: Posturedontics Press, 2008.
16. Evangelos Alexopoulos, Ioanna-Christina Stathi, and Fotini Charizani. Prevalence of musculoskeletal disorders in dentists. *BioMed Central Ltd.*, 2004. Web. 10 Feb 2016. <www.biomedcentral.com>.
17. Mark Tholen. Dental Operatory Ergonomics or Saving Your Skeleton. Henry Schein Dental, n.d. Web. 10 Feb. 2016. <www.dentallearning.net>.

POST-TEST

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1. Ergonomics in dental operatories means:
 - a. selecting the most popular operatory design and adapting to it.
 - b. making sure that your operatories are about average size and shape recommended by experts.
 - c. analyzing your body size and work preferences and adapting operatories to these characteristics.
 - d. none of the above.

2. Which is the most commonly occurring physical problem for clinicians related to dental practice?
 - a. Neurological problems
 - b. Musculoskeletal disorders
 - c. Tumors
 - d. Cardiovascular disease

3. The movements to avoid while practicing are:
 - a. fingers only.
 - b. wrist and hand movements.
 - c. elbow movement in abduction.
 - d. none of the above.

4. The best overall dental operatory design was supported in this presentation to be:
 - a. side delivery.
 - b. rear delivery.
 - c. over-the-patient delivery.
 - d. none of the above.

5. The most adequate position for operating is:
 - a. unknown.
 - b. standing.
 - c. standing and sitting.
 - d. sitting.

6. The average measurement of a female arm from the shoulder girdle to the tip of the fingers is:
 - a. 21 inches.
 - b. 24 inches.
 - c. 27 inches.
 - d. 23 inches.

7. The distance suggested for the space from the head of the chair to the back wall was:
 - a. 21 inches.
 - b. 27 inches.
 - c. 24 inches.
 - d. 23 inches.

POST-TEST (CONT'D)

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8. Countertops, both fixed and movable, should be:
 - a. 27 inches.
 - b. variable and directly related to your body characteristics.
 - c. 23 inches.
 - d. none of the above.

9. Sink location on the clinician's side of the operatory should be:
 - a. at the head of the chair.
 - b. at the foot of the chair.
 - c. at the preference of the clinician.
 - d. halfway from the head to the foot of the chair.

10. To improve the ergonomics in your clinical office, you should:
 - a. evaluate the current level of ergonomics in your office.
 - b. go to other dental offices and observe their ergonomic characteristics.
 - c. decide which ergonomic characteristics of your office need to be improved.
 - d. make the changes necessary in your office.
 - e. all of the above.

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