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The Visual Environment in an Operating Theatre at a Hospital

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36) The visual environment in an Operating Theatre at a Hospital.

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The requirements for the visual environment in an operating theatre are high. The purpose is to evaluate and improve the visual environment in operating theatres.

The evaluation of the visual environment showed that 30 percent of the surgeons had eye-eyestrain had three times as much musculoskeletal strain than those without eyestrain. The illuminance and luminance show a low uniformity level on the operating table. The operating table average of 100.000 lux, while the surrounding areas' illuminance were much lower, that is, the operating cavities larger than the operating lamps light beam. The luminance contrast was 140:1. Unfortunately, there are no international, nor Swedish, lighting recommendations.

An improvement of the visual environment in the operating theatre may enhance the surgeon's performance, reduce strain with positive effects on patient safety. The luminance contrast within the visual environment will be optimized. The next part of the study will be performed in the beginning of 2012, and will focus on how the visual environment in the operating theatre should be designed and formulate lighting recommendations for the operating area.

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