# Sensitisation of cariogenic bacteria to killing by light from a helium-neon laser

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**Summary.** Suspensions of the cariogenic bacteria *Streptococcus mutans*, *S. sobrinus*, *Lactobacillus casei* and *Actinomyces viscosus* were exposed to light from a 7·3-mW helium-neon laser in the presence of toluidine blue O. A substantial killing rate (*c.* $10^6$ cfu) of all four species was achieved with a dye concentration of 50 $\mu$g/ml and a light energy dose of 33·6 J/cm$^2$. This was achieved in 60 s, an exposure time that is clinically acceptable. Exposure to laser light in the absence of the dye did not significantly affect the viability of any of the organisms. This approach may be useful in dentistry to sterilise carious lesion prior to its repair.