



PROTOCOLS FOR FAILING IMPLANTS:

REASONS, REMOVAL AND
REHABILITATION



ALTERNATING TITLE

PROMAŠAJI, NEUSPJESI I KATASTROFE



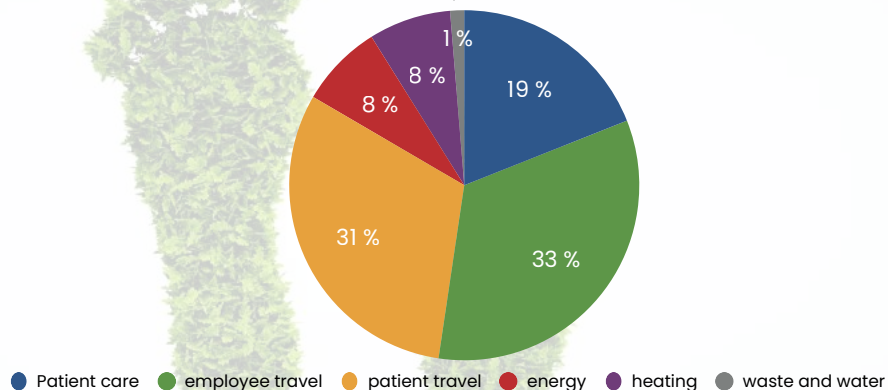
CONFLICT OF INTEREST

- APW/DGZINK
- HONORARY AMBASSADOR OF
SLOW DENTISTRY
- PAID LECTURES FOR
BEGO, GEISTLICH,
STRAUMANN, MECTRON ETC
- GREENVIU



Footprint of dentistry

2014: 675,706 tCO₂e



Carbon modelling within dentistry; Public Health England 2018

Reduce

Quality

High-quality treatment shows better outcomes and reduces steps and is therefore sustainable and preventive

Prevention

Preventing a disease is the most sustainable way to treat it.



11 koraka za sutra

Dijelimo ove informacije kako bismo pomogli zdravstvenim radnicima da odmah poduzmu mjere prema održivosti. Ovi se koraci mogu poduzeti sutra bez značajnih ulaganja i mogu dati značajan doprinos smanjenju utjecaja zdravstvenih praksi na okoliš. Poduzimajući ove korake, zdravstveni radnici mogu smanjiti potrošnju energije i resursa, smanjiti otpad i poboljšati zdravlje svojih pacijenata i zajednice. Kao sporednu korist, ovi vam koraci također mogu uštedjeti značajnu količinu novca. Nadalje, dijeljenjem ovih informacija nadamo se da ćemo potaknuti kulturu održivosti u zdravstvenoj industriji i promicati održivost izvan zdravstvene skrbi.

11 steps for tomorrow

Poduzimanje ovih koraka može pomoći zdravstvenim radnicima da odmah poduzmu mjere prema održivosti. Ovi se koraci mogu poduzeti sutra bez značajnih ulaganja i mogu dati značajan doprinos smanjenju utjecaja zdravstvenih praksi na okoliš.

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In the full membership included

- greenviu kalkulator otiska
- Individualni izračun i savjeti za poboljšanje
- Tečaj o održivoj higijeni
- NOVI! Obuka za menadžera održivosti
- Popusti na proizvode preko naših partnera
- i mnogo više...



DR. IGOR
RISTIC



Dr. Igor Ristic

Belgrade, Serbia

"Being environmentally conscious and influencing community to change its behaviour is equally important as clinical excellence. Let's make the Earth safe for next generations and act according – Primo non nocere".

DR. HRVOJE
STARČEVIĆ



Dr. Hrvoje Starčević

Zagreb, Croatia

"Recycling our waste is right way to return to nature what She gave us from beginning. Don't leave for tomorrow what you can do today".



greenviu®
THE GREEN CLINIC SOCIETY



PROTOCOLS FOR FAILING
IMPLANTS:

REASONS, REMOVAL AND
REHABILITATION

FLOPS, FAILURES AND
DISASTERS



1. REASONS FOR IMPLANT FAILURES

2. IMPLANTS BEYOND SALVATION

3. THE CORRECT PROTOCOL FOR THE INDIVIDUAL SITUATION

4. SUMMARY



1. REASONS FOR IMPLANT FAILURES

2. IMPLANTS BEYOND SALVATION

3. THE CORRECT PROTOCOL FOR THE INDIVIDUAL SITUATION

4. SUMMARY



J Clin Periodontol. 2008 Sep;35(8 Suppl):292-304. doi: 10.1111/j.1600-051X.2008.01275.x.

Peri-implant diseases: diagnosis and risk indicators.

Heitz-Mayfield LJ¹.

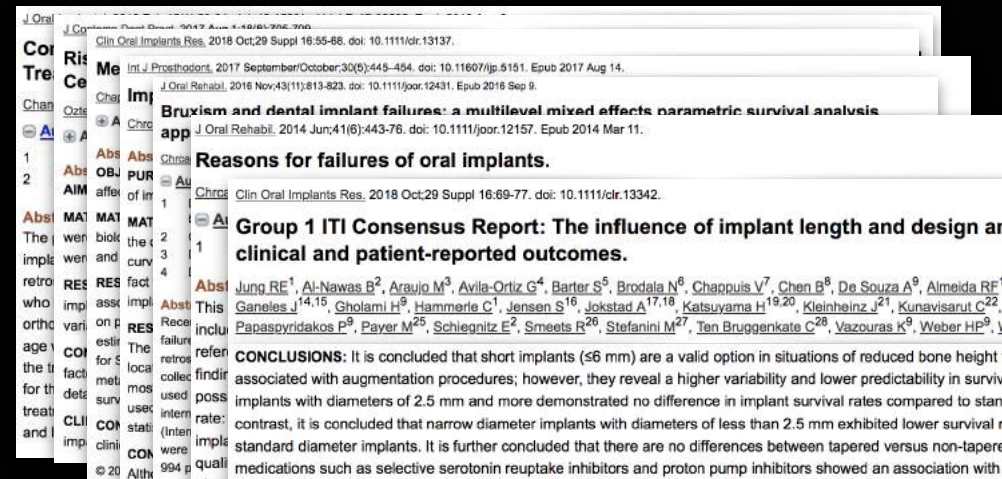


J Clin Periodontol. 2008 Sep;35(8 Suppl):292-304. doi: 10.1111/j.1600-051X.2008.01275.x.
Peri-implant diseases: diagnosis and risk indicators.
Heitz-Mayfield LJ¹.

BACKGROUND: Peri-implant diseases include peri-implant mucositis, describing an inflammatory lesion of the peri-implant mucosa, and peri-implantitis, which also includes loss of supporting bone.

METHODS: A literature search of the Medline database (Ovid), up to 21 January 2008 was carried out using a systematic approach, in order to review the evidence for diagnosis and the risk indicators for peri-implant diseases.

RESULTS: Experimental and clinical studies have identified various diagnostic criteria including probing parameters, radiographic assessment and peri-implant crevicular fluid and saliva analyses. Cross-sectional analyses have investigated potential risk indicators for peri-implant disease including poor oral hygiene, smoking, history of periodontitis, diabetes, genetic traits, alcohol consumption and implant surface. There is evidence that probing using a light force (0.25 N) does not damage the peri-implant tissues and that bleeding on probing (BOP) indicates presence of inflammation in the peri-implant mucosa. The probing depth, the presence of BOP, and suppuration should be assessed regularly for the diagnosis of peri-implant diseases. Radiographs are required to evaluate supporting bone levels around implants. The review identified strong evidence that poor oral hygiene, a history of periodontitis and cigarette smoking, are risk indicators for peri-implant disease. Future prospective studies are required to confirm these factors as true risk factors.



RISK FACTORS

Function	Medical	Habits	Surgeon

RISK FACTORS

Function	Medical	Habits	Surgeon
ortho	PPI & SSRI	smoking	positioning
bruxism	antiresorptive medication & radiation	oral hygiene / caries	augmentation
occlusion	metabolic disorders	incompliance	hard and soft tissue
	periodontitis / periimplantitis		type of implant and load

RISK FACTORS

Function	Medical	Habits	Surgeon
ortho	PPI & SSRI	smoking	positioning
bruxism	antiresorptive medication & radiation	oral hygiene / caries	augmentation
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RISK FACTORS

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ortho	PPI & SSRI	smoking	positioning
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4. SUMMARY

Abstract

BACKGROUND: Over time, the percentage of dental implants that fail increases because of biological and technical issues. Inevitably, clinicians will dedicate more time to dealing with ailing and failing dental implants.

METHODS: The authors searched the literature for articles that addressed diagnostic manifestations of failed implants and reasons for their demise, as well as survival rates of dental implant reimplantations.

RESULTS: The authors found that there is no precise cut point (besides 100 percent) with regard to the amount of bone loss in the absence of mobility that indicates an implant has failed. The decision to treat or explant an ailing implant is a judgment call by the treating clinician. Survival rates found in the literature after first and second reimplantations ranged from 71 percent to 100 percent and 50 percent to 100 percent, respectively. The 100 percent findings were based on small groups of implants, and there were scant data addressing implant survival after second reimplantations.

CONCLUSIONS: The decision to remove an implant needs to be based on clinical assessments, radiographic evaluations or both. If the implant is deemed hopeless, there are devices that facilitate their removal. Furthermore, reimplantations can be performed successfully, but their survival rate appears to be lower than that of implants placed at sites from which they were not lost formerly.

PRACTICAL IMPLICATIONS: Ailing dental implants should not be condemned prematurely, because patients often respond to treatment of peri-implantitis. Many patients desire reimplantations in sites in which implants have failed. This procedure is valuable, especially if it makes possible the fabrication of an implant-supported fixed or removable prosthesis.

Abstract

OBJECTIVES: To review and summarize the literature concerning peri-implantitis diagnostic parameters and to propose guidelines for peri-implantitis diagnosis.

MATERIAL AND METHODS: An electronic literature search was conducted of the MEDLINE (Ovid) and EMBASE databases for articles published between 2011 and 2016. Sequential screening at the title/abstract and full-text levels was performed. Systematic reviews/guidelines of consensus conferences proposing classification or suggesting diagnostic parameters for peri-implantitis in the English language were included. The review was recorded on PROSPERO system with the code CRD42016033287.

RESULTS: The search resulted in 10 articles that met the inclusion criteria. Four were papers from consensus conferences, two recommended diagnostic guidelines, three proposed classification of peri-implantitis, and one suggested an index for implant success. The following parameters were suggested to be used for peri-implantitis diagnosis: pain, mobility, bleeding on probing, probing depth, suppuration/exudate, and radiographic bone loss. In all of the papers, different definitions of peri-implantitis or implant success, as well as different thresholds for the above mentioned clinical and radiographical parameters, were used. Current evidence rationale for the diagnosis of peri-implantitis and classification based on consecutive evaluation of soft-tissue conditions and the amount of bone loss were suggested.

CONCLUSIONS: Currently there is no single uniform definition of peri-implantitis or the parameters that should be used. Rationale for diagnosis and prognosis of peri-implantitis as well as classification of the disease is proposed.

Symptoms: loosening, pus, pain

Decision: with the patient for or against a rescue attempt

Procedure: when rescue attempt not realistic
—> remove with / without regeneration

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OPTIONS



OPTIONS

Remove only

„Ridge
Preservation“

„Augment“



Volume

Remove only

„Ridge
Preservation“

„Augment“

Risk



OPTIONS

	remove only	ridge preservation	augment
pros	quick, cheap, infection can heal		
cons	loss of hard and soft tissue		
consequences	collapse of the alveolar ridge		



OPTIONS

	remove only	ridge preservation	augment
pros	quick, cheap, infection can heal	quick, moderate effort	
cons	loss of hard and soft tissue	material in an infection, not suitable for larger defects	
consequences	collapse of the alveolar ridge	residual tissues can be maintained	



OPTIONS

	remove only	ridge preservation	augment
pros	quick, cheap, infection can heal	quick, moderate effort	maximal hard and soft tissue growth
cons	loss of hard and soft tissue	material in an infection, not suitable for larger defects	material in an infection, planning!, expensive
consequences	collapse of the alveolar ridge	residual tissues can be maintained	Success: implant ready tissues Failure: additional augmentation needed



Biology of the defect

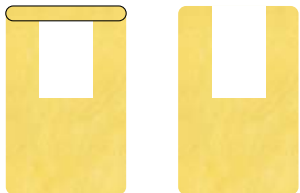


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potential of regeneration



Biology of the defect

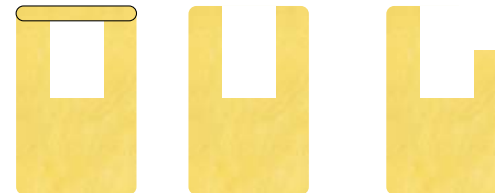


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potential of regeneration



Biology of the defect

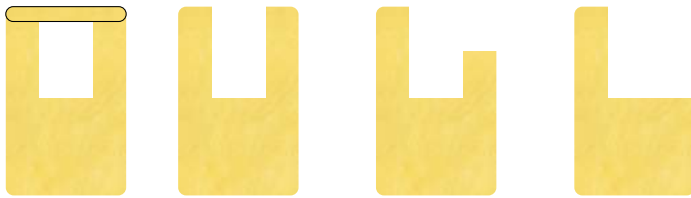


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potential of regeneration



Biology of the defect

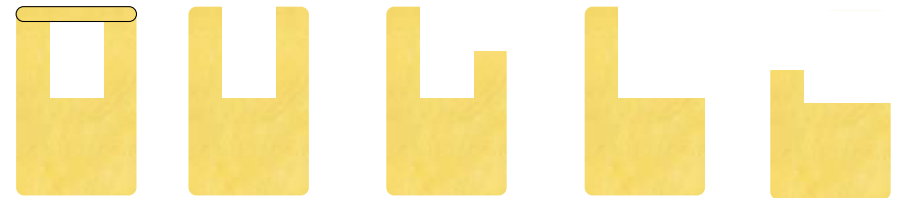


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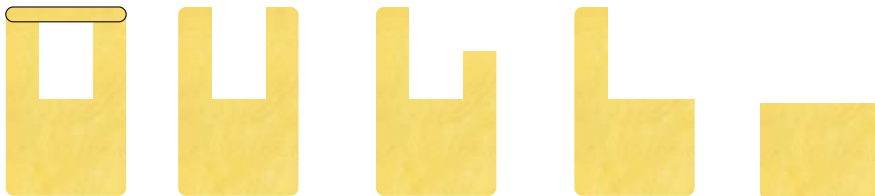


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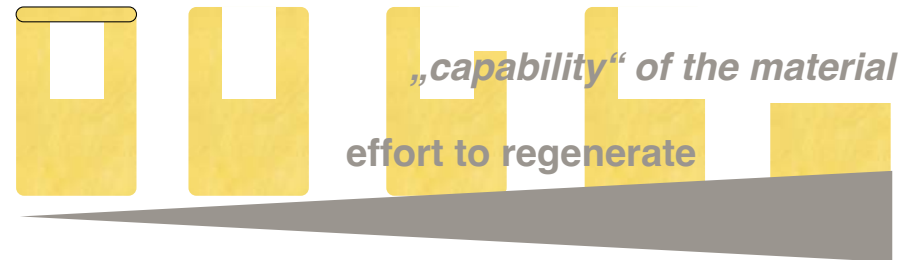


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potential of regeneration



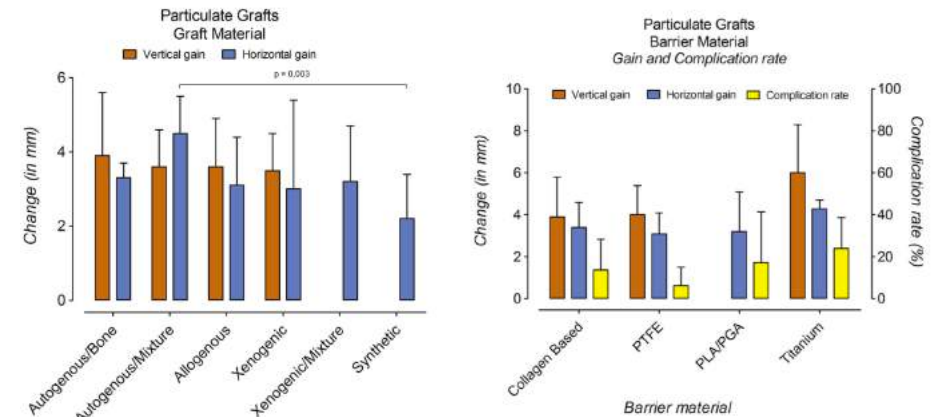
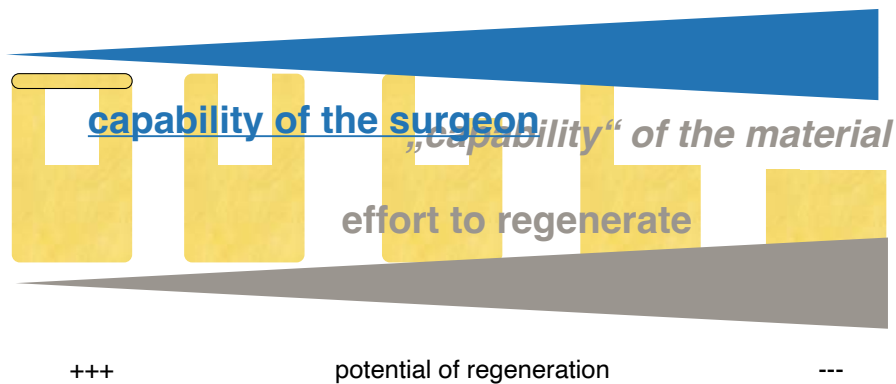
Biology of the defect



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potential of regeneration

Biology of the defect



Troeltzsch M, et al., Clinical efficacy of grafting materials in alveolar ridge augmentation: A systematic review; Journal of Cranio-Maxillo-Facial Surgery 2016



Int J Periodontics Restorative Dent. 2005 Feb;25(1):19-25.

Reduction of autogenous bone graft resorption by means of bio-oss coverage: a prospective study.

Meloni C¹, Beretta M, Salina S, Santoro E.

Author information

¹ Department of Oral Surgery, University of Milan School of Dentistry.

Abstract

Bone grafting may be required prior to implant placement, at the time of implant placement, or subsequent to it. The aim of this study was to compare the healing of onlay block grafts when deproteinized bovine bone coverage was used with the healing of the grafts without such coverage. The purpose was a clinical evaluation of deproteinized bovine bone's ability to reduce grafted bone resorption. The results indicated that bovine bone can be placed over grafted areas, taking advantage of its osteoconductive properties and compensating for the natural bone resorption caused by remodeling.



TroeltzschBrothers
Success through knowledge

Int. J. Oral Maxillofac. Implants, 2002 Mar-Apr;17(2):236-48.

The use of ramus autogenous block grafts for vertical alveolar ridge augmentation and implant placement: a pilot study.

Proussaefs P¹, Lozada J, Kleinman A, Rohrer MD.

Author information

1 School of Dentistry, Graduate Program in Implant Dentistry, Loma Linda University, California 92350, USA, pProussaefs@hotmail.com

Abstract

PURPOSE: This study presents a clinical, radiographic, laboratory, and histologic/histomorphometric analysis of the use of mandibular ramus block autografts for vertical alveolar ridge augmentation and implant placement.

MATERIALS AND METHODS: Autogenous block autografts were fixed at the recipient site with fixation screws while a mixture of autogenous bone marrow and inorganic bovine material (Bio-Oss) was used at the periphery. All grafts appeared well incorporated at the recipient site during reentry surgery.

RESULTS: Radiographic measurements revealed an average of 6.12 mm vertical ridge augmentation 1 month after surgery and 5.12 mm 4 to 6 months after surgery. Laboratory volumetric measurements revealed an average of 0.91 mL alveolar ridge augmentation 1 month after surgery and 0.75 mL 6 months postoperatively. Linear laboratory measurements revealed 6.12 mm of vertical ridge augmentation 1 month postoperatively and 4.37 mm 4 to 6 months after surgery. Histologic evaluation indicated signs of active remodeling in all the specimens. Histomorphometric analysis of the peripheral particulate bone indicated bone present at 34.33% of the grafted area, while 42.17% of the area was occupied by fibrous tissue and 23.50% by residual Bio-Oss particles.

DISCUSSION: The results demonstrated the potential of mandibular block autografts harvested from the ascending ramus to maintain their vitality. Volumetric resorption rate of 16.34% were in accordance with previously published literature. Early exposure appeared to compromise the results, while late exposures did not affect the vitality of the block autografts.

CONCLUSION: Mandibular block autografts can maintain their vitality when used for vertical alveolar ridge augmentation. Inorganic bovine mineral (Bio-Oss) can be used at the periphery of the block graft when mixed with autogenous bone marrow.

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TroeltzschBrothers
Success through knowledge

DBBM -C

COLLAGEN MEMBRANE

TroeltzschBrothers
Success through knowledge

OPTIONS

OPTIONS

	remove only	ridge preservation	augment
indicated	severe infection, most tissue is lost, medical issues	infection, patient compliant, tissue to save	large defect, no to little infection, patient healthy and compliant
contraindicated	noninfected, healthy patient, lots of tissue to save	severe infection, most tissue is lost, medical issues, habits	severe infection, most tissue is lost, medical issues, habits
material	—	DBBM - C & collagen membrane & PRF	3D Ti mesh / autogenous plate technique & particulate material & collagen membrane & PRF

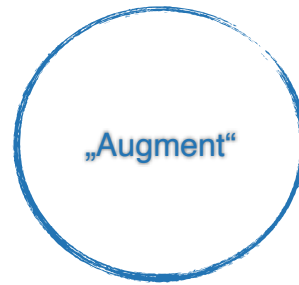
DATA 2018: 53



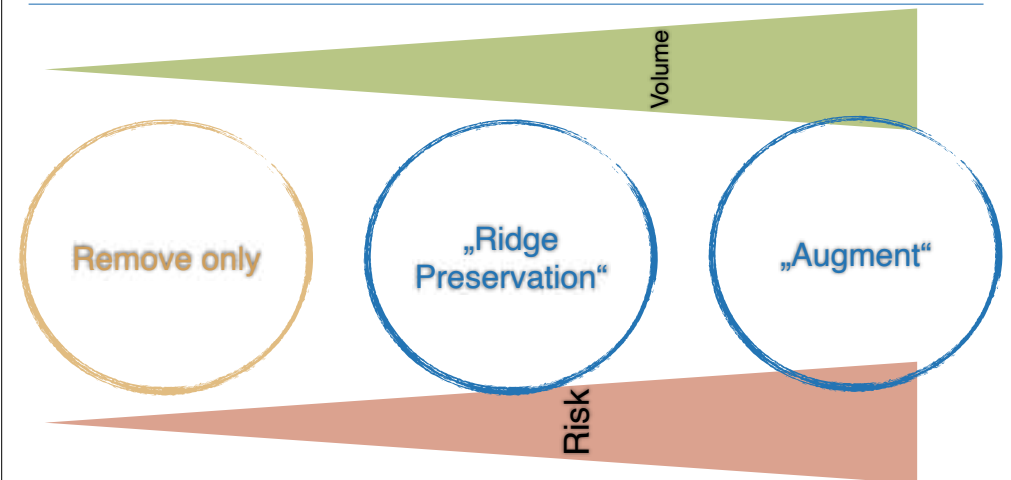
10 Implants
failures: 0
collapsed ridge: 10

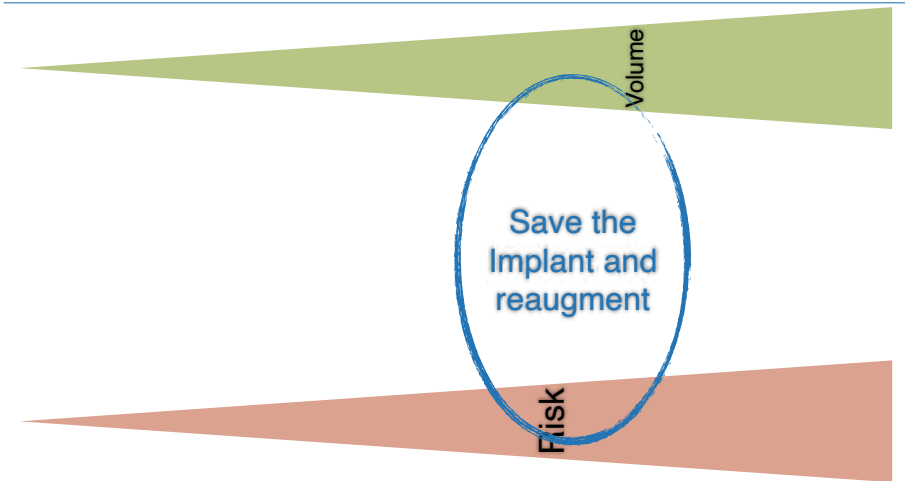
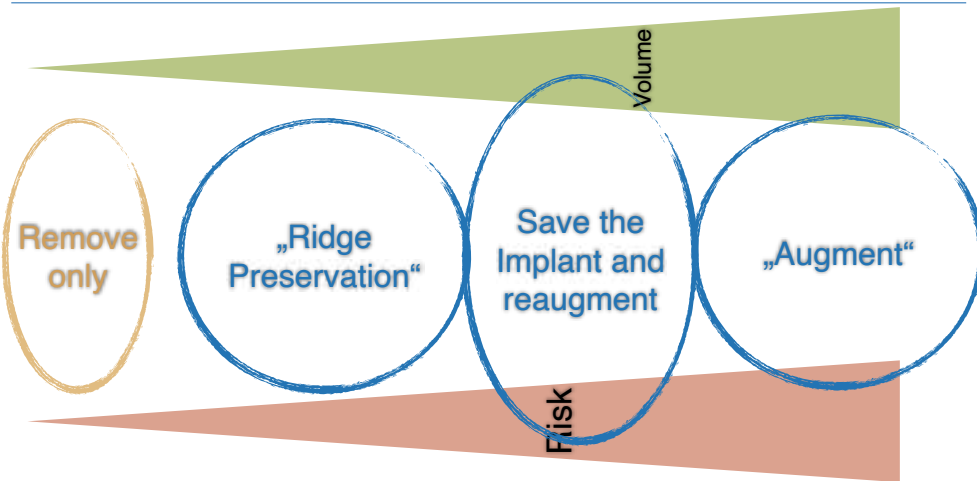


37 Implants
good result: 28
moderate result: 9
failures: 0



6 Implants
complications: 2
failures: 0





diamond burs, polishers, plastic and metal hand instruments, air scaler and air flow devices

Kister et. al, 2017

<https://pubmed.ncbi.nlm.nih.gov/27832905/>

nonsurgical (mechanical, antiseptic, and antibiotics), surface decontamination (chemical and laser), and surgical (air powder abrasive, resective, and regenerative)

Rokoya et. al, 2020

<https://pubmed.ncbi.nlm.nih.gov/32882741/>

The current evidence indicates that regenerative approaches to treat peri-implant defects are unpredictable.

Rokoya et. al, 2020

<https://pubmed.ncbi.nlm.nih.gov/32882741/>



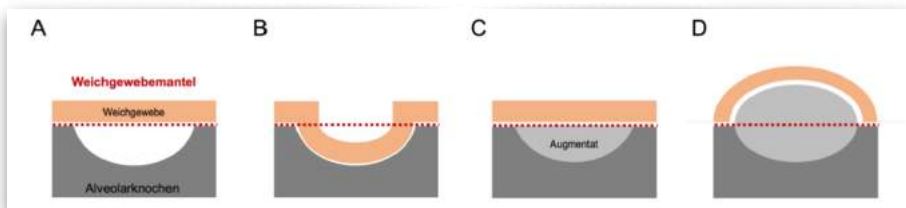
Treatment of Peri-implantitis-Electrolytic Cleaning Versus Mechanical and Electrolytic Cleaning-A Randomized Controlled Clinical Trial-Six-Month Results

Schlee et. al, 2020 <https://pubmed.ncbi.nlm.nih.gov/30703404/>

The present randomized clinical trial assesses the six-month outcomes following surgical regenerative therapy of periimplantitis lesions using either an electrolytic method (EC) to remove biofilms or a combination of powder spray and electrolytic method (PEC).

EC needs no further mechanical cleaning by powder spray. Complete re-osseointegration in peri-implantitis cases is possible

DEFEKT – BIOLOGIJA



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Bilal Al-Nawas

S2k-Leitlinie (Langversion)
**Implantologische Indikationen
für die Anwendung von
Knochenersatzmaterialien**
AWMF-Registernummer: 083-009

<https://www.umaedizin-mainz.de/mkgtuners/klinik/mittelbau/medizinische-mitarbeiter/profilseiten/der-mitarbeiter/prof-dr-bilal-al-nawas.html>

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11 steps for tomorrow

Share this information with your colleagues and patients to help them take immediate action to reduce their environmental impact. These steps can be taken tomorrow without significant investment and can make a significant contribution to reducing the environmental impact of healthcare. As a side benefit, these steps can also save you a significant amount of money.

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današnja skripta



A RISK - FACTOR RELATED
DECISION PROTOCOL

REMOVE

Function	Medical	Habits	Surgeon
ortho	PPI & SSRI	smoking	positioning
bruxism	antiresorptive medication & radiation	oral hygiene / caries	augmentation
occlusion	metabolic disorders	incompliance	hard and soft tissue
	periodontitis / periimplantitis		middle grade of experience

RIDGE PRESERVATION

Function	Medical	Habits	Surgeon
ortho	PPI & SSRI	smoking	positioning
bruxism	antiresorptive medication & radiation	oral hygiene / caries	augmentation
occlusion	metabolic disorders	incompliance	hard and soft tissue
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RIDGE PRESERVATION

Function	Medical	Habits	Surgeon
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bruxism	antiresorptive medication & radiation	oral hygiene / caries	augmentation
occlusion	metabolic disorders	incompliance	hard and soft tissue
	periodontitis / periimplantitis		high grade of experience

AUGMENTATION

Function	Medical	Habits	Surgeon
ortho	PPI & SSRI	smoking	positioning
bruxism	antiresorptive medication & radiation	oral hygiene / caries	augmentation
occlusion	metabolic disorders	incompliance	hard and soft tissue
	periodontitis / periimplantitis		high grade of experience



Thank you for
your attention

conference@dr-troeltzsch.de