
The recent Editorial by Laakso et al (2002) is, quite simply, brilliant. The authors are to be commended for their insight, foresight and courage in writing such an editorial in the face of mounting criticism about the use and inclusion of electrophysical agents in physiotherapy practice and education.

Reading this editorial gave me comfort and hope. Comfort from the fact that these authors not only know their stuff, but they have the research, publications, and expertise to back them up. They are not shooting blindly or randomly from the hip. These are well read and well respected researchers, educators and writers. It gave me hope because as an educator myself, teaching electrophysical agents for the past 21 years, I have often felt I am in an uphill battle against the manual therapists and non-electrotherapy users in my profession. I have been told that more articles and research projects state that placebo is more effective than TENS or ultrasound than there are citing effectiveness. I have been told that electrophysical agents should be either dropped or severely cut back in entry-level curricula. However, those same critics cannot show me the evidence that these authors not only know their stuff, but they have the research, publications, and expertise to back them up. They are not shooting blindly or randomly from the hip. These are well read and well respected researchers, educators and writers. It gave me hope because as an educator myself, teaching electrophysical agents for the past 21 years, I have often felt I am in an uphill battle against the manual therapists and non-electrotherapy users in my profession. I have been told that more articles and research projects state that placebo is more effective than TENS or ultrasound than there are citing effectiveness. I have been told that electrophysical agents should be either dropped or severely cut back in entry-level curricula. However, those same critics cannot show me evidence that Maitland is more effective than Kaltenborn or Paris or McKenzie, or even more effective than no manual therapy, yet the physiotherapy world is rampant with manual therapy courses and teaching gurus. Where is the evidence that Sahrmann techniques really work?

I constantly scour the literature for articles and research studies that are done well and that examine the use of electrophysical agents from a clinical point of view. How will this agent help me treat my patient - or will it? If the article does not have any clinical relevance, then I wonder how can I make it useful to my students? So what if ultrasound makes nerve conduction velocity increase? How will that help my patient? However, if an article states that ultrasound can heat connective tissue, and that heat helps to increase tissue extensibility with stretching and exercise, then ultrasound can, and will, remain a part of my treatment program for that patient.

These authors have helped me to explain to my students why we teach electrophysical agents and why they are still an important part of physiotherapy education. They have articulated not only the need to keep electrophysical agents as part of entry-level curricula, but also the need to keep them as part of a physiotherapist’s treatment approach.

I am excited and looking forward to sharing these authors’ insights and thoughtful reasoning with my fellow electrophysical agents instructors in Canadian physiotherapy programs.

Sandy Rennie  
*University of Alberta, Edmonton, Canada*


The recent editorial by Laakso and colleagues argued that there was sufficient evidence to justify the continued inclusion of electrophysical agents as a major study area within entry-level curricula. They stated that “despite the barriers, there are some positive, high quality systematic reviews supporting the use of electrophysical agents...”. In support of this assertion, they cited a Cochrane review (Flemming and Cullum 2002a). My view is that the citation of this review to support their assertion is quite misleading because it seems contrary to the reviewers’ conclusions.

The Flemming and Cullum review located seven low quality trials, so pooling was not performed, with none of the individual trials finding a difference in healing rates in favour of ultrasound. Flemming and Cullum suggested that their results had the following implications for practice:

“There is insufficient evidence in this review to support the routine use of therapeutic ultrasound in practice. The available evidence does suggest a benefit of ultrasound therapy in the healing venous leg ulcers. However due to the poor quality of the studies included in the review this effect needs interpreting with caution. As all of the studies are underpowered the effect estimates are extremely imprecise.”

In the same issue of the Cochrane Library, Flemming and Cullum published four other reviews of electrophysical agents for the treatment of skin lesions and the implications for practice from each review are reproduced below:

1. “There is no reliable evidence of benefit of using electromagnetic therapy in the treatment of pressure sores. The possibility of benefit or harm cannot be ruled out due to the small number of trials with methodological limitations and small numbers of participants.”
2. “There is insufficient evidence from RCTs to support the routine use of electromagnetic therapy in practice.”
3. “There is insufficient evidence in this review to give a clear direction for practice. There is no evidence of a benefit of lasers on leg ulcer healing, though there is not clear evidence of no benefit as the trials are small and of poor quality.”
4. “There is no evidence of a benefit of using ultrasound therapy in the treatment of pressure sores. The possibility of a beneficial or a harmful effect cannot be ruled out due to the small number of trials with methodological limitations and small numbers of participants.”

My letter should not be seen as support for those in this debate who wish to abandon the use of electrophysical agents. My position is that the only meaningful way to eventually resolve this debate is to carefully consider all the...
available evidence. The Editorial by Laakso and colleagues has failed to advance the debate because it has not done this.

Chris Maher
The University of Sydney

References

Continued research into electrophysical agents is the way forward. (Reply to Maher C, Australian Journal of Physiotherapy 49: 65-66)

We thank Dr Maher for his interest in the Editorial in which we argued for the continued inclusion of electrophysical agents (EPAs) in the entry-level physiotherapy curricula (Laakso et al 2002, Maher 2003). Our argument was predicated on the existing evidence, clinical practices and use of EPAs, and on safety issues. All aspects are integral to our argument and to current discussions.

The Editorial devoted considerable space to the problem of obtaining adequate evidence. This included the decisions about what constitutes quality evidence, and how evidence is obtained and evaluated. Dr Maher’s letter argued that the only way of “resolv(ing) this debate is to carefully consider all the available evidence”. We agree and argued precisely for this to precede decisions about EPAs in entry-level curricula. However, we also discussed our concerns regarding the current lack of high quality studies investigating the clinical uses of EPAs and the problems in relying on databases that depend on systematic reviews of randomised controlled trials (RCTs), such as PEDro or the Cochrane Library. We also discussed some inherent problems in EPA research (eg dosage-related issues) and the need to consider basic and applied research. Given the extent of our discussion, we are puzzled as to why Dr Maher is reporting Cochrane Library entries on some EPAs and skin disorders, and think the choice somewhat disingenuous.

We welcome the opportunity of continuing this debate and look forward to continued discussion of the relevant aspects of the issue of EPAs in entry-level curricula. At this stage though, we venture to repeat our suggestion of a way forward: promote all types of research into EPAs. This is also consistent with the need for a generally more substantial evidence base for decision-making in physiotherapy practice as a whole. And, if we then discuss all the relevant evidence, not just reviews of RCTs, perhaps we can then agree on which EPAs are clinically effective and which are not. This may then assist educators in their decisions as to what can and cannot justifiably be included in future curricula.

VJ Robertson¹, LS Chipchase² and E-L Laakso³

¹La Trobe University, Melbourne ²University of South Australia ³Griffith University, Gold Coast