

Comprehensive Assessment & Implant Maintenance Handout

**Amy L. Kinnamon RDH
www.bigfishdental.net**

Copyright © BlgFish Dental. All rights reserved.

Your attendance at the program is greatly appreciated. The hand out is for your use. Please share it with the team members in your practice and if I can assist you with other reference materials or answer any other questions feel free to contact me.

Enjoy this gift of a day!

Amy

a.kinamonrdh@bigfishdental.net

The value we place on ourselves is usually the value others place on us.

~John C. Maxwell



Physical ramifications of tooth loss



Joshipura KJ, Willett WC, Douglass CW. The impact of edentulousness on food and nutrient intake. JADA 1996;127(4):459-467.

Psychological ramifications of tooth loss

Positive Self-image



The Physical and Psychological Effects of Tooth Loss. <http://www.pittsburghdentalimplants.com/dental-implants/effects-of-tooth-loss/>

Social ramifications of tooth loss



I love you,
even if you only
have
one huge dot...



<http://www.pittsburghdentalimplants.com/dental-implants/effects-of-tooth-loss/>



Improved health
Functionality
Improved retention for implant-retained
denture
Look, feel, and function like natural
teeth
Preserve bone
Improved quality of life



Candidates for Dental Implants

- Existing patients of record
- Patients with fixed or removable prosthetics
- Edentulous patients
- Controlled diabetics
- Non-smokers
- Patients with congenitally missing teeth



Possible Candidates for Dental Implants

- Immunosuppressed
- IV bisphosphonates
- Anticoagulants
- Steroids
- Heavy smokers
- Poorly controlled diabetics





Preserve bone

No reduction of adjacent teeth



44% loss of additional teeth

40% stop wearing
partials after 4 years

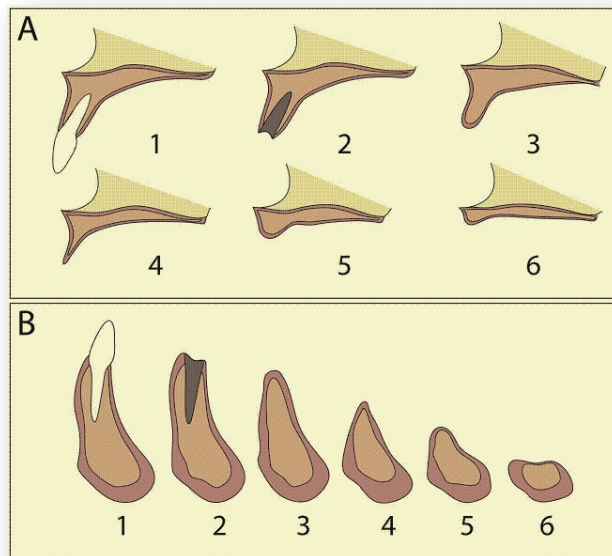




Facial structure

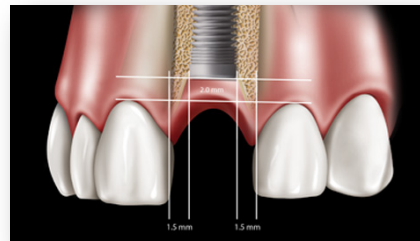


Ortho



Bone level

Optimizes and simplifies soft tissue management



Bone level tapered



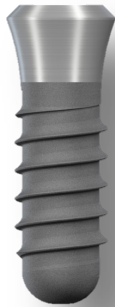
limited anatomy

facial undercut
converging root tips,
concave jaw structure
narrow atrophied ridges

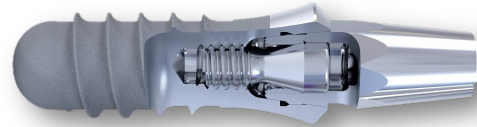


Tissue level

Non-esthetic zone



Abutments

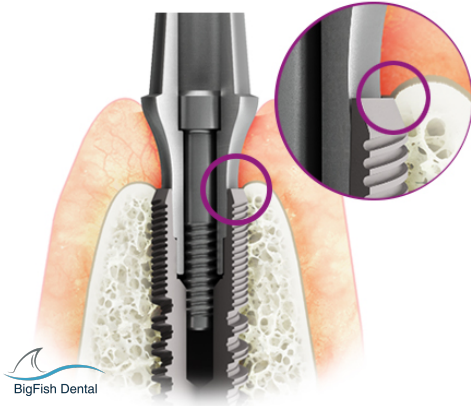


The connecting element



Abutments

Platform switching



Smaller abutment

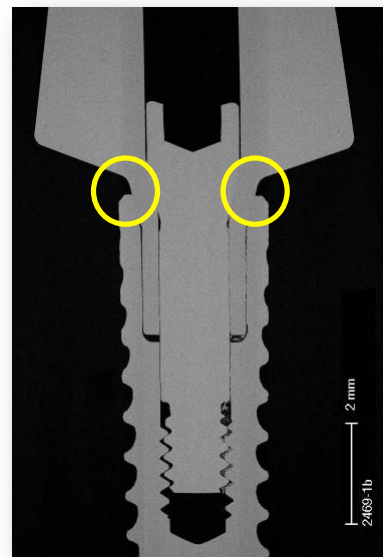
Horizontal offset of the biologic
Distance keeps bone away
from the micro gap

Maximizes osseointegration
and crestal
bone preservation

Abutments

Micro gap

A **micro gap** can cause
bacterial contamination
and micro-movements



Prosthesis

Screw retained

Dependent on implant orientation / angulation

May not be aesthetic



Prosthesis

Cement retained

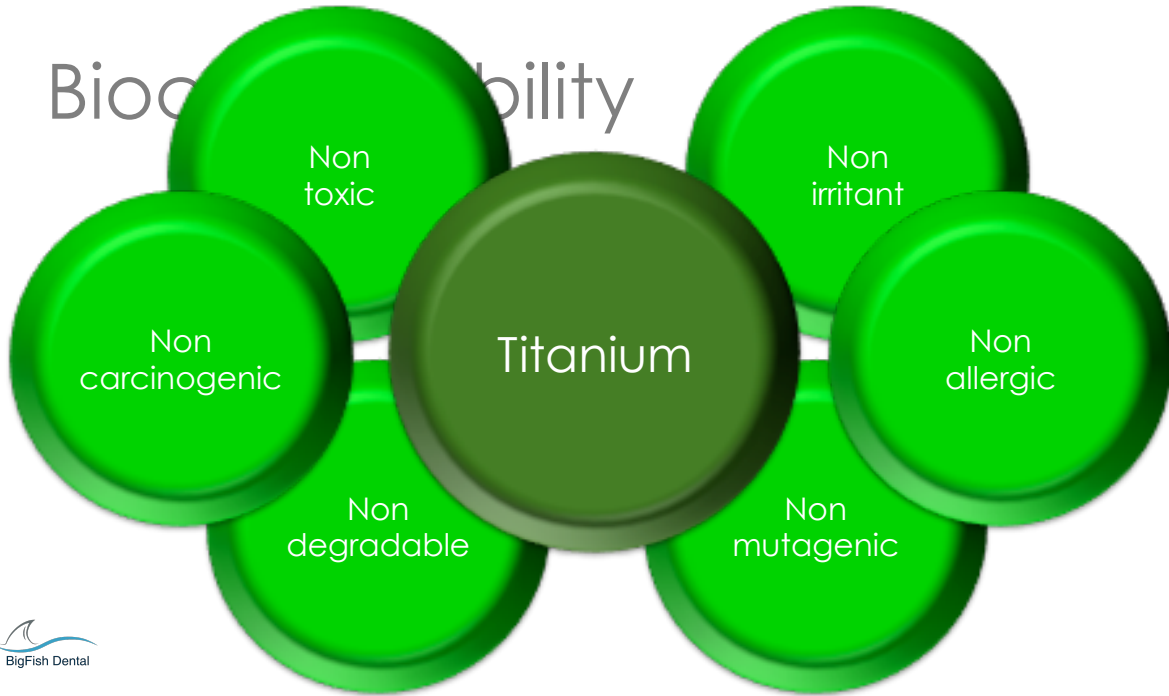
Advantages

Independent of implant orientation / angulation

Enhanced esthetics



Bioavailability

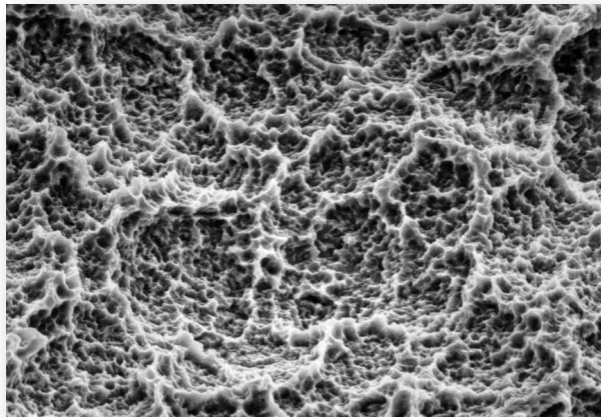


Topography

SLA

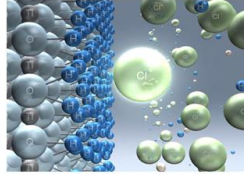
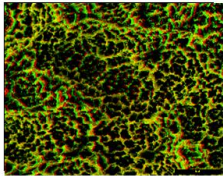
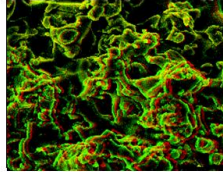
Sand blasted Acid etched

Micro/Macro
Surfaces



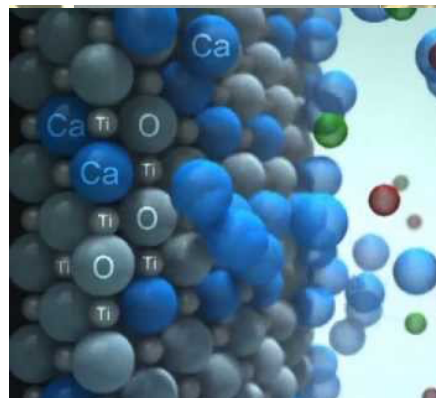
Topography

SLActive

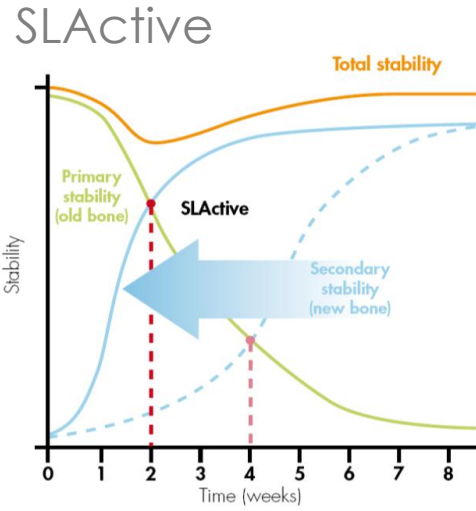
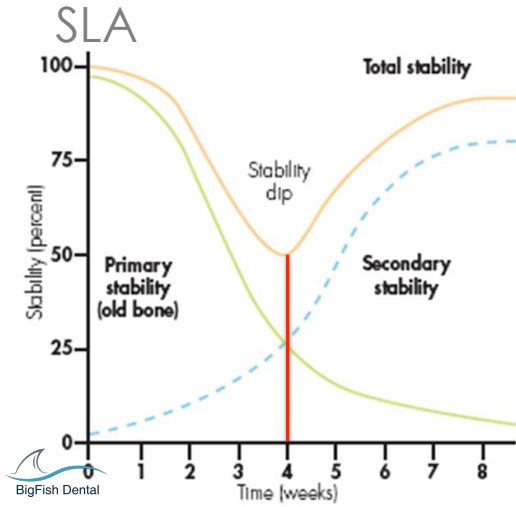


SLActive

Topography
Hydrophilic
Chemical Activity



Topography



Implants

up to 98%



Failure

Review of 15-year study:

Tooth loss rates range from **3.6% to 13.4%**

Implant loss rates range from **0% to 33%**



Levin,L; Halperin-Sternfeld,M, et al. Tooth preservation or implant placement :A systematic review of long-term tooth and implant survival rates. The Journal of the American Dental Association (October 1, 2013) 144, 1119-1133

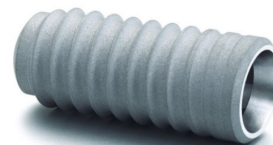
Early

Poor bone quantity and/or quality

Contamination of Implant/infection

Trauma during surgery - overheating the bone at the time of surgery or too much force when they are placed

Premature immediate load



Late Failure

Occlusal overload
Poor Hygiene / Peri-implantitis
Poor restorative materials
Contacts
Cement
Mobile crown/abutment
Systemic complications



Peri-mucositis

50-80% of implants
Poor homecare of natural dentition
Non-surgical therapy



Peri-implantitis

11-47% of implants
Poor homecare of natural dentition
Systemic implications
Same bacteria responsible for perio dx



Stages of Disease

Peri-mucositis (gingivitis)	Peri-implantitis (periodontal disease)
Inflammation	Inflammation
Possible bleeding	Bleeding/exudate
PD>4mm	PD>5mm
No bone loss	Bone loss



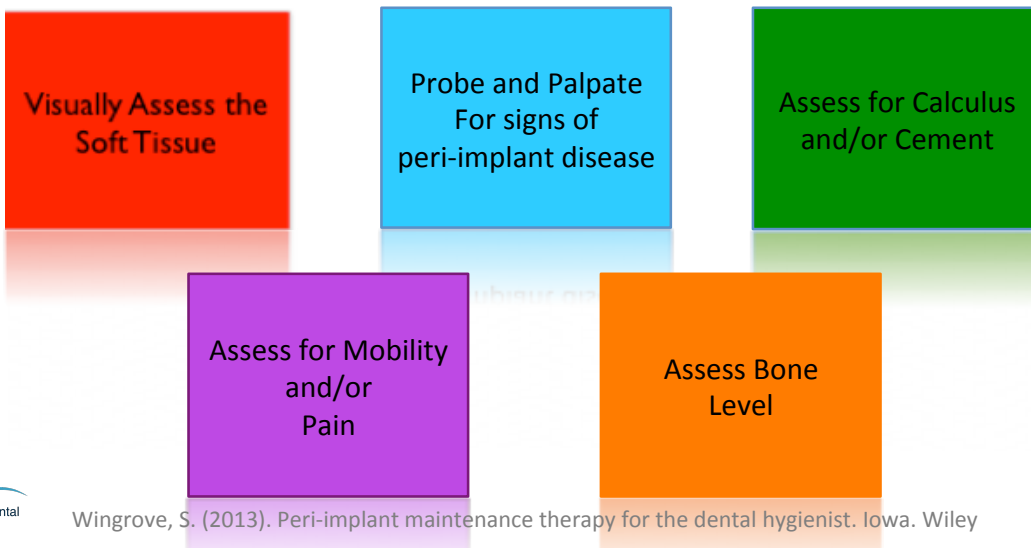
AIM

Assess Identify Monitor



Wingrove, S. (2013). Peri-implant maintenance therapy for the dental hygienist. Iowa. Wiley Blackwell

5 Step Exam for Implant Success



Wingrove, S. (2013). Peri-implant maintenance therapy for the dental hygienist. Iowa. Wiley

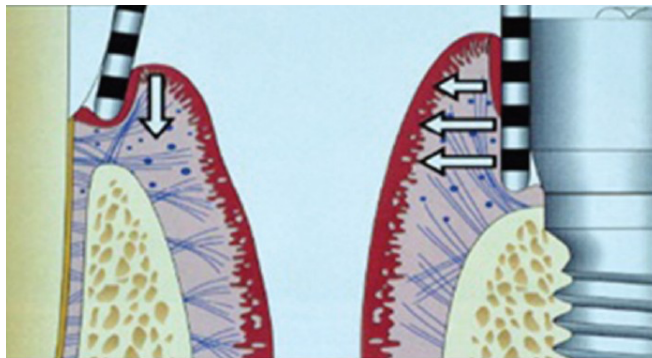
Visually Assess the Soft Tissue

Record of visual assessment soft tissue appears healthy



Wingrove, S. (2013). Peri-implant maintenance therapy for the dental hygienist. Iowa. Wiley

Probe and Palpate For signs of peri-implant disease

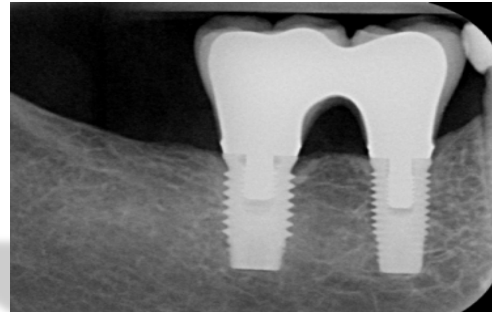


Assess for Calculus
and/or Cement



Wingrove, S. (2013). Peri-implant maintenance therapy for the dental hygienist. Iowa. Wiley

Assess Bone
Level



Wingrove, S. (2013). Peri-implant maintenance therapy for the dental hygienist. Iowa. Wiley

Check the occlusion

The occlusion on an implant should not be the same as natural teeth



Check the contact

Contact areas on implants should be broad to prevent movement



Modified Implant Classification

Class I Health	Class II Peri-mucositis	Class III Peri-implantitis	Class IV Failure
No bleeding	Bleeding present	Bleeding present	Bleeding present
No exudate	No exudate	Exudate present	Exudate present
Compare to baseline	1-2mm change Compare to baseline	2mm change Compare to baseline	Possible mobility
No bone loss	False Pockets	Progressive bone loss	Progressive bone loss
2-4 mo. year 1 2-3 mo high risk 3-6 mo low risk	10-14 day re-evaluation 2-3 month re-care	NO DH TX Referral to specialist Surgical treatment	NO DH TX Referral to Specialist Surgical Removal

Resource: Pattison, A and Sumi, J. *Post Surgical Implant Care*

4 Key Questions

- How do you define health and disease in your practice?
- How much disease are you willing to tolerate?
- What determines patient maintenance intervals?
- What's your evidence-based decision process?

The Truth About Instrumentation

“The impact of scalers on implant abutment surfaces varies between abutment types presumably due to different surface characteristics with no apparent advantage of one abutment type over the other with regard to resistance to surface damage. Unfilled resin was found consistently to be the least damaging to abutment surfaces, although all scalers of all compositions caused detectable surface changes to polished surfaces of implant abutments.”

Hasturk, H et al. Comparison of the Impact of Scaler Material Composition on Polished Titanium Implant Abutment Surfaces. 2013 JDH 87(4) 200-211



The Truth About Instrumentation

Amorphous unfilled resin



Carbon composite



The Truth About Instrumentation

"The use of plastic instruments and tips is generally not recommended for implant instrumentation-ineffective in removing calculus and/or cement-in vitro research has revealed plastic particles may adhere to implants when these instruments are employed."

Dr. Gustavo Avila-Ortiz *Dimensions of Dental Hygiene*;
Vol 11(5) 57



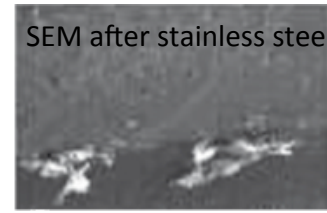
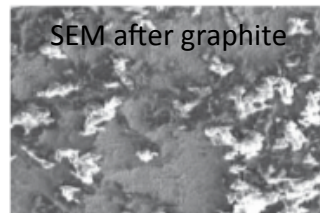
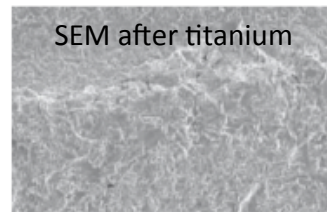
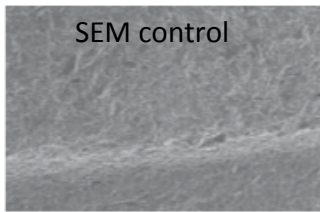
The Truth About Instrumentation

"Titanium implant scalers are recommended on implants coated with hydroxyapatite (HA) or titanium plasma spray (TPS). Plastic curettes leave deposits on the titanium implant surface, especially those with surface coating and this has been confirmed in multiple studies."

Dr. L. Ramaglia. *Implant Dentistry*. 2006; 15:77-82

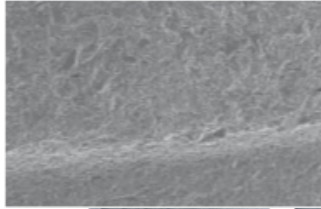


The Truth About Instrumentation

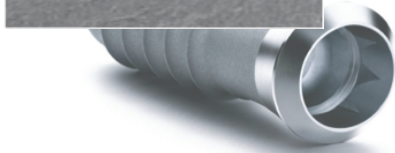
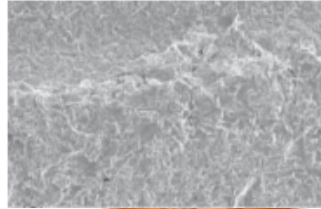


The Truth About Instrumentation

SEM control



SEM after titanium



Rockwell Hardness

Implants	40-45
Wingrove Titanium Scaler	28-30
Stainless Steel	50-59
Heat Treated Titanium	60-69
Titanium Ultrasonic	36



Air Polishing/ Subgingival Air Polishing(GPAP)

- Air Polishing is contraindicated for: implants, renal, respiratory, metabolic & infectious disease
- GPAP –different with Perio powder- Glycine 25 microns, 80% less abrasive than sodium bicarbonate*
- GPAP can be a helpful addition to prevent peri-implant disease & can non-surgically treat peri-implant mucositis.



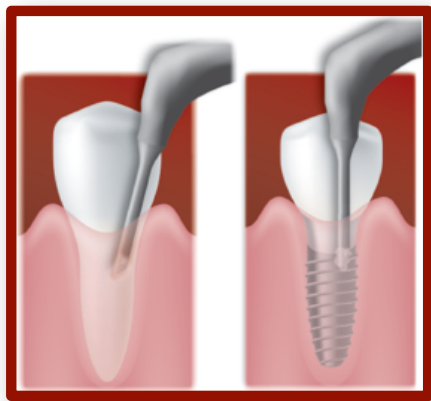
NOT intended to remove calculus, rather it compliments power and hand instrument in elimination of biofilm.-*



Daubert, D. Subgingival Air Polishing: Dimension of Dental Hygiene , Dec. 2013



Polishing Implants



Use only perio attachment
Glycine-based powder
Adapt parallel to the implant
Benefit of lavage
Effective for pockets
depths >3mm



Polishing



APF Free
Low RDA paste
e.g. silica
Low RDA dentifrice



Straumann Pro Arch – Maintenance & Home-Care Clinical Whitepaper Fixed Full Arch & Chair-Side Guide

Download @ networktocare.com

Straumann® Pro Arch
Maintenance and home-care for the Straumann
edentulous Straumann® Pro Arch Patient

INTRODUCTION

Patients today have high expectations for natural looking dental restorations that increase quality of life, improve esthetics, and can be delivered with fewer appointments. Functional restorations with a high level of comfort, for immediate fixed hybrid prosthesis, is delivered by the Straumann Pro Arch solution.

Straumann Pro Arch delivers a seamless approach for immediate fixed full arch edentulous treatment cases. This fixed screw-retained prosthesis is non-removable by the patient but can be removed by a dental professional for periodic maintenance.

MAINTENANCE

Implant maintenance visits consist of assessment, safe maintenance, and daily home care recommendations. Assessment at each implant maintenance visit is critical to reveal early signs of any complications and provide an opportunity for early intervention for treatment to support long-term success.

The recommended five-step protocol for implant assessment consists of a visual examination of the soft tissues surrounding the implant, probing the implant(s) to assess for inflammation (e.g. bleeding on probing, BOP) or signs of peri-implant disease. Probing access may be complicated due to the presence of the prosthesis, in many cases probing will not be possible.

Final steps include identifying if calculus is present, evaluation for mobility or pain, and assessment of the bone level using the appropriate radiograph(s).

One key element in the protocol for complete implant supported fixed arch restorations, is to evaluate the tissue surrounding the implant. Is it keratinized or non-keratinized? Is there any inflammation present? Ideally the tissue should look pink, firm, and keratinized with no signs of ulceration. Record your findings at each visit. Note: non-keratinized tissue can be a factor leading to peri-implant disease.

Bleeding on probing (BOP) score is a necessary part of the diagnostic process. It should be completed after the implant is macroirrigated for six months along with a radiographic protocol to evaluate bone level. Factors for mobility and provide articulating medium for the doctor to monitor occlusion at every implant maintenance visit.

The radiographic protocol recommends establishing baseline radiographs or panoramic film at time of delivery of final restoration. Make a radiograph with a paralleling technique every one to two years thereafter or at any signs of infection.

Peri-Implant Therapy for the Dental Hygienist

SUSAN WINGROVE, RDH, BS

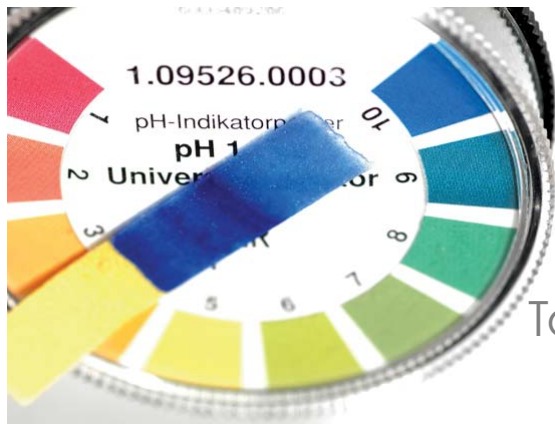
Proper instrumentation



Fixed screw-retained implant prosthesis

- Place retractor
- Lavage with ultrasonic on lowest setting
- OR** subgingival GPAP
- Assess for calculus-remove with short horizontal strokes
- Polish prosthesis with non-abrasive (e.g. silica) for stain removal or to smooth prosthesis after debridement

***in-office maintenance at least every 6 months**



Avoid

- APF
- Sodium FL \geq 2.0%,
- Toothpaste below neutral PH
- Stain removers
- Smoker's toothpaste

*Nakagawa M et al. Effect of Fluoride concentration and PH on corrosion behavior of titanium for dental use. J Dent Res 1999;78(9): 1568-1572



Homecare for Implants

- Power Brush
- Soft round tufted
- Oral Irrigator
- Low RDA dentifrice
- Antimicrobial rinse



Homecare for Implants



- Insert floss in both contacts
- Wrap the floss in a C-shape
- Shoe-shine motion
- Floss the entire circumference



Homecare



BigFish Dental

Homecare for Implants



BigFish Dental

Prompt the Doctor:
Personal
Necessary radiographs
Periodontal Exam
Hard Tissue Exam
Confirm Findings
Next Steps



Straumann Network to C.A.R.E

Join us at: www.networktocare.com





a.kinnamonrdh@bigfishdental.net

Leadership
Collaborative Team Building
Professional Wellness
Career Diversification

www.bigfishdental.net

Thank you

