

'Estimation of Time Since Death in the Early Post-mortem Period', 2nd Ed C. Henssge, T. Krompecher, B. Knight (Ed), B. Madea, Nokes L. (2002) ISBN 0340719605 £85 [Arnold Publishers](#)

Now in its second edition, this unique reference text draws on a wealth of primary research data on the subject of estimating time since death (post-mortem interval), primarily by temperature based techniques.

The international panel of contributors adds an authoritative weight to the text, and it is drawn together into practical summaries by the editor - Prof. Bernard Knight (retired Home Office Pathologist and Emeritus Professor of Forensic Pathology at the University of Wales College of Medicine).

Practicing forensic pathologists will be more aware of the details of estimating this potentially crucial post-mortem interval, and will no doubt be familiar with the various 'rules of thumb' and more 'scientific' means of utilising the drop in body temperature after death - particularly using one of the author's 'nomograms' (Henssge). For the more 'casual' reader, or amateur pathologist, reading about the background to the development of these quantitative techniques is fascinating (if not just a little bit daunting for the numerically challenged of us!).

It was interesting to note that in a comparison of the utility of rules of thumb with the more detailed use of numerous equations, the simple methods fared very well - indeed, the most consistently accurate method was $\text{Time since death} = \text{rectal temperature at time of death } (^\circ\text{C}) \text{ minus the rectal temperature at a second time } (^\circ\text{C}) + 3$.

The limitations of the nomogram method are presented, together with the theoretical basis upon which the assumptions of the utility of the nomogram are based. For example, the method was based upon data derived from assessing naked bodies on dry surfaces, laying on their back on a thermally indifferent base, in still air and in surroundings away from any source of strong heat radiation. For situations not conforming to these ideals, there are various corrective factors to be applied.

This text also details non-temperature based techniques for determining post-mortem interval, including other experimental

techniques of stimulating skeletal muscle (retaining contractability for varying degrees post-mortem), and the examination of electrolytes from vitreous humour (popular in the US). The use of stomach contents also gets a brief review, including details of the Steven Truscott case that taxed the brains of many scientists in Canada in the late 1950s (including our own Prof. Keith Simpson of Guy's Hospital, London).

The utility of rigor mortis and post-mortem hypostasis is also reviewed, giving literature based/ evidence based summary tables of the time of onset of each of these phenomena that will be of use to those undertaking practical case work.

Like its predecessor, the strength of this edition lies in its presentation of both the original scientific treatises on the subject, together with a practical assessment of the use of each technique described.

Indeed the last part of the book is taken up with case studies that demonstrate the strengths and weaknesses of each technique, giving useful suggestions as to how they may be applied in 'real life'.

In most forensic medicine textbooks, the area of estimation of time since death is dealt with in a very 'matter-of-fact' manner, and the reader often gets the impression that the whole science behind their statements is much more concrete than it actually is. Having said that, all of the texts that I have seen reference this book, so they clearly acknowledge the fact that it is an imprecise science.

Perhaps the people who most need to see this book are those charged with actually trying or defending cases where the time of death is of crucial importance, and the investigating officers who try to pin the pathologist down to an unrealistic estimate of time since death?

This textbook is clearly of a specialised nature, and would be best placed on the shelf of a practicing pathologist, or lawyer. It is probably too detailed for the non-specialist reader, but would not be out of place on the library shelves of all medical schools. It is a well written book covering an area of forensic medicine (like the ageing of bruises) that is so contentious, that it is a perfect area of study for any aspiring forensic pathologist, and would make an excellent Special Study Module topic for any interested student. Contact your nearest forensic medicine department now, and discuss it!