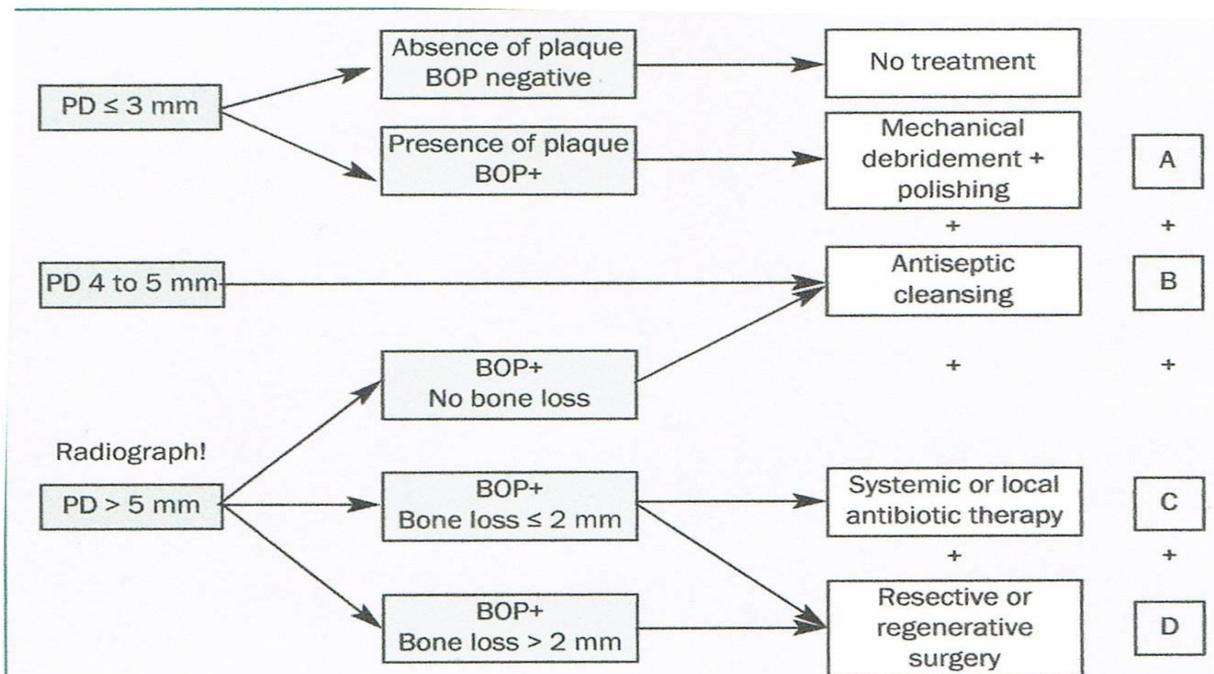


Implant Maintenance Protocol as of October 2016

Paul Fletcher DDS

This protocol was adapted from Lang’s concept of “Cumulative Interceptive Supportive Therapy (CIST)”, first presented in a COIR article in 2000. The protocol therapy is additive, in that as pocketing and signs of inflammation progress, additional treatments are added. The flow chart is presented below.



Therapy A) With pocket depths 3mm or less with no plaque or BOP, no treatment is indicated. If plaque and/or BOP are evident, the plaque must be thoroughly removed mechanically and the accessible dental components polished with a prophy cup, ideally using non abrasive paste. In our office and at Columbia University we use carbon fiber or plastic curettes. In difficult to access areas we also use the EMS/Hu-Friedy Perio-Flow air polishing unit with a special subgingival tip. It uses glycine powder, which is soluble in crevicular fluid, as opposed to sodium bicarbonate powder which is more abrasive and has been shown to remain on the implant.

Therapy B) With 4-5mm pocketing and BOP, subgingival antiseptic irrigation is added to the mechanical therapy. After speaking with a number of microbiologists and subsequently reviewing the dental literature, it's evident that a dilute sodium hypochlorite (NaClO) solution isn't inactivated by crevicular enzymes or blood and is as cytotoxic or more cytotoxic to peri-implant pathogens and disruptive to subgingival biofilm than antiseptics such as chlorhexidine, povidone iodine and hydrogen peroxide. We're now taking one teaspoon (5ml) of standard 6% household bleach (Clorox) and diluting it with 4 oz (125ml) of water (the size of the plastic patient rinsing cup that's available in all dental office is 5oz or 156ml) to produce a .25% solution. According to the American Dental Association dilute NaClO is classified as a safe antiseptic rinse. We initially irrigate intracrevicularly to disrupt and dislodge the biofilm, then thoroughly debride the implant surface with a curette and then irrigate again to rinse out the debris and further detoxify the subgingival area. Pressure is then applied for one minute to obtain intimate soft tissue/restoration contact. Superior patient home care (discussed below) is imperative if an optimal result is to be obtained.

Therapy C) With pocketing  $\geq$  5mm and bleeding on probing and radiographic bone loss up to 2mm (2<sup>nd</sup> implant thread), therapies "A&B" are performed for one maintenance cycle. If the patient still has BOP and a pocket greater or equal to 5mm three months after the initial maintenance, therapies "A&B" are performed again, but Arestin, (therapy C) is placed around the implant after the final irrigation in a further effort to eliminate the BOP and shrink the pockets. Again, optimal home care is imperative, as is the treatment of any extraneous periodontal disease in the rest of the patient's mouth. While pocket reduction may be minimal, resolution of the BOP is the primary goal of treatment. If the patient returns 3 months later at the next maintenance and still has significant BOP, I would remove the restoration if possible and use dilute NaClO on a cotton pellet to detoxify the implant platform, the abutment, the screw access opening and the underside of the crown; then lightly curette the inflamed gingiva, replace the restoration and apply pressure at the gingival margin to maximize soft tissue readherence to the crown.

Therapy D) If the pocket continues to deepen and a subsequent radiograph shows the bone loss to have progressed, flap surgery is indicated, with the objectives being pocket reduction to less than 5mm and the elimination of BOP.

Patient home care regimen: Biofilms form supragingivally and migrate subgingivally. While it's been shown there's rapid supragingival recolonization, subgingival pathogens can remain suppressed for months. It must be explained to the patient that the objective of their home care is to keep the subgingival biofilm at a subinflammatory level for a 3 month period until it can be disrupted and removed again at the next hygiene visit. To maximize the chances of

having a compliant patient, the home care regimen has to be made as simple as possible. The patient is told to:

- 1) Brush the problem implant thoroughly 2x/ day using Colgate Total toothpaste. Use an end tuft brush if available. Total contains triclosan, a well-documented anti-inflammatory and antibacterial agent. The ingredients also include a co-polymer that helps maintain the toothpaste's activity for up to 12 hours.
- 2) Rinse twice/day for 30 seconds with Listerine mouthwash  
Listerine kills bacteria on the mucous membranes, the tongue and posterior parts of the mouth in addition to the teeth. The second rinse should be at bedtime, as bacteria multiply more rapidly during sleep when salivary flow is reduced. If the patient can't use a mouthrinse containing alcohol, Listerine without alcohol or a cetylpyridinium chloride based mouthrinse like Colgate Total is the alternative.
- 3) If you can get the patient use an interproximal brush in addition, even better.

I hope you find the above information beneficial. Share it with your hygienists, your colleagues and your students. It's important the word gets out. The prevalence of peri-implant disease is increasing, and the earlier it's recognized and treated the better. Feel free to contact me if you have any additional questions. A video on the management of peri-implant disease as well as this protocol can be viewed if you go to YouTube and search: Paul Fletcher, Management of Peri-implant Disease.

**Paul Fletcher DDS**, is a periodontist who practices in New York City as a member of Specialized Dentistry of New York, a group implant- cosmetic specialty practice. He's an Associate Clinical Professor at Columbia University and teaches periodontics and implant dentistry on a post-graduate level. Additionally, he's had over 30 papers published in the dental literature and has lectured on periodontal prosthetics and implant dentistry both nationally and internationally. His current teaching interest lies in spreading the word on the prevention and treatment of inflammatory peri-implant disease.  
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## IN OFFICE - MAINTENANCE PROTOCOL

*In office regimen: maximum recall – 3 mo*

### **3mm, No BOP**

- a) Gentle probing for resistance
- b) evaluate plaque levels
- c) prophyl cup and polish

### **4-5 mm and no BOP or suppuration**

- d) mechanically debride: curette, air polisher

### **4-5mm-BOP, >5 mm w/wo BOP, SOP = Interceptive therapy**

- e) NaOCl irrigation – before, during and after debridement

### **At 3 month re-eval : 4-5mm-BOP, >5 mm w/wo BOP**

Repeat initial therapy and add:

- a) local antibiotics (minocycline microspheres)

### **At 6 month re-eval: a) systemic antibiotics**

### **b) remove restoration and detoxify**

### **c) surgery if progressive bone loss or pt prone to perio.**