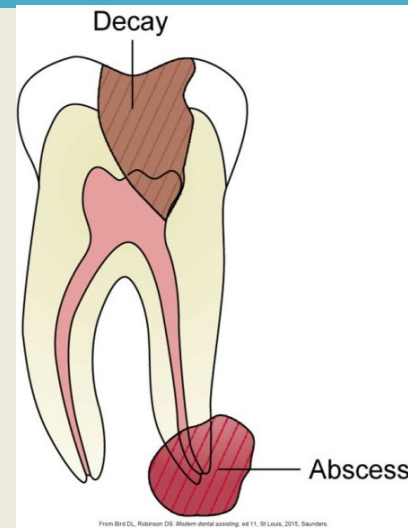




*COC: The Great Divide*  
*Oral health is vital to overall health*

# Oral Health Basics

Stephanie Baca, RDH MS



Biofilm -- the root of the *solution*

...

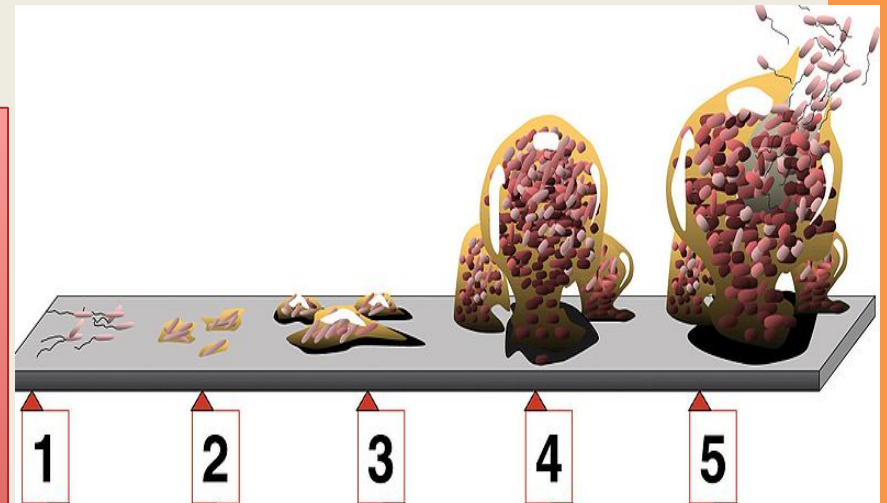
# Objectives

- Demonstrate basic oral health techniques in order to maintain health in those with special needs
- Develop educational strategies to help caregivers perform daily oral care
- Recognize and differentiate oral health conditions of patients with developmental disabilities

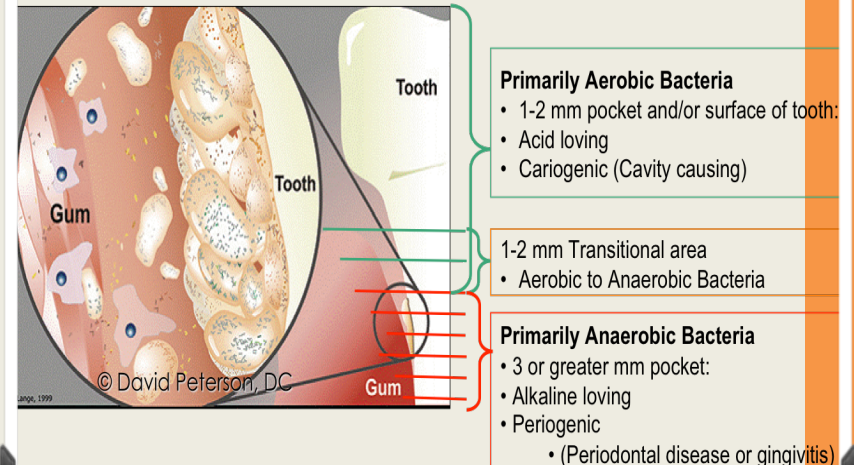
# Enemy #1 — Biofilm

Oral microbial biofilms are three-dimensional structured bacterial communities<sup>1</sup> attached to a solid surface like the enamel of the teeth, the surface of the root or dental implants<sup>2</sup> and are embedded in an exopolysaccharide matrix<sup>3</sup>.

The bacterial diversity in the oral cavity is estimated to be more than **700** different species and phylotypes, belonging to nine phyla; *Deferribacteres*, *Spirochaetes*, *Fusobacteria*, *Actinobacteria*, *Firmicutes*, *Bacteroidetes*, *Proteobacteria*.



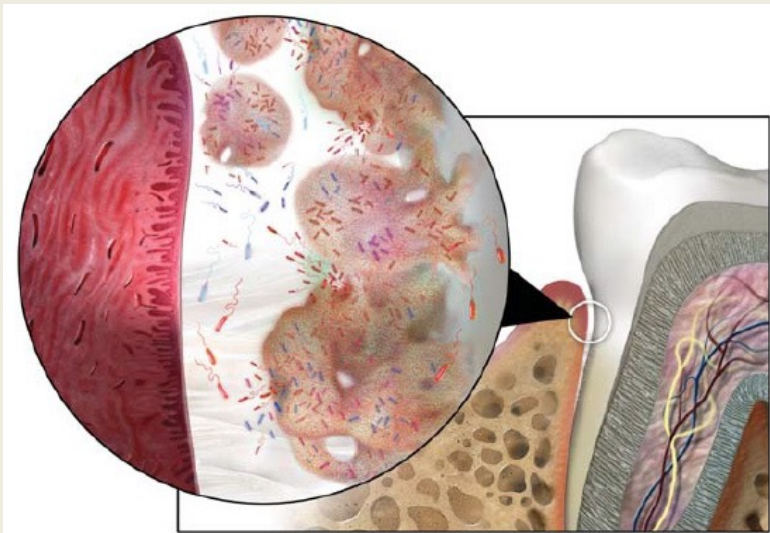
## Oral Biofilm Infection



# Oral Biofilm

- Oral cavity is an open growth system
- Biofilms are ubiquitous; forming on virtually all surfaces immersed in a natural aqueous environment
- Biofilm-associated bacteria mediated gene expression or “communication”

- Organisms in a biofilm are 1000-1500 times more resistant to antibiotics
- Biofilms have been found to be involved in a wide variety of microbial infections (by one estimate 80% of all infections)



# Periodontal infection

Whole bacteria

Bacteria Products  
(LPS, Fimbriae)

Inflammatory Mediators  
(IL-1, TNF, IL-6, IL-8)

Blood Stream  
Systemic Inflammatory Process

Heart & Blood Vessel  
Endothelial injury, Lipid  
deposition, monocyte migration,  
smooth muscle proliferation

Acute Phase Proteins  
CRP, SAA, IL-6, TNF- $\alpha$ , IL-1

Placenta/Uterus  
Contraction of uterine smooth muscle,  
preterm rupture of membranes

Liver & Pancreas  
Insulin Resistance

Atherosclerosis  
Cardiovascular Disease

Diabetes

Preterm / low birth weight

# Oral - Systemic Conditions

<b>Pathogen</b>	<i>Oral findings</i>	<i>Systemic Condition</i>
Actinomyces	gingivitis necrotic pulp	hepatobiliary disease
Bacteriodes	adult periodontitis	brain abscess
Candida	oral candidiasis adult periodontitis	vertebral osteomyelitis
Fusobacterium	gingivitis adult periodontitis necrotic pulp	hepatobiliary brain abscess vertebral osteomyelitis



Lactobacillus	dental caries	aspiration pneumonia
Peptostreptococcus	adult perio	brain abscess
Staphylococcus	adult perio	vertebral osteomyelitis brain abscess prosthetic joint infection meningitis
Streptococcus	dental caries periapical abscess	vertebral osteomyelitis, brain abscess, bacterial endocarditis, meningitis, hepatobiliary disease



**Target: Biofilm**





# Performing an Oral Assessment



# Toothbrush Selection

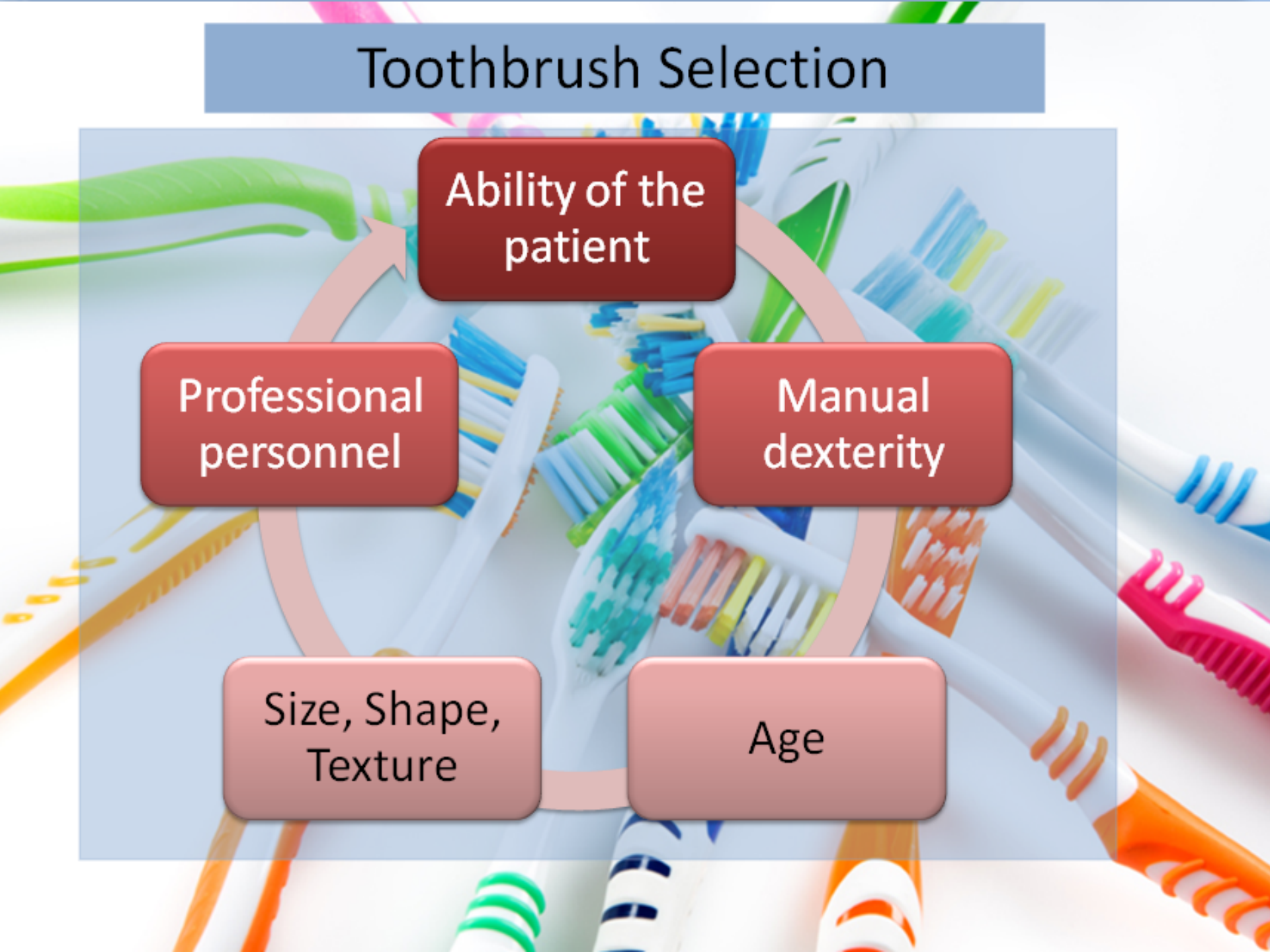
Ability of the patient

Professional personnel

Manual dexterity

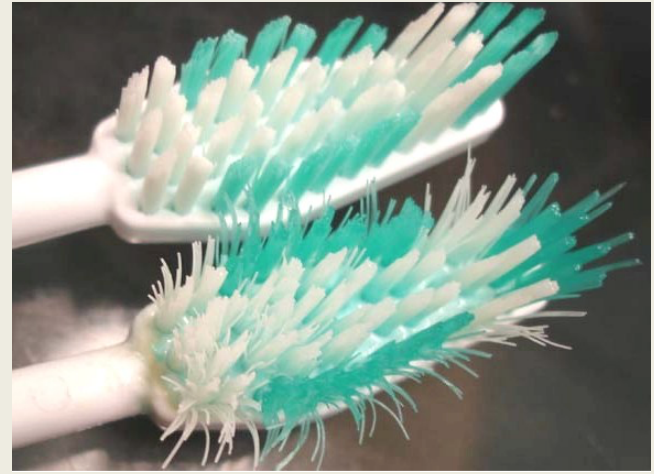
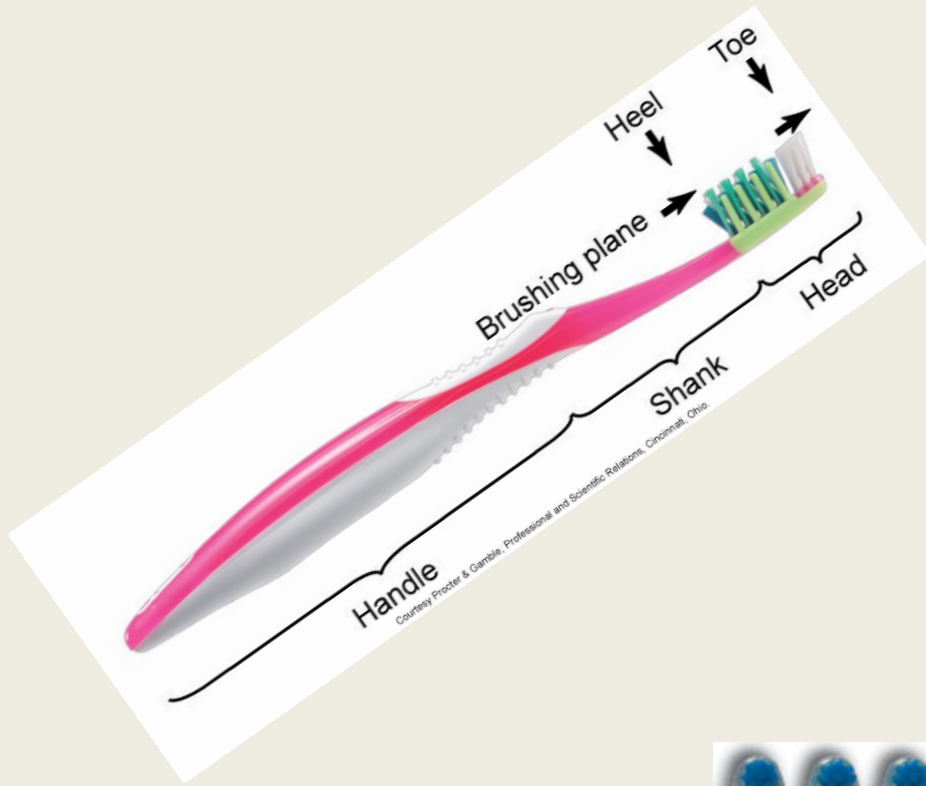
Size, Shape, Texture


Age



# Toothbrushing *Best Practices*

1. *Rub* check to single starting
2. Brush *twice* daily
3. Ensure to have all tools *ready* prior to cleaning
4. Use *less* products than more
5. *Change* toothbrush often and store in a *clean* place to dry out



A roll of white toilet paper is mounted on a silver-colored metal holder. The paper is unrolled slightly, and the text "The Great Debate..." is printed on the surface of the paper. The background is a dark, textured wall.

The Great Debate...



# Toothpaste...

- Cleansing and polishing
- Humectants
- Water/Binders
- Detergents
- Flavoring/Coloring Agents
- Sweeteners
- Preservatives

## Therapeutic/Medicinal Agents:

- *Anticaries* agents
- Desensitizing agents
- *Antigingivitis*/biofilm reduction agents

## Other Agents:

- Anticalculus agents
- Antistain agents
- Antihalitosis agents

# Toothpaste *Best Practices*



Types

Ingredients

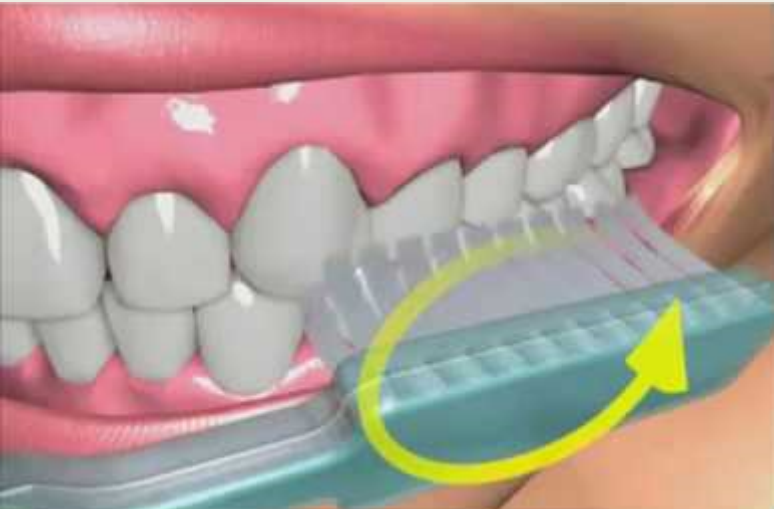
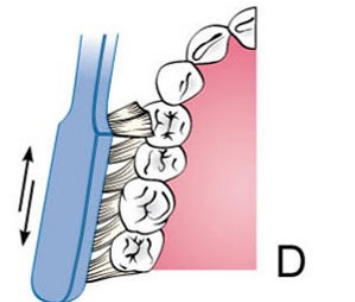
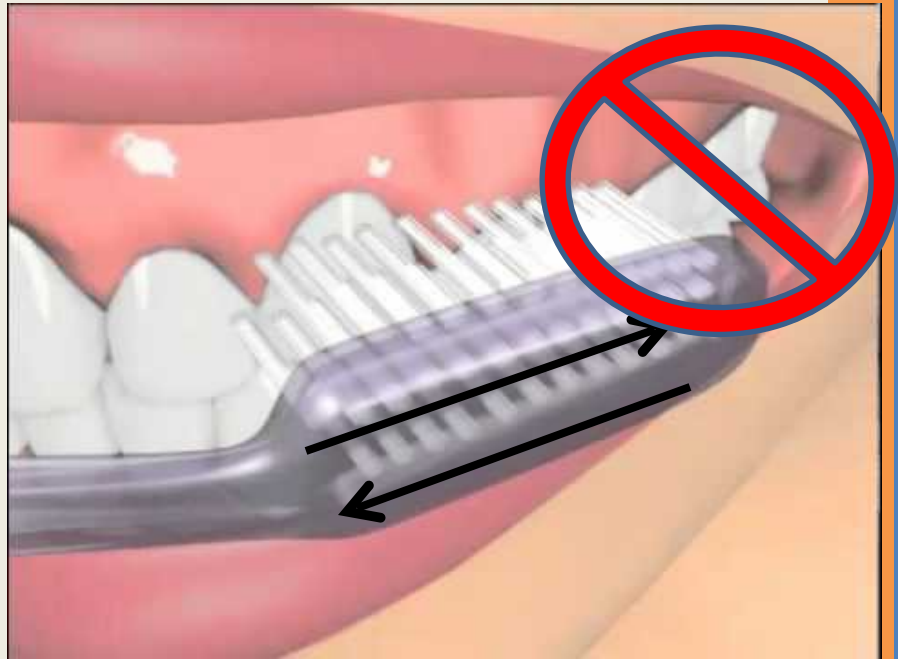
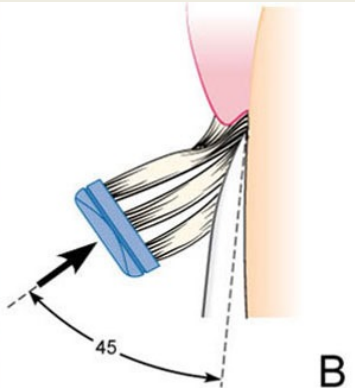
SLS free



Amount

Grain of  
Rice

One green  
pea



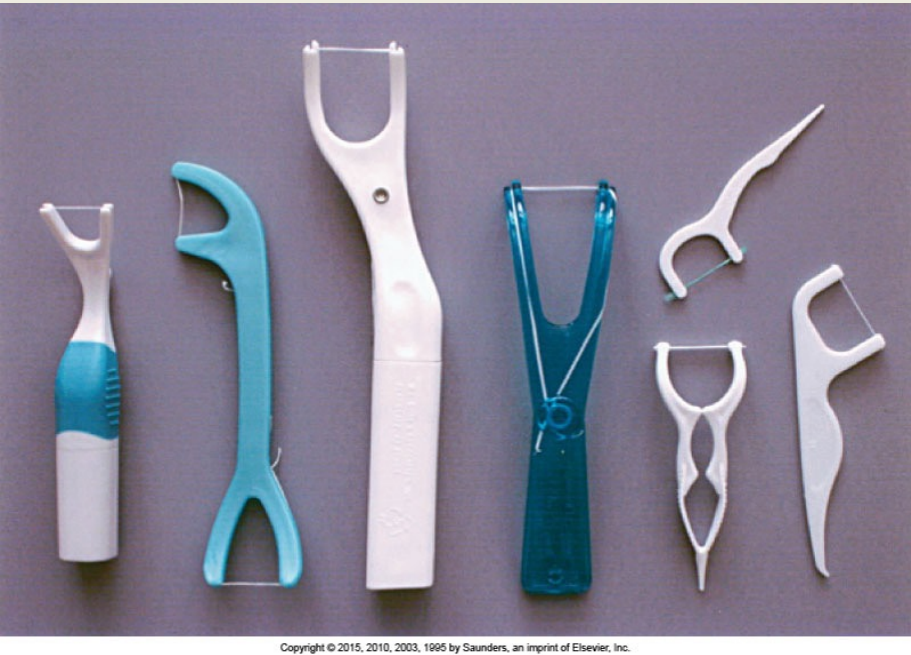
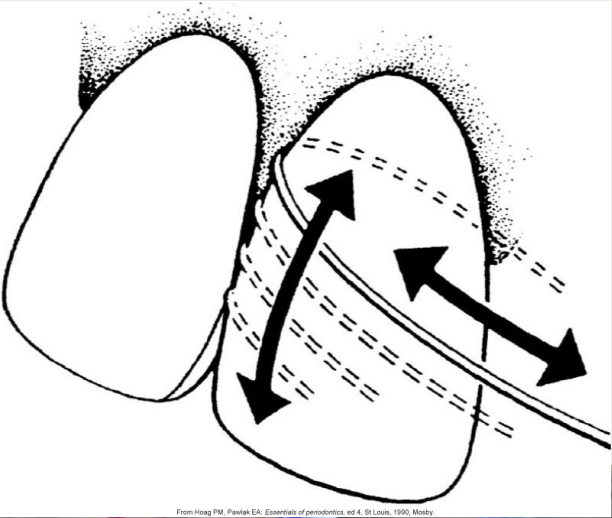
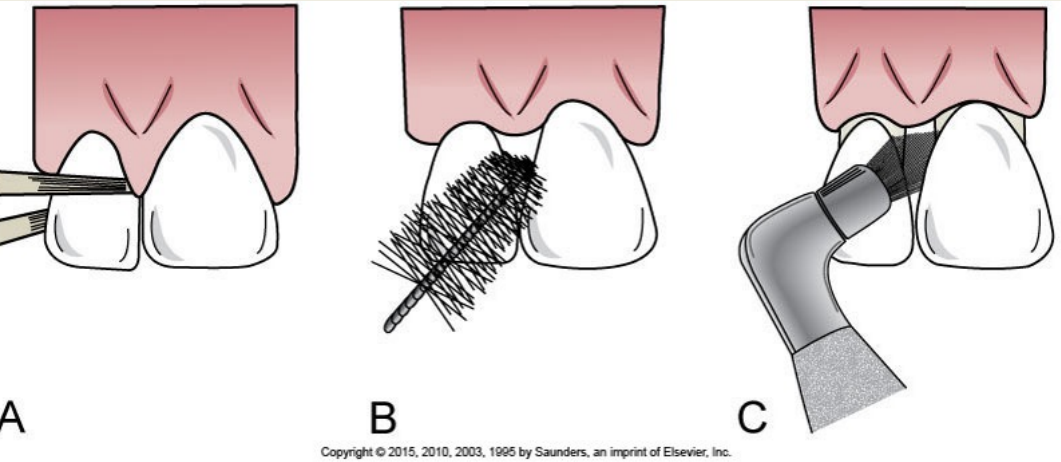
B and D, From Newman MG, Takei HH, Klokkevold PR, Carranza FA: Carranza's clinical periodontology, ed 11, St Louis, 2012, Saunders.

Don't forget the finish...

# Toothbrushing sequence *Best Practices*

- Always use *circular* motions
- *Massage* the tissues (gums)
- Brush *3* surfaces (check, bite, and tongue sides)
- *Gentle* and slow; bottom to top
- Don't forget the *tongue*

# Interproximal Care options



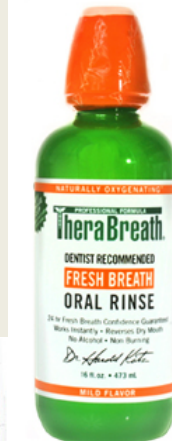
# Partially/Edentulous Patient

- Cleaning dentures/partials *always* requires REMOVAL
- *Wipe* tissues with baby washcloths and water, *clean* appliance
- Always *remove* dentures at night
- *Yearly* dental visits



# General *Best Practices*

- Choose 2
- Be *consistent*
- Roll and *move* with not against
- Find *modifications* or alternatives
- *Practice* TACT
  - *Time*
  - *Ask for involvement*
  - *Communicate with voice & body clear & simple*
  - *Tell, Show, Do*



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Thank you