THE POSSIBLE EFFECTS OF ORGANOSELENIUM (SELDOX) ON DENTISTRY

Russell W. Reddell, DDS, MBA
Dentistry

Special Needs
ABOUT THE PRESENTER

- Bachelor’s in Chemistry with Minor in Biology from Texas Tech University (1994)
- Doctor of Dental Surgery 1998 - Baylor College of Dentistry
- Beginning Master’s of Public Health
- State Dental Director Texas Department of Aging and Disabilities Services (2010 - 2014)

- Dental Director Lubbock State Supported Living Center (2006 - 2014)

- Private Practice Lubbock, Texas - Practice Limited to Special Needs - Includes Hospital Dentistry and Geriatrics (2014 - Present)

- Member of Texas Oral Hygiene Coalition

- Member of Special Care Dentistry Association

- Member American Association of Disability Medicine and Dentistry
DISCLAIMER

- I am a paid presenter / researcher for Selenbio / Dentesshield
- I am not paid by Kerr / Opti-bond
- I am not paid Dentsply / Dyract
- I am not paid by Elevate
- I use the products that I am discussing in my office daily
ADVANCES IN CARIES PREVENTION

- Fluoride
- Dental Sealants
- Glass Ionomer
- Compomer
- Resin reinforced Glass Ionomer
- Silver Diamine Fluoride
FLUORIDE

- Is an anion of the chemical Fluorine, which is the #9 element on the Periodic Table
- Introduced in 1940’s to prevent caries
- Is on the World Health Organization’s list of essential medicines
- Is in water, toothpaste, mouth rinses, etc….
- Is a vital part of caries prevention
- There is Scientific evidence that it has decreased caries by over 30%
DENTAL SEALANTS

- Introduced in 1960’s because of an increase of caries on pit and fissure surfaces
- Helped to decrease pit and fissure caries
- Provides protection for many years
- A vital part of early caries prevention
GLASS IONOMER

- Introduced in 1972
- Releases fluoride
- Was originally a sealant material
- Derivative of Silicate and Polycarboxylate cements
- Used as an anterior restorative material
- A key to preventing recurrent caries
COMPOMER

- Is primarily a composite material with Glass Ionomer mixed into the material
- Introduced in 1988
- Releases Fluoride to help prevent recurrent caries
- Most common for Dyract
RESIN REINFORCED GLASS IONOMER

- Is primarily Glass Ionomer with resin mixed inside to reinforce
- Good for Class V Restorations
- Releases Fluoride to help prevent recurrent caries
SILVER DIAMINE FLUORIDE

- Discovered in the late 1960’s to arrest caries
- Used in Europe and Asia since the late 1960’s
- FDA approved in
- A key to arresting and preventing caries
WHAT IS THE NEXT BIG BREAKTHROUGH IN THE FIGHT AGAINST CARIES?
ORGANOSELENIUM

- Shown in 2012 at Texas Tech Health Sciences Center (Go Red Raiders!) by Dr. Ted Reid, et al. to inhibit the biofilms of bacteria

- Is categorized as an anti-biofilm agent

- When covalently bonded to a solid matrix retains its ability to catalyze the formation of superoxide radicals that prevent bacterial colonization of solid surfaces

- Is non-toxic to other cells and animals in-vitro and in-vivo
- Was originally used to coat intravascular catheters to prevent secondary infections

- Shown to prevent colonization of bacteria on solid surfaces especially *Staphylococcus Aureus* as well as *Pseudomonas Aeruginosa*, *Enterococcus species* and *Acinetobacter baumanii*.

- *Seldox* is the brand name

- *Is an Anti-microbial*

- *Marketed as Denteshield by Selenbio Dental for Dental applications*
CURRENT PRODUCTS AVAILABLE

- Pit and Fissure Sealant
  - Used as Sealant

- Surface Sealant
  - Can be used as a desensitizer

- Primer
  - Used for bonding Orthodontic Brackets / Resin Restorations
FUTURE PRODUCTS

- Primer with bonding agent
- ?
- ?
- ?
WHERE TO PURCHASE

- Direct from Selenbio / Dentesheild
  [www.Selenbio.com](http://www.Selenbio.com)

- Patterson Dental has recently contracted to become a retailer for Dentesheild products
MY TECHNIQUE

- Etch with traditional etchant
- Rinse
- Air Dry
- Place Dentseshield Primer
- Air Dry
- Apply bonding agent - Optibond FL - Fluoride releasing bonding agent
  - Light cure

- Restore with a Fluoride releasing restorative material
  - Dyract (Flowable or Bulk Fill)
  - Light cure

- Contour
  - High Speed Diamond Burrs
  - Low Speed
QUESTIONS / COMMENTS

- Special Needs Dentistry
  2420 Quaker Avenue Suite 101
  Lubbock, Texas 79410
  (806) 701-5066

- Russell W. Reddell, DDS, MBA

- E-mail: rwrdds@hotmail.com