Appendix 1. Search strategy

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| **Search in LILACS**  Latest search: 21.09.2016 | | |
| # | **Search for photodynamic therapy** | Items found |
| 1 | (tw:("photodynamic therapy" OR "photodynamic treatment" OR pdt OR apdt OR pact OR pad OR photochemotherapy OR photochemotreatment OR fotoquimioterapia OR "antimicrobial photodynamic therapy" OR "photodynamic inactivation" OR "photoactivated disinfection" OR "light activated disinfectio" OR helbo OR periowave OR emundo OR periogreen OR fotosan OR photosensitizing OR photosensitizer ) OR mh:("Photochemotherapy")) AND db:("LILACS")) | 1103 |
|  | **Search for periodontal disease** |  |
| 6 | tw:(periodont\* OR scaling OR debridement OR "SRP" ) OR mh:("Periodontal Debridement") OR mh:("Periodontal Debridement" OR "Periodontal Diseases") AND (db:("LILACS")) | 1,954 |
| 7 | #1 AND #6 | 45 |

mh: Medical Subjects Headings, db: database

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| **Search in Medline (via PubMed)**  Latest search: 21.09.2016 | | |
| # | **Search for photodynamic therapy** | Items found |
| 1 | "Photochemotherapy"[Mesh] OR "photochemotherapy"[All Fields] OR “photodynamic antimicrobial chemotherapy“ [All Fields] OR "PACT" [All Fields] OR (photochem\*[All Fields] AND (therapy OR treatment) [All Fields]) | 17072 |
| 2 | "Photosensitizing Agents"[Mesh] | 11736 |
| 3 | "laser therapy, low-level"[MeSH Terms] OR ("laser" [All Fields] AND "therapy"[All Fields] AND "low-level" [All Fields]) OR "low-level laser therapy"[All Fields] OR ("low" [All Fields] AND "level"[All Fields] AND "laser"[All Fields] AND "therapy"[All Fields]) OR "low level laser therapy"[All Fields] OR "LPT"[All Fields] | 5209 |
| 4 | ("photodynam\* therapy"[All Fields] OR (photodynam\*[All Fields] AND (("therapy"[Subheading] OR "therapy"[All Fields] OR "therapeutics"[MeSH Terms] OR "therapeutics"[All Fields]) OR ("therapy"[Subheading] OR "therapy"[All Fields] OR "treatment"[All Fields] OR "therapeutics"[MeSH Terms] OR "therapeutics"[All Fields])))) OR "PDT"[All Fields] | 17463 |
| 5 | "phototherapy"[MeSH Terms] OR "phototherapy"[All Fields] | 34019 |
| 6 | "antimicrobial photodynamic therapy"[All Fields] OR "APDT"[All Fields] | 326 |
| 7 | (("light"[MeSH Terms] OR "light"[All Fields]) AND activated[All Fields]) AND ("disinfection"[MeSH Terms] OR "disinfection"[All Fields])) OR (light-activated[All Fields] AND ("disinfection"[MeSH Terms] OR "disinfection"[All Fields])) | 114 |
| 8 | (photoinactivation[All Fields]) OR (photodynamic[All Fields] AND inactivation[All Fields]) OR (photoactivated[All Fields] AND ("disinfection"[MeSH Terms] OR "disinfection"[All Fields])) | 1829 |
| 9 | "helbo" OR "fotosan" OR "pad plus" OR "periowave" OR "periogreen" OR "emundo" | 393 |
| 10 | "Lasers, Semiconductor"[Mesh] | 1924 |
| 11 | #1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10 | 49624 |
|  | **Search for periodontal disease** |  |
| 12 | "Periodontitis"[Mesh] OR "Chronic Periodontitis"[Mesh] OR "Aggressive Periodontitis"[Mesh] OR "Periodontal Diseases"[Mesh] OR "Periodontal Pocket"[Mesh] OR "Periodontal Attachment Loss"[Mesh] OR "Tooth Mobility"[Mesh] | 76567 |
| 13 | "Periodontics"[Mesh] OR "Preventive Dentistry"[Mesh] OR"Subgingival Curettage"[Mesh] OR "Root Planing"[Mesh] OR "Dental Scaling"[Mesh] OR "Dental Prophylaxis"[Mesh] | 45997 |
| 14 | periodont\* | 98662 |
| 15 | "attachment loss"[All Fields] OR "clinical attachment loss"[All Fields] OR "periodontal attachment loss"[All Fields] OR "alveolar bone loss"[All Fields] OR "clinical attachment level"[All Fields] OR (pocket[All Fields] AND depth[All Fields]) | 16078 |
| 16 | #12 OR #13 OR #14 OR #15 | 143010 |
| 17 | #11 AND #16 | 765 |

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| **Search in Web Of Science Core Collection**  Latest search: 21.09.16 | | |
| # | **Search for photodynamic therapy** | Items found |
| 1 | TOPIC: (photodynam\* OR photochemotherapy OR photochemotreatment OR pact OR apdt OR pdt OR photoactivated OR pad OR photoinactivation OR "light activated disinfection" OR lad OR photosens\* OR phototherapy OR helbo OR periowave OR emundo OR periogreen OR fotosan OR "pad plus") | 105,654 |
|  | **Search for periodontal disease** |  |
| 2 | TOPIC:(periodontitis OR periodontal OR "pocket depth" OR "attachment loss" OR "alveolar bone loss" OR "clinical attachment level" OR "preventive dentistry" OR ((debridment OR scaling) AND (dental OR root)) OR "root planing" OR "dental prophylaxis") | 60,779 |
| 3 | #1 AND #2 | 490 |

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| **Search in Cochrane Library**  Latest search: 21.09.16 | | |
| # | **Search for photodynamic therapy** | Items found |
| 1 | MeSH descriptor: [Photdynamic Therapy] explode all trees | 738 |
| 2 | photodyn\* or photochem\* or photosens\* or photoinactiv\* or photoactiv\* or lightactiv\* or PDT or APDT or LAD or PACT or PAD or helbo or periowave OR emundo OR periogreen or fotosan or “pad plus“ in Trials | 4275 |
| 3 | #1 OR #2 | 5241 |
|  | **Search for Biofilm:** |  |
| 4 | MeSH descriptor: [Biofilms] explode all trees | 247 |
| 5 | MeSH descriptor: [Dental Plaque] explode all trees | 2177 |
| 6 | (dental and plaque) or (dental and bacteria) or biofilm or ((microbial or polymicrobial) and infection)  (Word variations have been searched) | 7416 |
| 7 | #5 OR #6 OR #7 | 7440 |
| 8 | #3 AND #7 | 112 |
|  | **Search for parodontitis:** |  |
| 9 | MeSH descriptor: [Periodontics] explode all trees | 2995 |
| 10 | MeSH descriptor: [Periodontal Diseases] explode all trees | 4337 |
| 11 | MeSH descriptor: [Subgingival Curettage] explode all trees | 620 |
| 12 | MeSH descriptor: [Dental Scaling] explode all trees | 987 |
| 13 | periodont\* (Word variations have been searched) | 7692 |
| 14 | (dental near scal\*) or (tooth near scal\*) or (teeth near scal\*) or (teeth near scaled) or (suprgingival next scal\*) or (subgingival next scal\*) or (scale\* near polish\*) (Word variations have been searched) | 1450 |
| 15 | (subgingival near curettage) or (mechanical\* near debride\*) or (periodontal near debride\*) (Word variations have been searched) | 443 |
| 16 | #9 OR #10 OR #11 OR #12 OR #13 OR #14 OR #15 | 8955 |
| 25 | #8 AND #24 | 48 |