
"Mag het een beetje meer zijn?":
adjuncts in de parodontologie
Prof. Dr. W. Teughels
Catholic University Leuven
Department of Periodontology
Research Group for Microbial Adhesion
Kapucijnenvoer 7
B-3000 Leuven
Belgium
Brussels
Leuven

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Moderate 12 months:
WMD: -1.16 mm
95% CI: -1.37 - -0.95
Deep 12 months:
WMD: -1.97 mm
95% CI: -2.39 - -1.54
Meta-analysis of the effect of scaling and root planing, surgical treatment and antibiotic therapies on periodontal probing depth and attachment loss

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Moderate 6/9 months:
WMD: -1.55 mm
95% CI: -1.80 - -1,29
Deep 6/9 months:
WMD: -2.59 mm
95% CI: -3,12 - -2,07
Subgingival instrumentation for treatment of periodontitis. A systematic review

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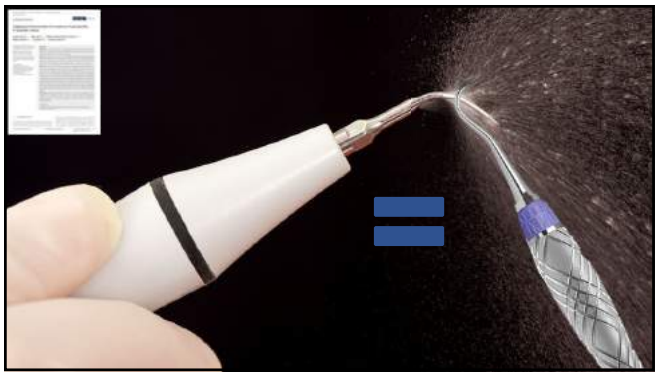

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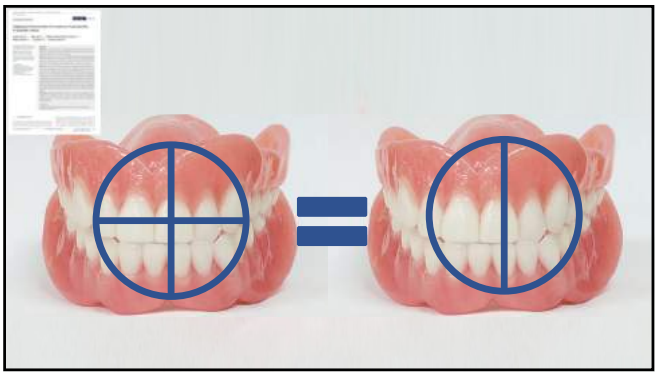

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BEST
BETTER
GOOD

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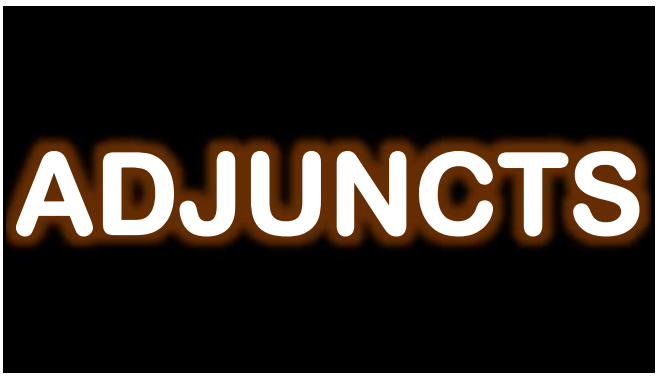
ADJUNCTS

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Diversity

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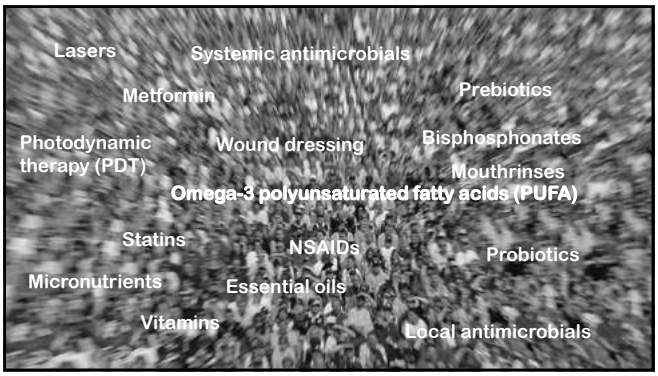
Lasers
Systemic antimicrobials
Metformin
Prebiotics
Photodynamic therapy (PDT)
Wound dressing
Bisphosphonates
Mouthrinses
Omega-3 polyunsaturated fatty acids (PUFA)
Statins
NSAIDs
Probiotics
Micronutrients
Essential oils
Vitamins
Local antimicrobials

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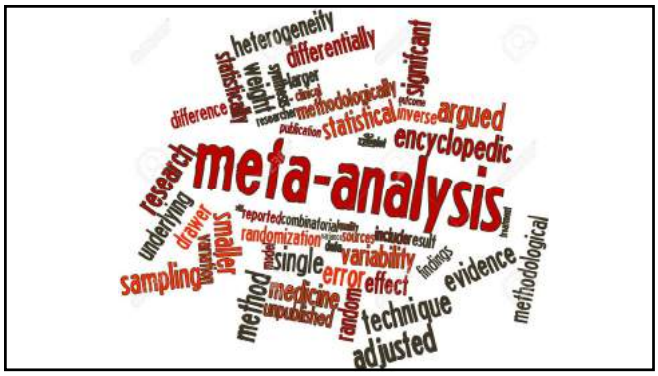
meta-analysis
heterogeneity
differentially
significant
statistically
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methodologically
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argued
encyclopedic
research
underlying
drawer
sample
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randomization
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Antibiotics

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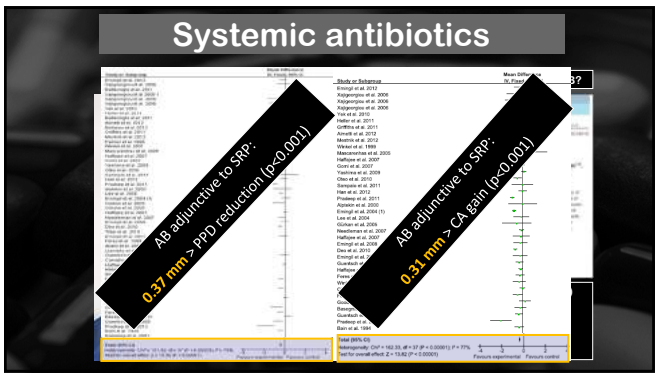

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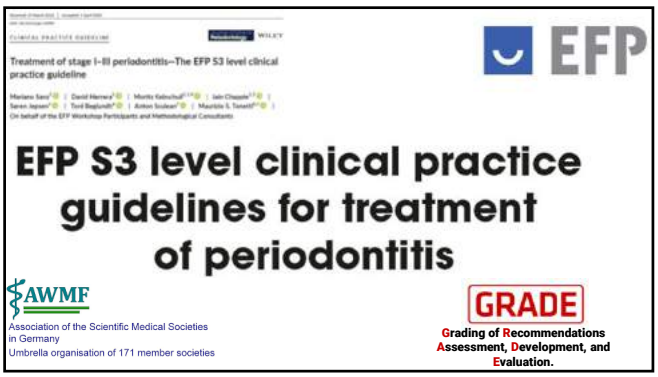

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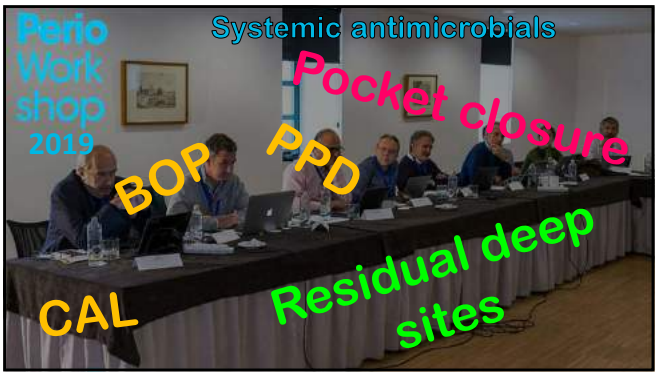

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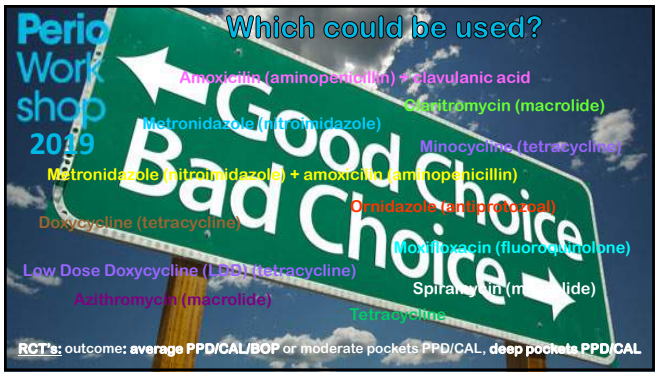

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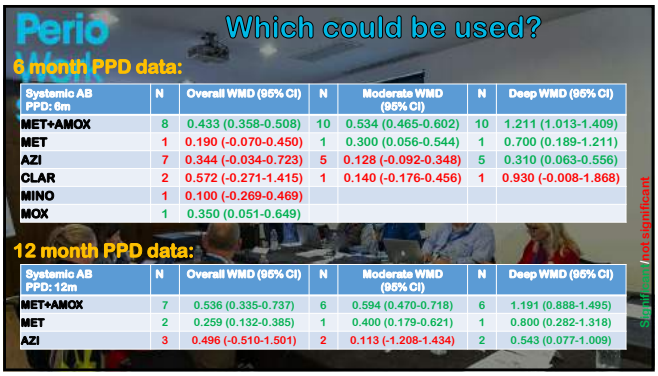

Systemic AB PPD: 6m	N	Overall WMD (95% CI)	N	Moderate WMD (95% CI)	N	Deep WMD (95% CI)
MET+AMOX	8	0.433 (0.358-0.508)	10	0.534 (0.465-0.602)	10	1.211 (1.013-1.409)
MET	1	0.190 (-0.070-0.450)	1	0.300 (0.056-0.544)	1	0.700 (0.189-1.211)
AZI	7	0.344 (-0.034-0.723)	5	0.128 (-0.092-0.348)	5	0.310 (0.063-0.556)
CLAR	2	0.572 (-0.271-1.415)	1	0.140 (-0.176-0.456)	1	0.930 (-0.008-1.868)
MINO	1	0.100 (-0.269-0.469)				
MOX	1	0.350 (0.051-0.649)				

Systemic AB PPD: 12m	N	Overall WMD (95% CI)	N	Moderate WMD (95% CI)	N	Deep WMD (95% CI)
MET+AMOX	7	0.536 (0.335-0.737)	6	0.594 (0.470-0.718)	6	1.191 (0.888-1.495)
MET	2	0.259 (0.132-0.385)	1	0.400 (0.179-0.621)	1	0.800 (0.282-1.318)
AZI	3	0.496 (-0.510-1.501)	2	0.113 (-1.208-1.434)	2	0.543 (0.077-1.009)

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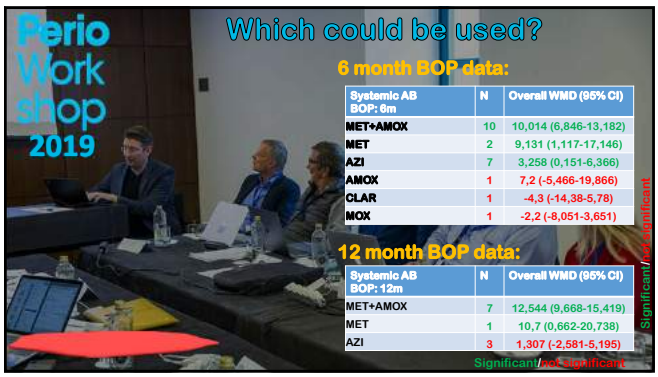

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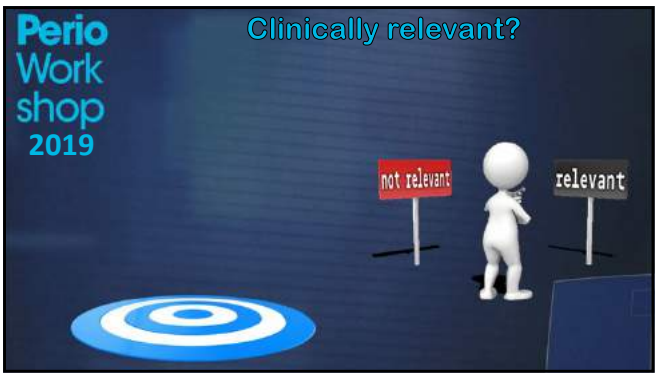

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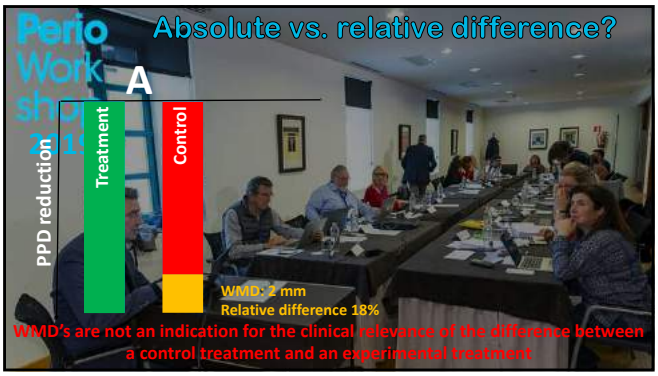

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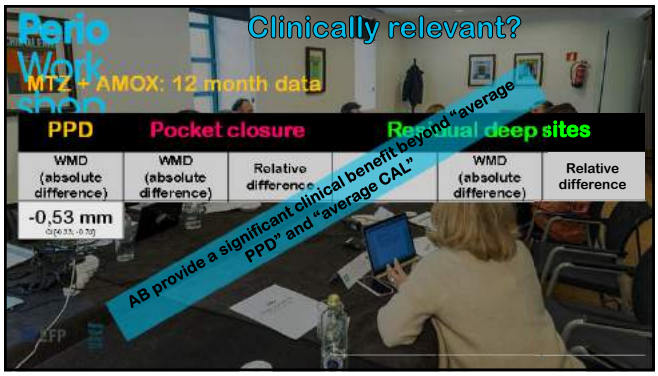

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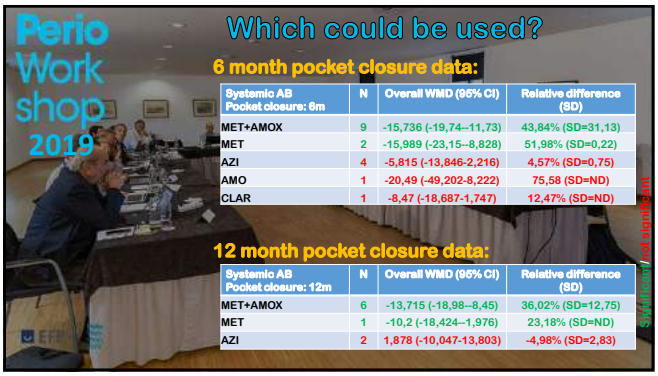

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Which could be used?

6 month % deep sites data:

Systemic AB ≥ 5mm: 6m	N	Overall WMD (95% CI)	Relative difference (SD)
MET+AMOX	7	7,092 (5,496-8,688)	49,45% (SD=12,52)
MET	1	4,37 (-1,407-10,147)	49,17% (SD=ND)
AZI	4	1,14 (-0,648-2,929)	26,38% (SD=32,29)
CLAR	1	-2,26 (-9,621-5,101)	58,90 (SD=ND)

12 month % deep sites data:

Systemic AB ≥ 5mm: 12m	N	Overall WMD (95% CI)	Relative difference (SD)
MET+AMOX	6	9,913 (6,524-13,301)	60,56% (SD=17,63)
MET	1	4,1 (-1,048-9,248)	62,5% (SD=ND)
AZI	2	0,574 (-1,326-2,498)	-5,68% (SD=15,72)

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Which could be used?

6 month BOP data:

Systemic AB BOP: 6m	N	Overall WMD (95% CI)	Relative difference (SD)
MET+AMOX	10	10,014 (6,846-13,182)	-30,61% (SD=11,67)
MET	2	9,131 (1,117-17,146)	-24,41% (SD=4,53)
AZI	7	3,258 (0,151-6,366)	-11,74% (SD=20;56%)
AMOX	1	7,2 (-5,466-19,866)	-34,50% (SD=ND)
CLAR	1	-4,3 (-14,38-5,78)	-26,11% (SD=ND)
MOX	1	-2,2 (-8,051-3,651)	-7,84% (SD=ND)

12 month BOP data:

Systemic AB BOP: 12m	N	Overall WMD (95% CI)	Relative difference (SD)
MET+AMOX	7	12,544 (9,668-15,419)	-33,81% (SD=12,96%)
MET	1	10,7 (0,662-20,738)	-28,51% (SD=ND)
AZI	3	1,307 (-2,581-5,195)	-12,15% (SD=18,65%)

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Conclusions review

- Systemic antimicrobials as adjunct to SRP, specifically MET + AMOX, results in greater PPD reduction, higher % pocket closure, reduction in frequency of deep pockets, CAL gain and BOP reduction
- The additional PPD reduction and CAL gain elicited by MET + AMOX, and to a lesser extent by MET and AZI, are more pronounced in initially deep than in initially moderately deep pockets.
- These clinical effects are maintained up to 12 months after their use.
- There is currently no evidence above 2 years of follow-up.
- No indications that the effect is different between aggressive and chronic periodontitis patients.
- The use of MET + AMOX is associated with the largest frequency of side effects.
- MET and AZI have a significant impact on some outcome measures, but smaller than MET + AMOX in terms of magnitude.

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S-3 Clinical practice guidelines

Due to concerns about patient's health and the impact of systemic antibiotic use to public health, its **routine use** as adjunct to subgingival debridement in patients with periodontitis **is not recommended**.

The adjunctive use of specific systemic antibiotics **may be considered for specific patient categories** (e.g. generalized periodontitis Stage III in young adults).

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GLOBAL A failure to address the problem of antibiotic resistance could result in:

10m deaths by 2050

Costing £66 trillion

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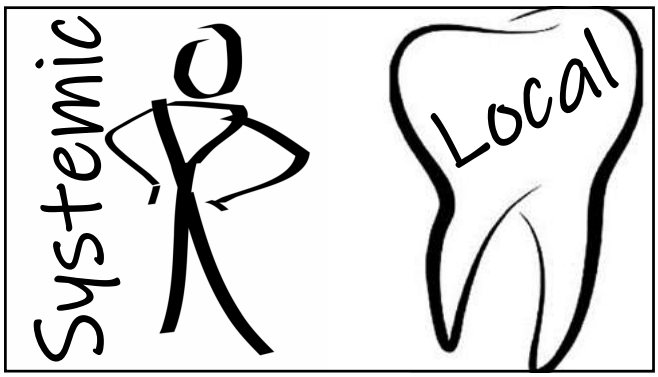

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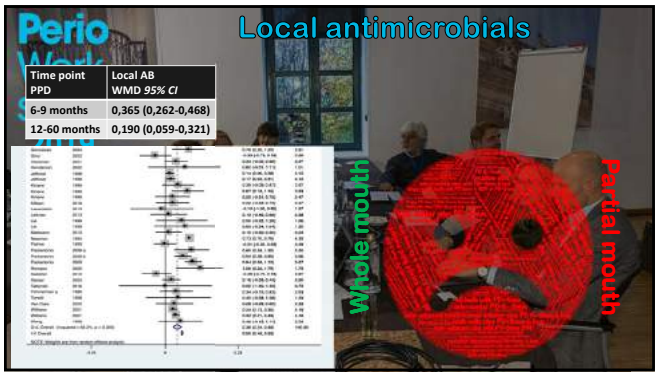

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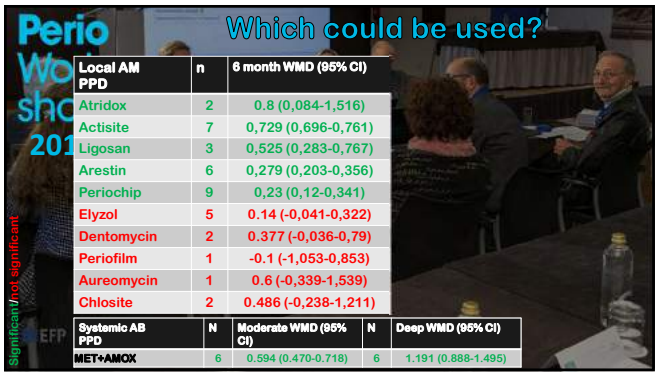

Local AM PPD	n	6 month WMD (95% CI)
Atridox	2	0.8 (0,084-1,516)
Actisite	7	0,729 (0,696-0,761)
Ligosan	3	0,525 (0,283-0,767)
Arestin	6	0,279 (0,203-0,356)
Periochip	9	0,23 (0,12-0,341)
Elyzol	5	0.14 (-0,041-0,322)
Dentomycin	2	0.377 (-0,036-0,79)
Periofilm	1	-0.1 (-1,053-0,853)
Aureomycin	1	0.6 (-0,339-1,539)
Chlosite	2	0.486 (-0,238-1,211)

Systemic AB PPD	N	Moderate WMD (95% CI)	N	Deep WMD (95% CI)
MET+AMOX	6	0.594 (0.470-0.718)	6	1.191 (0.888-1.495)

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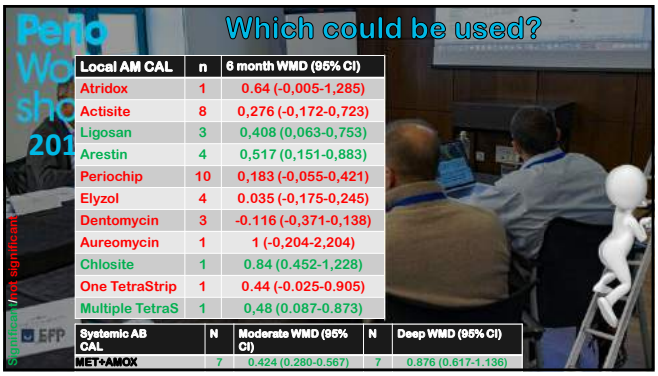

Local AM CAL	n	6 month WMD (95% CI)
Atridox	1	0.64 (-0,005-1,285)
Actisite	8	0,276 (-0,172-0,723)
Ligosan	3	0,408 (0,063-0,753)
Arestin	4	0,517 (0,151-0,883)
Periochip	10	0,183 (-0,055-0,421)
Elyzol	4	0.035 (-0,175-0,245)
Dentomycin	3	-0.116 (-0,371-0,138)
Aureomycin	1	1 (-0,204-2,204)
Chlosite	1	0.84 (0.452-1,228)
One TetraStrip	1	0.44 (-0.025-0.905)
Multiple TetraS	1	0,48 (0.087-0.873)

Systemic AB CAL	N	Moderate WMD (95% CI)	N	Deep WMD (95% CI)
MET+AMOX	7	0.424 (0.280-0.567)	7	0.876 (0.617-1.136)

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Which could be used?

Significant/not significant

Local AM BOP	n	6 month WMD (95% CI)
Atridox	1	12.5 (1.746-23,254)
Actisite	2	-0.458 (-1,543-0,628)
Periochip	1	-7 (-8.793—5.207)
Elyzol	3	4,315 (-1,239-9,87)
Dentomycin	3	-0.008 (-13,343-13,503)
Chlosite	1	22.0 (5,957-38,043)

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Conclusions review

The adjunctive use of locally delivered subgingival antimicrobials results in statistically significant benefits in terms of PPD reduction and (only short-term) CAL gain.

Prediction intervals did not demonstrate significant benefits, and the magnitude of the benefits may not be clinically relevant..

No increase in adverse effects or differences in PROMs were observed.

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S-3 Clinical practice guidelines

Specific locally administered sustained-release antibiotics as an adjunct to subgingival instrumentation in patients with periodontitis may be considered.

Locally administered sustained-release chlorhexidine as an adjunct to subgingival instrumentation in patients with periodontitis may be considered.

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Mouthwashes

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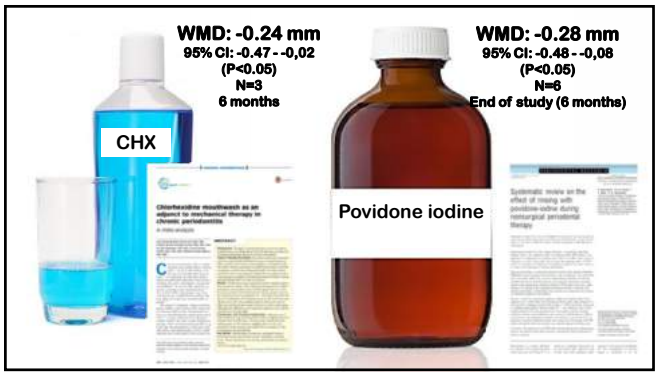

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Mouthwashes

R2.13 | Does the adjunctive use of adjunctive chemotherapeutics (antiseptics) improve the clinical outcome of subgingival instrumentation?

Expert consensus-based recommendation (2.13)

Adjunctive antiseptics **may be considered**, specifically chlorhexidine mouth rinses for a limited period of time, in periodontitis therapy, as adjuncts to mechanical debridement, in specific cases.

Supporting literature da Costa, Amarai, Barbirato, Leao, and Fogacci (2017)

Grade of recommendation Grade 0—⇔

Strength of consensus Consensus (6.3% of the group abstained due to potential CoI)

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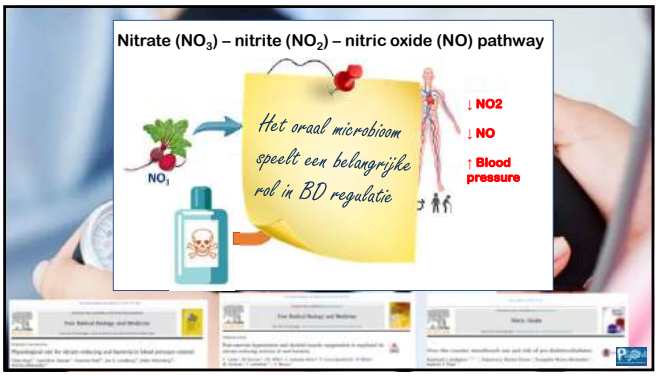

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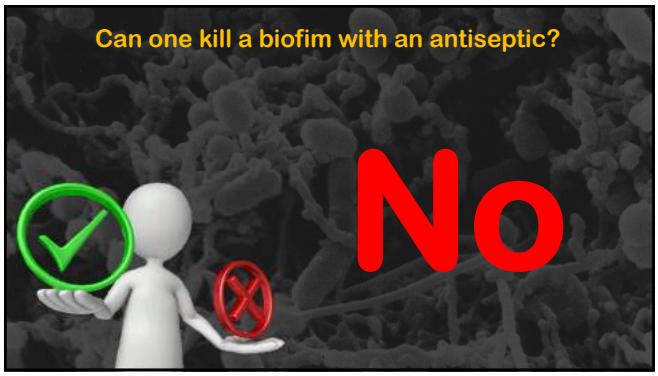

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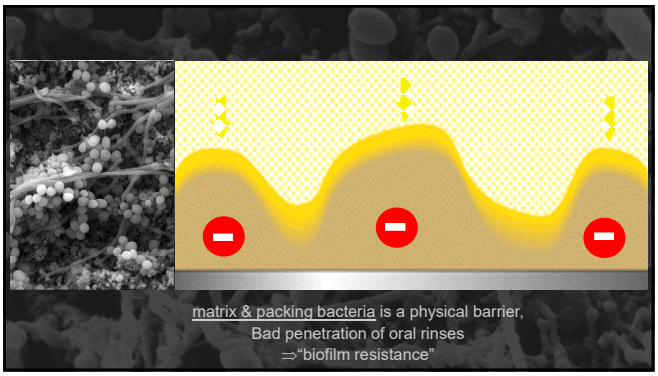

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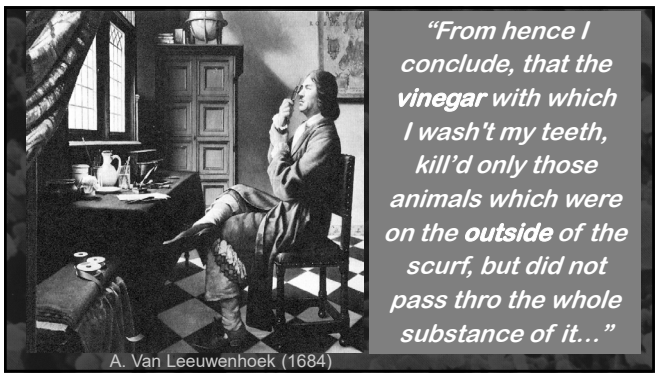

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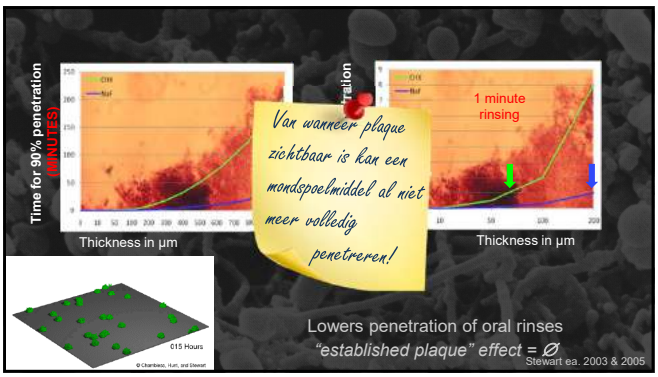

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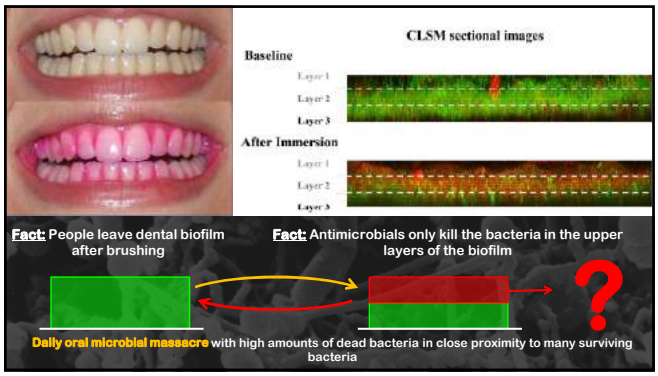

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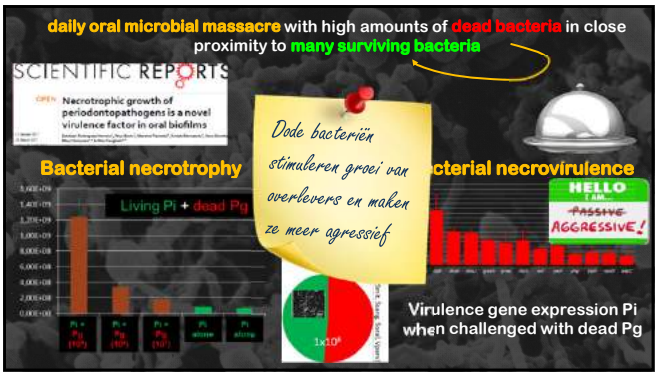

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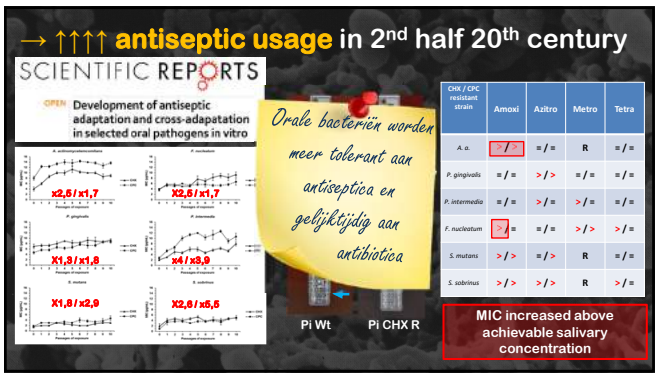

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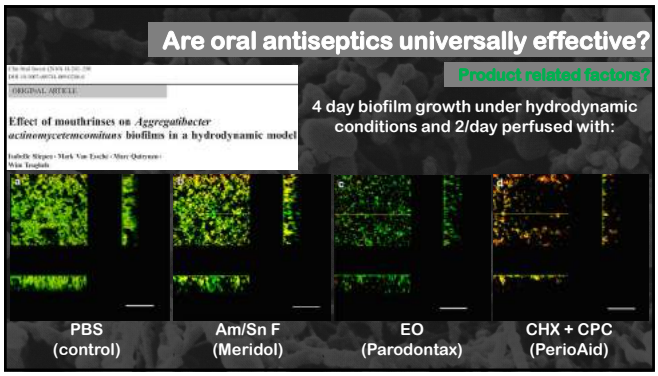

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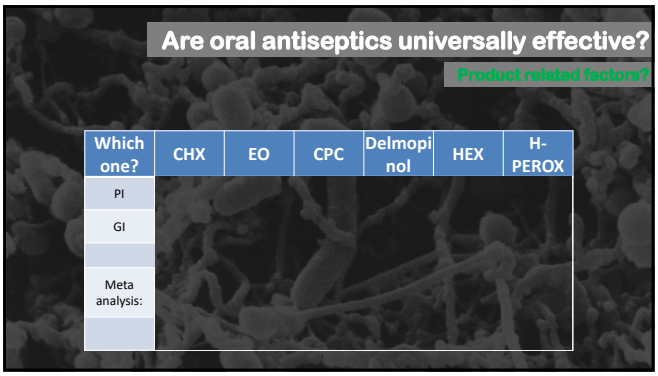

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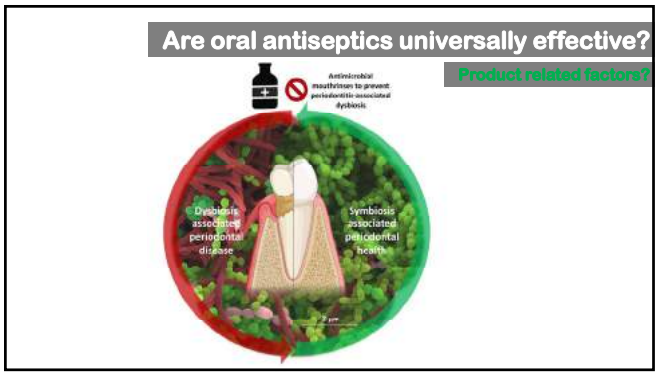

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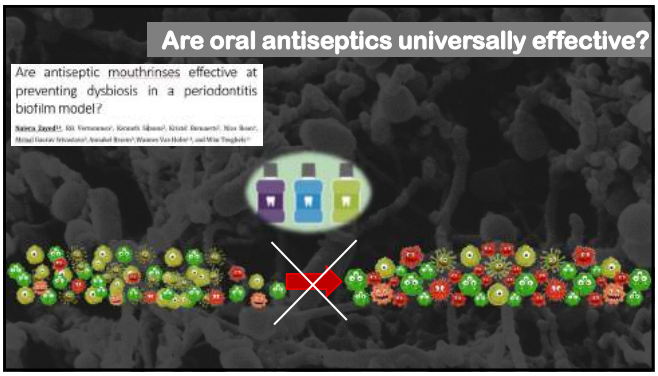

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Are oral antiseptics universally effective?

Are antiseptic mouthrinses effective at preventing dysbiosis in a periodontitis biofilm model?

Mouthrinse	Active Ingredient	Additives
Curasept 20	0.2% CHX	ADS
Corsodyl	0.2% CHX	7% alcohol
Oral-B ® Pro-expert	CPC 0.07%	
O7 ®	Active oxygen	
Listerine ® Cool mint	Essential oils	Alcohol
Meridol ®	Olaflur (amine fluoride), stannous fluoride (SnF2)	

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Are oral antiseptics universally effective?

Are antiseptic mouthrinses effective at preventing dysbiosis in a periodontitis biofilm model?

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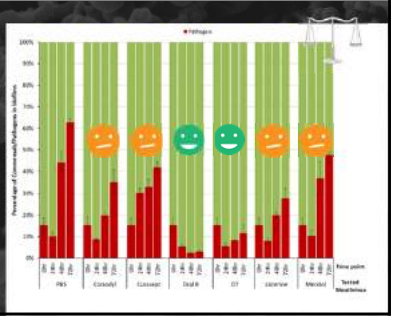

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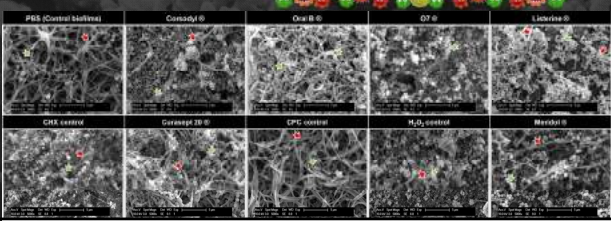

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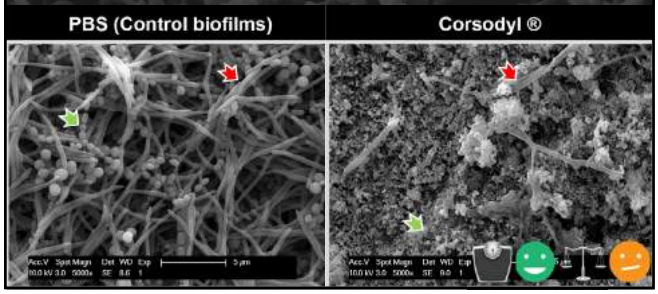

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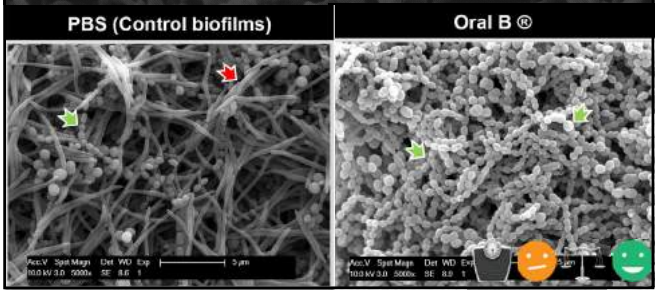

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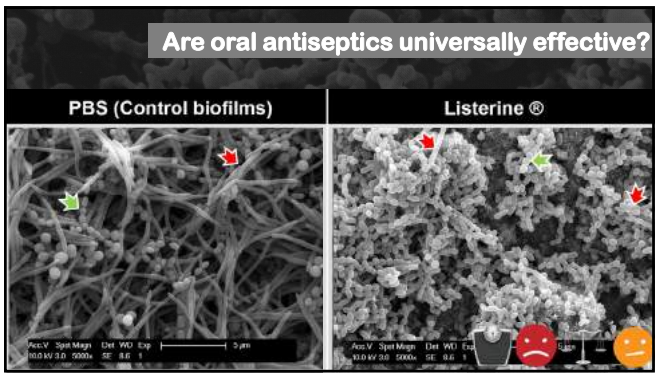

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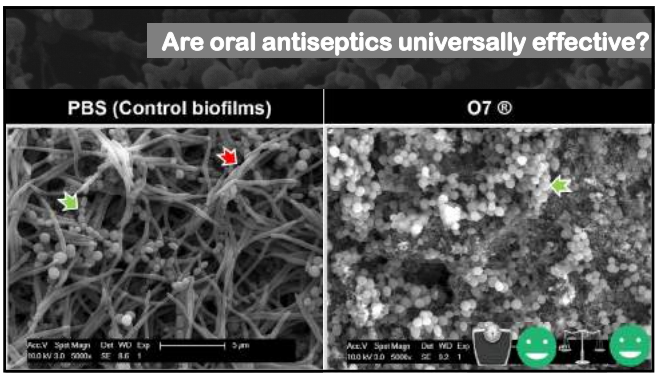

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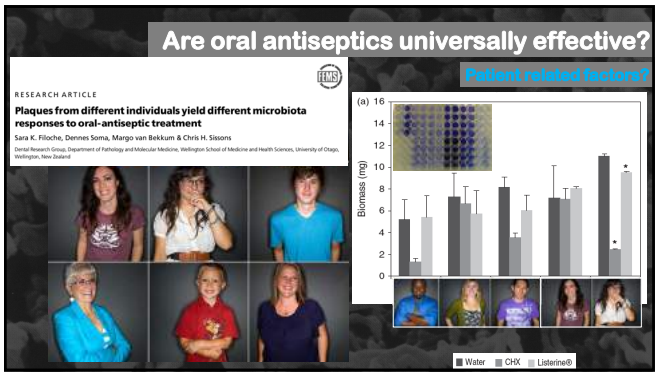

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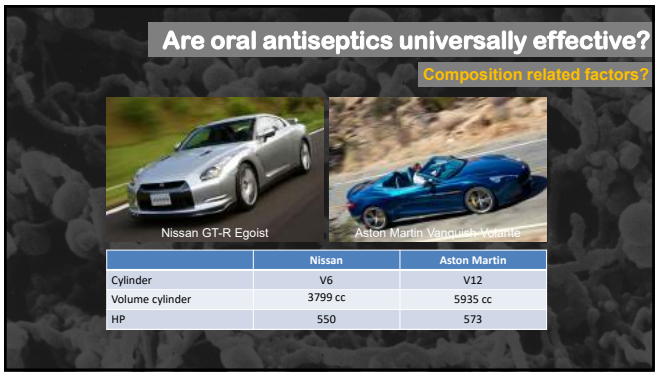
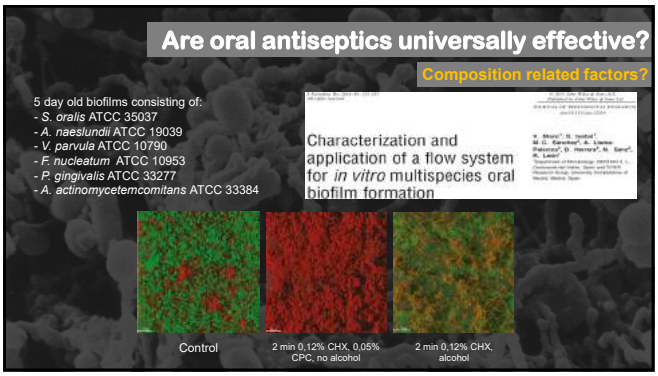


	Nissan	Aston Martin
Cylinder	V6	V12
Volume cylinder	3799 cc	5935 cc
HP	550	573

71



72

Are oral antiseptics universally effective?

Mouthrinse	Code	CHX	Additives
Curasept 20	HF	0.2%	ADS
Clorhexol	HG	0.2%	
Clara X	HH	0.2%	
Corsodyl	HI	0.2%	7% alcohol
Perio Aid Intensive Care	MC	0.12%	0.05% CPC
Perioff-Forte	MD	0.12%	0.05% CPC
Curasept 12	ME	0.12%	ADS
Perio Aid Active Control	LB	0.05%	0.05% CPC
Eludril	LA	0.03%	32% alcohol

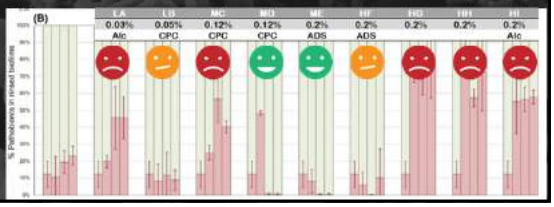
73

Are oral antiseptics universally effective?

LA	LB	MC	MD	ME	HF	HG	HH	HI
0.03% Alc	0.05% CPC	0.12% CPC	0.12% CPC	0.2% ADS	0.2% ADS	0.2%	0.2%	0.2% Alc

74

Are oral antiseptics universally effective?



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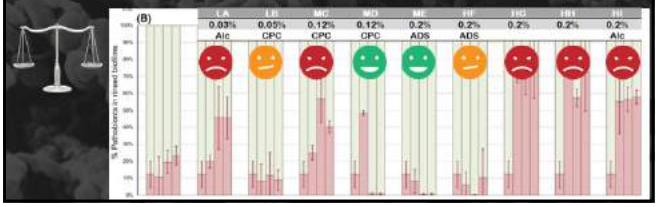
Are oral antiseptics universally effective?



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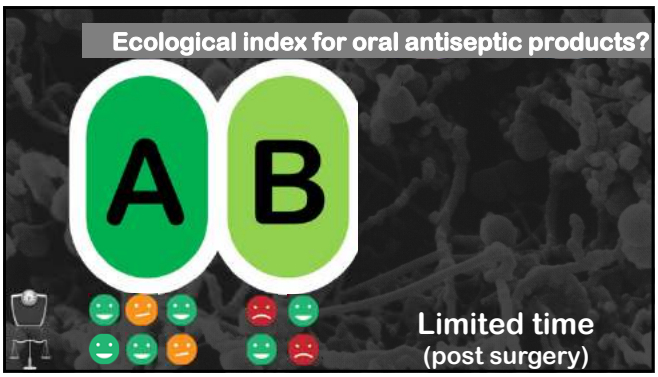
Are oral antiseptics universally effective?

77

Ecological index for oral antiseptic products?

78

79



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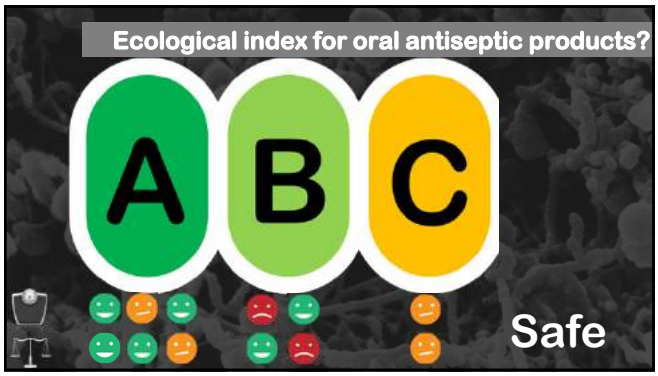

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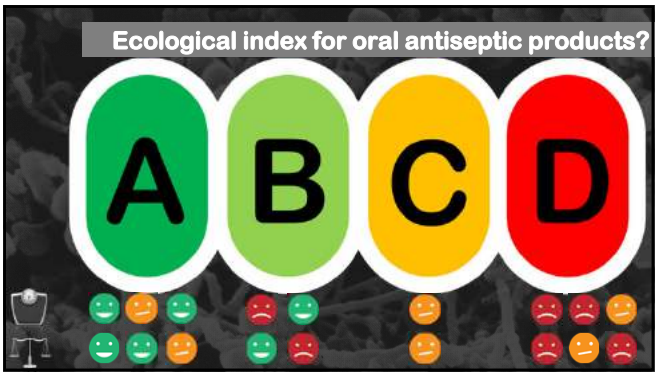

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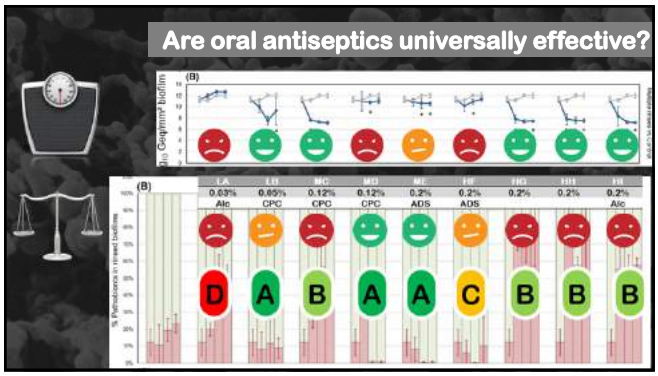

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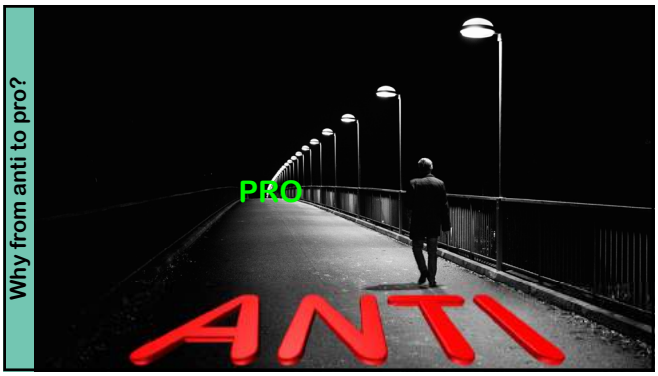

84

PROBIOTICS

85

World Health Organization

"Living micro-organisms which, when administered in adequate amounts confer a health benefit to the host"

86

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88

Domains?

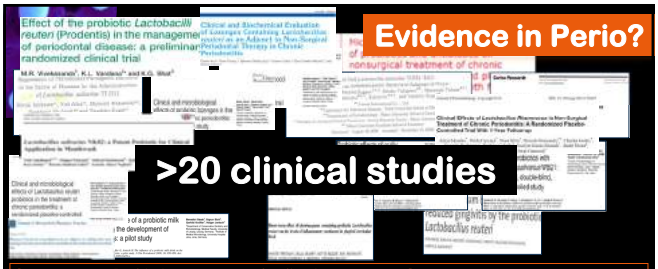
Frequently confronted?

Prevention or R/ GI disorders: daily basis

Prevention or R/ oral conditions: Emerging

89

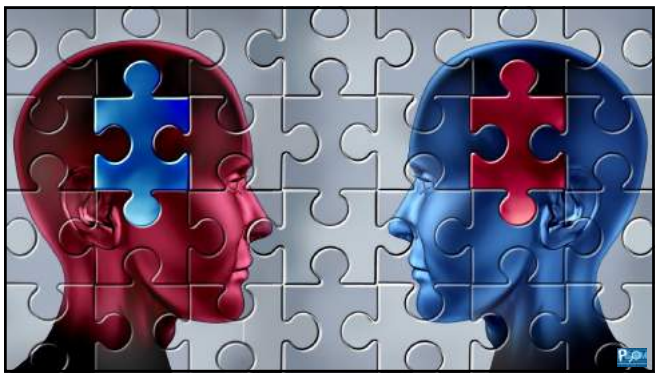
Evidence in Perio?



>20 clinical studies

Set-up	Probiotic:	Application:	Outcome measure
	- *L. salivarius* - *W. cibaria* - *L. reuteri* - *L. casei shirota* -	- tablets - chewing gum - oral rinse - milk drink	- PPD - GI - PI - BOP - microbiology

90



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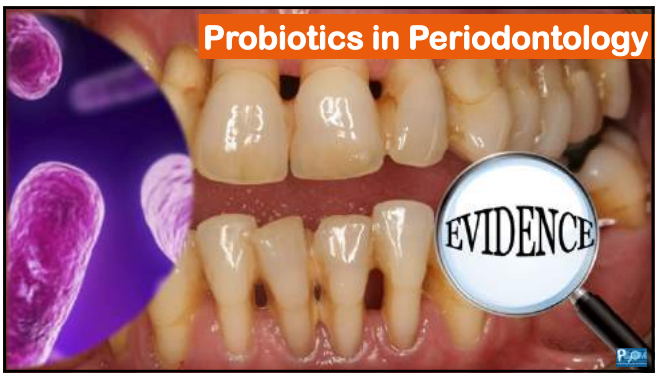

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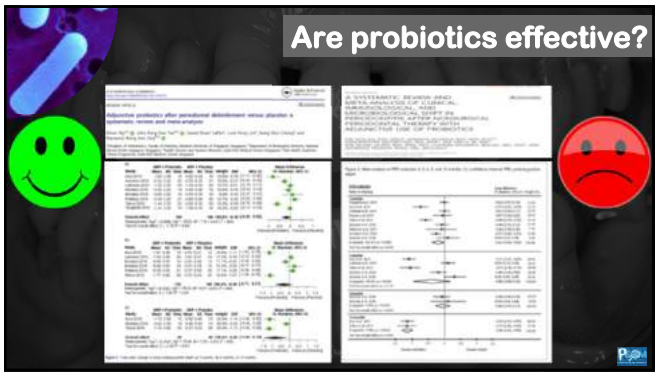

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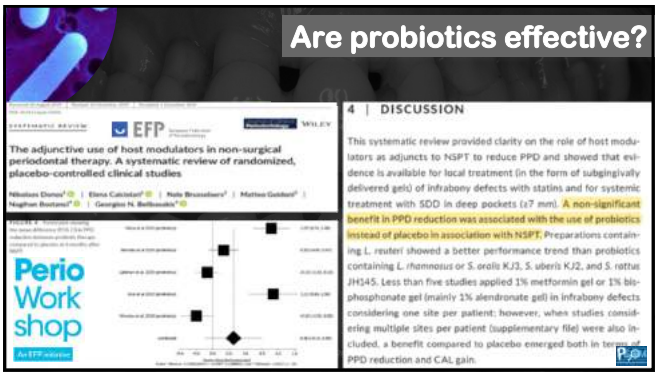

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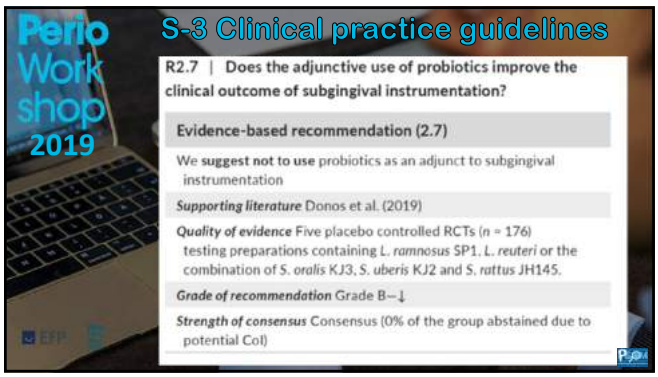

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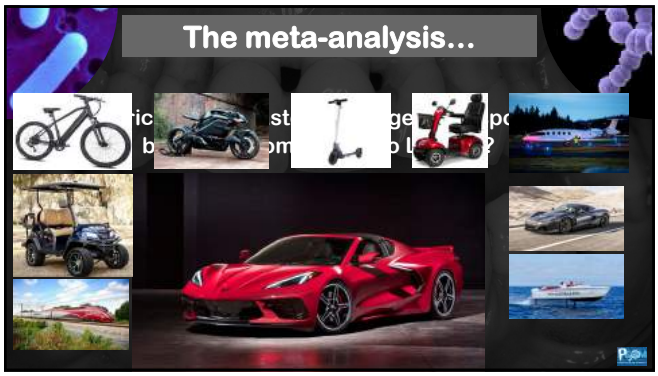

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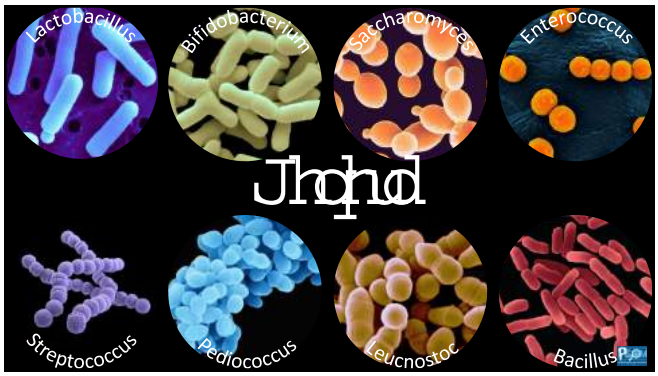

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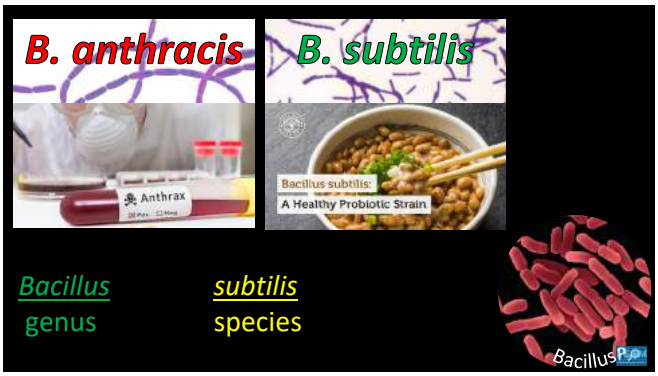

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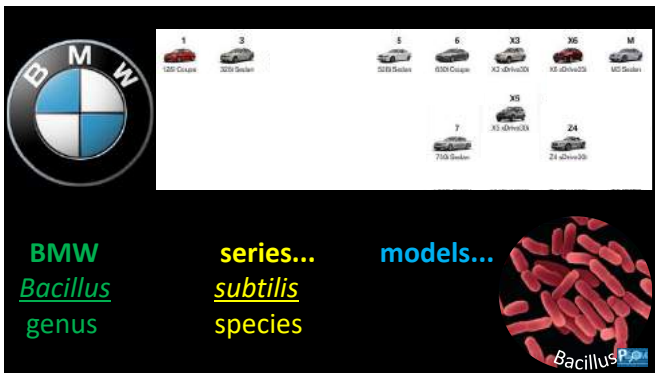

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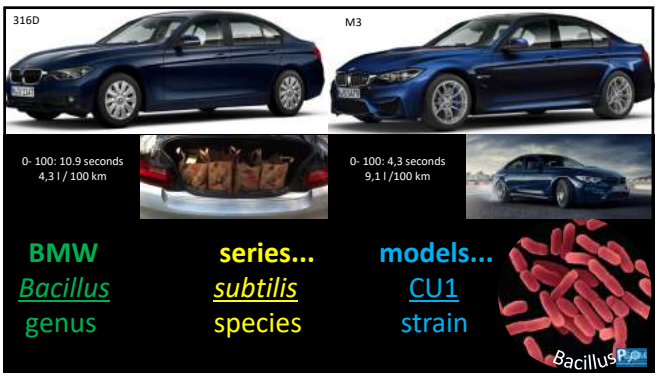

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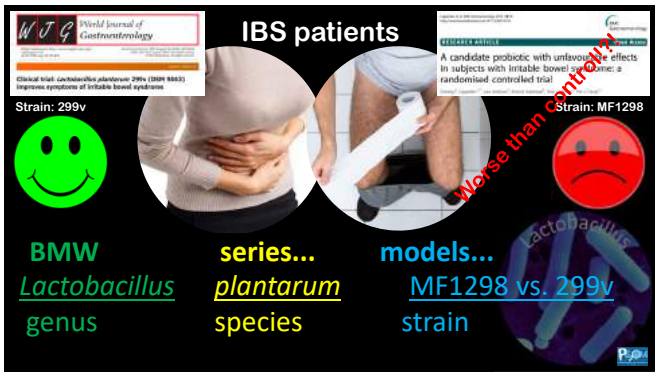

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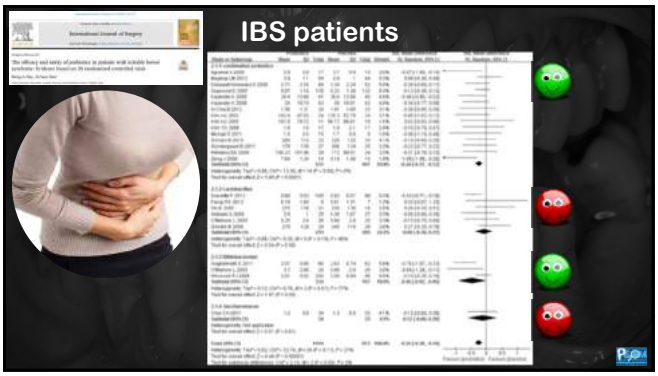

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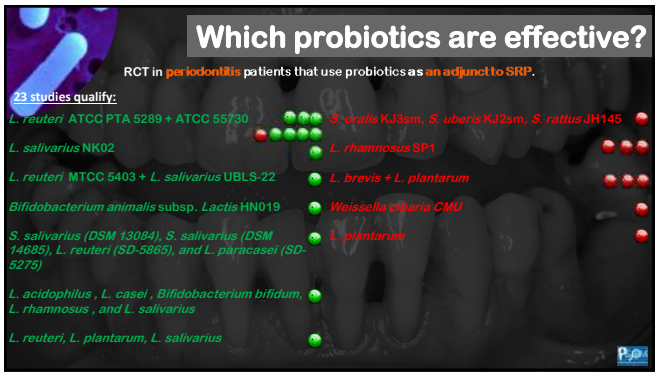

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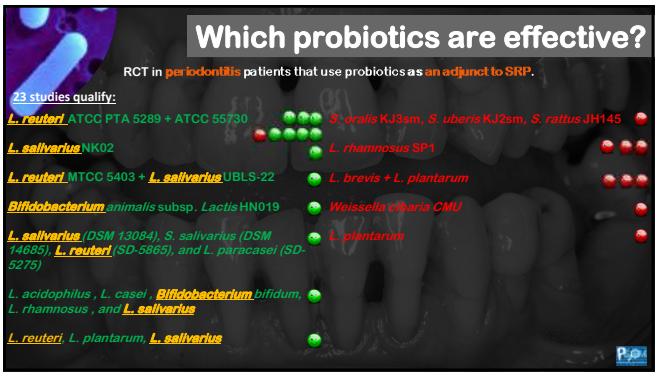

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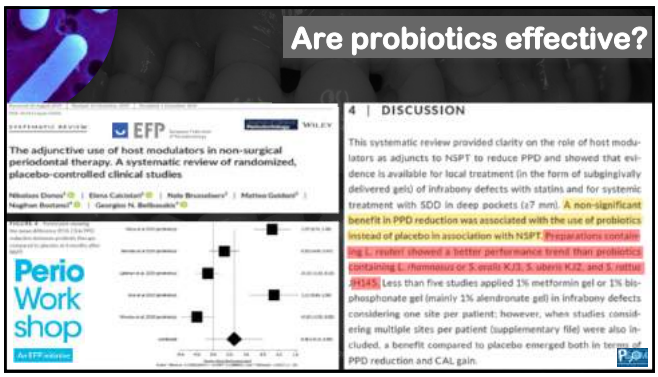

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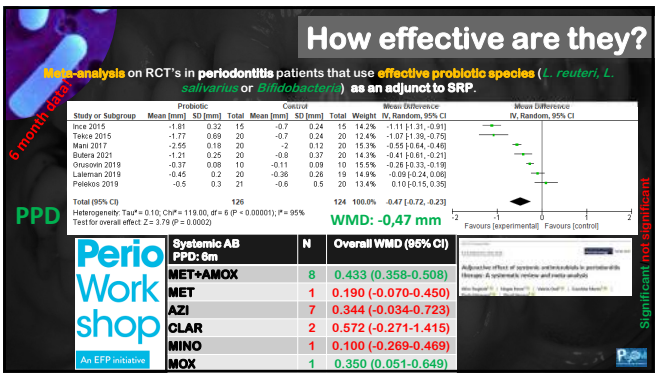
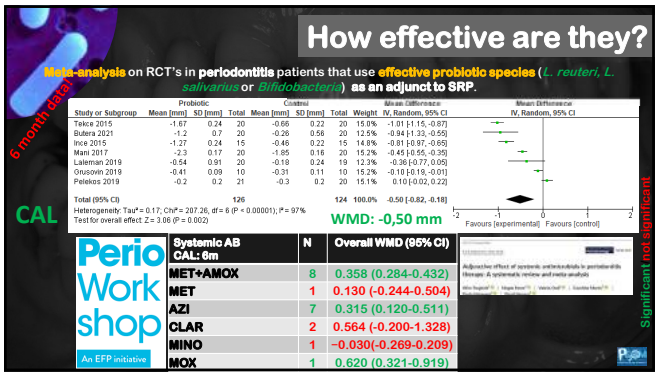


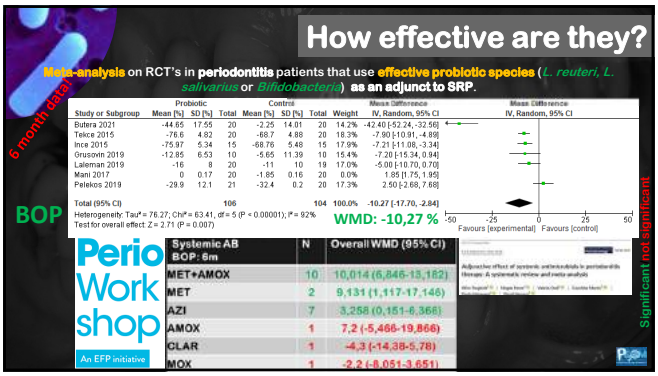
Systemic AB PPD: 6m	N	Overall WMD (95% CI)
MET+AMOX	8	0.433 (0.358-0.508)
MET	1	0.190 (-0.070-0.450)
AZI	7	0.344 (-0.034-0.723)
CLAR	2	0.572 (-0.271-1.415)
MINO	1	0.100 (-0.269-0.469)
MOX	1	0.350 (0.051-0.649)

110



Systemic AB CAL: 6m	N	Overall WMD (95% CI)
MET+AMOX	8	0.358 (0.284-0.432)
MET	1	0.130 (-0.244-0.504)
AZI	7	0.315 (0.120-0.511)
CLAR	2	0.564 (-0.200-1.328)
MINO	1	−0.030(-0.269-0.209)
MOX	1	0.620 (0.321-0.919)

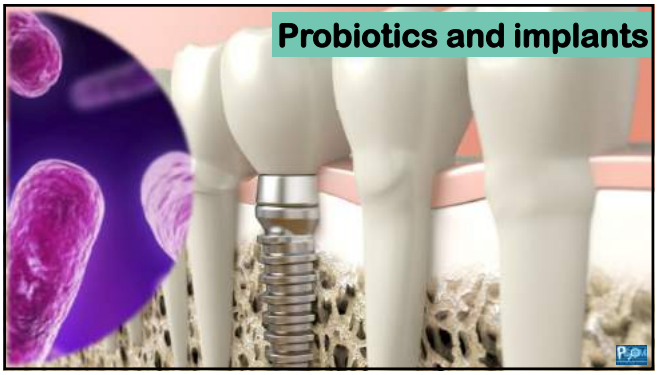
111



Systemic AB BOP: 6m	N	Overall WMD (95% CI)
MET+AMOX	10	10,014 (6,846-13,182)
MET	2	9,131 (1,117-17,146)
AZI	7	3,258 (0,151-6,366)
AMOX	1	7,2 (-5,466-19,866)
CLAR	1	-4,3 (-14,38-5,78)
MOX	1	-2,2 (-8,051-3,651)

112

113



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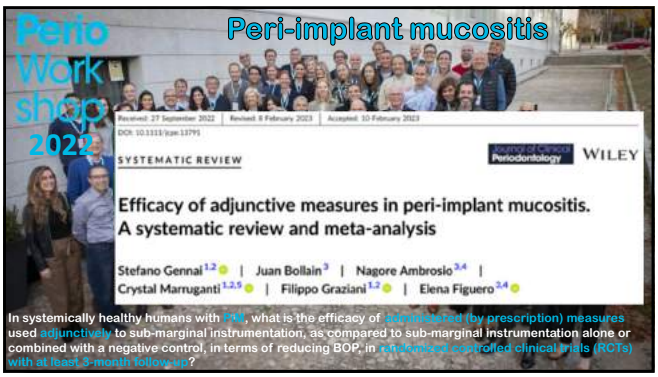

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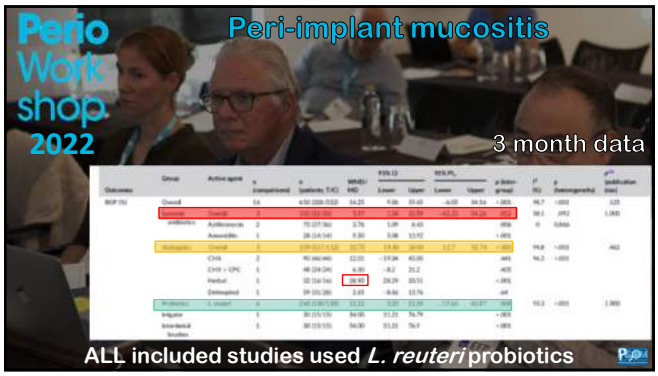

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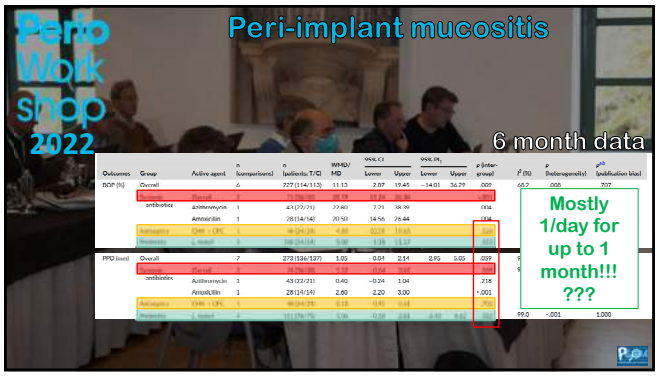

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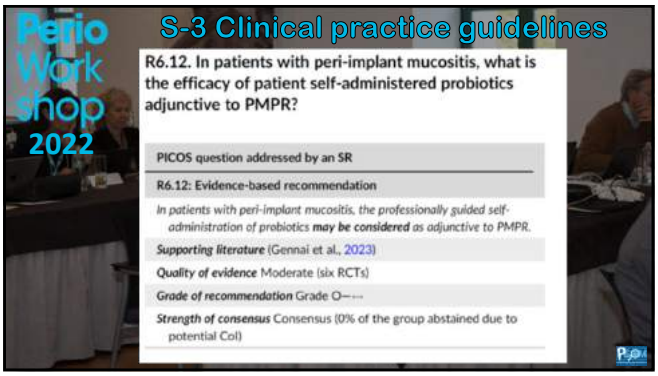

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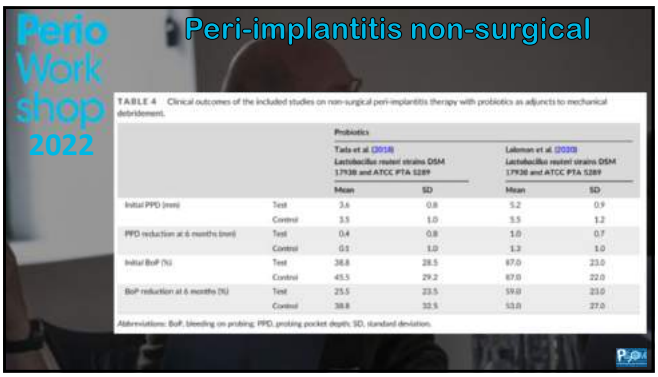

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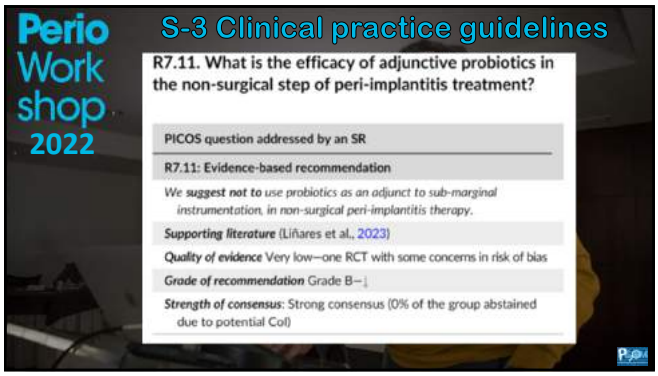

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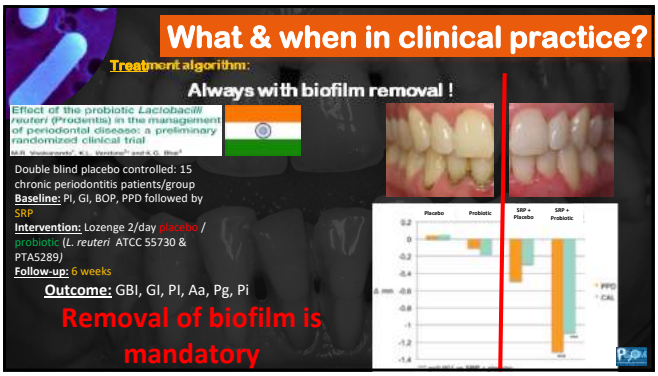

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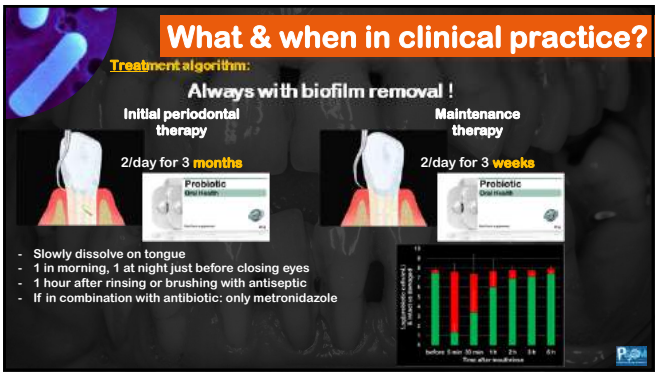

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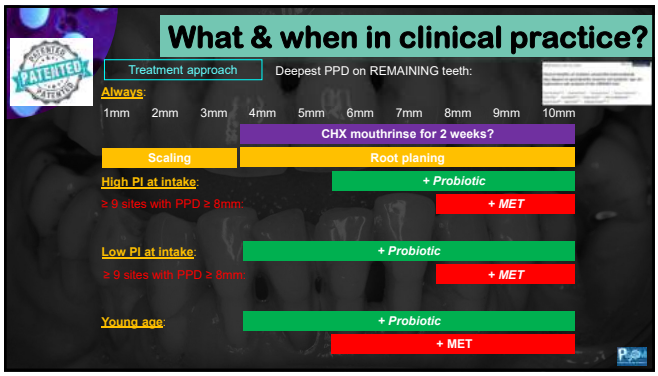

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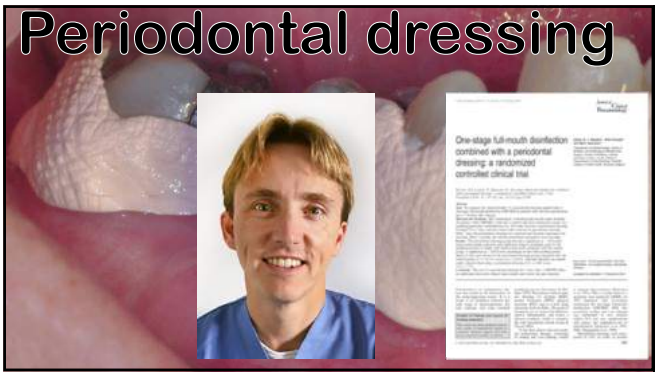

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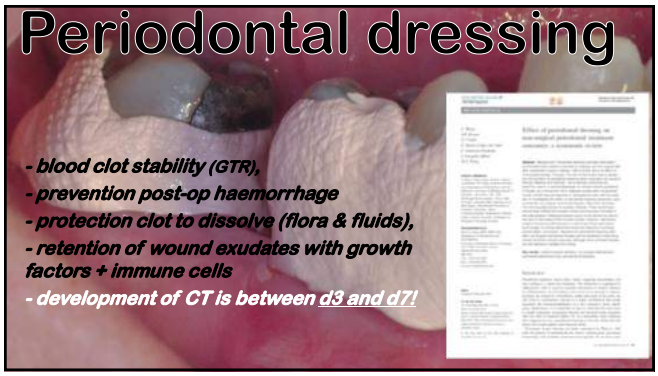

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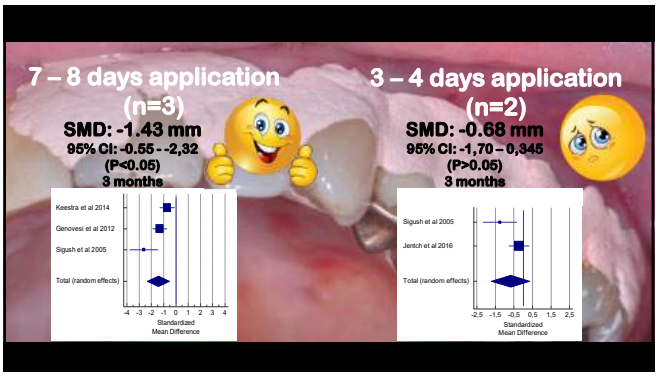

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