Tooth bleaching or whitening is not a new technique in dentistry and it is evident from the published literature that the technique has been in use for over one hundred and fifty years. The question concerning the whiteness of teeth is a complex one since tooth whiteness may vary from individual to individual, and is also dependent on the age of the individual and culture etc. Tooth whitening following treatment may also be dependent on the type of whitening system used to whiten the teeth. There are a number of side-effects to this process and these include dentine sensitivity and gingival irritation. Normally these side effects should resolve after approximately 48 hours following treatment although in extreme situations may last for several months. The purpose of this overview was therefore to review the available published literature in order to determine whether there was any evidence that the application of 10% and 15% carbamide peroxide in tooth whitening procedures resulted in tooth (dentine) sensitivity. The conclusions from the review would indicate that tooth whitening with either 10% or 15% carbamide peroxide was an effective and safe treatment under a dental professionals’ supervision following careful diagnosis and treatment planning. Reported side-effects from these studies, namely dentine sensitivity and gingival irritation were considered mild to moderate in nature and were transient in duration. Reported incidences of dentine sensitivity range from 15-65% of patients using 10% carbamide peroxide whereas higher incidences (67-78%) were reported when using hydrogen peroxide in combination with heat.