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Theilade E, Wright W H, Jensen S B & Löe H. Experimental gingivitis in man. II. A longitudinal clinical and bacteriological investigation. *J. Period. Res.* 1:1-13, 1966.
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Persons with excellent oral hygiene and healthy gingiva developed gingivitis after they stopped toothbrushing. The sparse, simple microflora of healthy gingiva gradually changed into the abundant, complex flora of gingivitis. Following resumption of tooth cleaning, the clinical and microbiological picture returned to gingival health. [The *SCI*® indicates that this paper has been cited in over 255 publications.]

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The dental college that opened in Aarhus in 1958 attracted a young, enthusiastic staff with diverse research backgrounds and offered a fruitful environment of interdepartmental teamwork unhampered by the barriers too often found in older institutions.

Experimental gingivitis as perceived by Löe[1] became a simple, didactic proof of the essential role of dental plaque bacteria in periodontal diseases, which was earlier suggested by epidemiological data. The new Plaque Index and Gingival Index had made it possible to establish a baseline of plaque-free tooth surfaces and healthy gingiva and to assess quantities of plaque and severity of gingival inflammation at individual tooth surfaces.

At that time, oral microbiologists (getting ready with cultural methods for a coming era of great development) lacked definitions of the clinical status of sampling areas of gingival tissues. Therefore, they had failed to find any qualitative differences in the microfloras of what were considered to be gingival health and disease, but which were really two disease states.

When Löe asked Jensen and me to do some studies on experimental gingivitis,[1] we resorted to two methods of simple, direct microscopy of stained preparations developed by H.A. Gins and B.G. Bibby some 25 years earlier. I consider this first experiment a very successful pilot study. It was then repeated with modifications: "Aarhus superhealthy gingiva" was obtained by a pre-experimental period of supervised oral hygiene. Repeated microbiological sampling of defined areas allowed us to establish a sequence of development over time from the sparse gram-positive flora of clean teeth and healthy gingiva to the complex gingivitis-flora comprising also gram-negatives, fusiforms, filaments, curved rods, and spirochetes.

Once our heated discussions about the manuscript were over (an invaluable intellectual exercise), publication was no problem. I hope it was independent of the fact that Löe was editing the first issue of the *Journal of Periodontal Research*.

The paper became widely quoted for several reasons: (1) As a simple, instructive demonstration of the causal role of plaque bacteria in gingivitis, it has become required reading in most dental schools. Some dental students even have to try the experiment in their own mouths. (2) It inspired studies on the microflora of other defined states of periodontal diseases. (3) The experimental gingivitis model can be combined with advanced methods to study, for example, the cultivable microflora of developing plaque and the role of various species in plaque formation and initiation of gingivitis.[2-4] (4) Many other aspects of gingivitis have been similarly studied, such as pathogenesis, cellular and humoral immune response, and gingival exudate. Analogous animal models have facilitated structural studies of the tissues. (5) Last, but not least, many citations are due to the widespread use of the model for assessment of chemical agents for their potential to inhibit plaque formation and prevent gingivitis. A classical example is the introduction of chlorhexidine into dentistry.[5]

1. **Löe H, Theilade E & Jensen S B.** Experimental gingivitis in man. *J. Periodontology* 36:177-87, 1965. (Cited 635 times.) [See also: Löe H. Citation Classic. *Current Contents/Clinical Practice* 10(37):22, 13 September 1982.]
2. **Theilade E, Theilade J & Mikkelsen L.** Microbiological studies on early dento-gingival plaque on teeth and Mylar strips in humans. *J. Period. Res.* 17:12-25, 1982.
3. **Loesche W J & Syed S A.** Bacteriology of human experimental gingivitis. Effect of plaque and gingivitis score. *Infec. Immunity* 21:830-9, 1978.
4. **Moore W E C, Holdeman L V, Smibert R M, Good I J, Burmeister J A, Palcanis K G & Ranney R R.** Bacteriology of experimental gingivitis in young adult humans. *Infec. Immunity* 38:651-67, 1982.
5. **Löe H & Schiött C R.** The effect of mouthrinses and topical application of chlorhexidine on the development of dental plaque and gingivitis in man. *J. Period. Res.* 5:79-83, 1970. (Cited 220 times.)