

Because you're worth it

With eyes opened, Amanda Gallie believes we should all invest in ourselves

Swedish message

The Lindegard study was set up in Sweden to evaluate whether the use of prismatic lenses in loupes – in conjunction with 1.5 hours of ergonomic training – would surpass just receiving ergonomic information in relation to reducing cervical neck and shoulder strain.

A total of 60 participants were selected, 40 dentists and 20 hygienists; 24 were women and 16 were men. There was a number of people who dropped out bringing the total to 40 participants who took part. The mean age was 43.

All participants received a 1.5 hour masterclass on ergonomics. The control group of 20 participants just received the masterclass. The other 25 individually tested the loupes and lenses after the ergonomics session for eight weeks and were assessed in practice by the same ergonomics specialist.

All 25 had to attend an optometrist to have an eye test and all lenses were bespoke to each participant.

The assessments were taken at the individuals' workplaces while working on patients – the first study to do so. The dental work assessed compared work carried out in the maxilla and mandible, and a measure of the time taken for certain procedures. Instruments called inclinometers were used to measure the inclination of the head and neck at a neutral

I am one of the 60% of clinical dental personnel worldwide who suffers with neck and shoulder pain. [1](Ayers et al 2009; Hayes et al 2009.) It is something that, over time, I have learned to temper with anti-inflammatory preparations and chiropractic. The chiropractic has really opened my eyes to the fact that my work posture hasn't been working for me – it has been working against me.

I sit at the 11 o'clock position as a lot of right-handed clinicians do and I lean in to compensate for the fact the patient's head and my eyeline are not perpendicular. I also have cervical vertebrae straining, and this is common in dentists. In a recent study of 20 hygienists and 40 dentists, the hygiene cohort had a steeper flexion at 22 degrees compared to 14 degrees of the dentists. see box out of the results of Lindegard et al 2012.)



Thrilled

So, I was thrilled to be able to try the prism loupes used in the Lindegard study. Prism loupes may be the link in the chain we are all missing. The Swedish health board thinks so; they have just invested 7.8 million Swedish Krona into getting their dental professionals kitted out with these special prism glasses.

It sounds good, doesn't it? Well, being a slightly sceptical individual I wanted to try this all out for myself. In retrospect, it's been an interesting journey and a real learning experience to boot. I had a scheduled session with ergonomics specialist and managing director, Per Pettersson, who has 26 years of experience in optics and ergonomics, and it dawned on me over the hour that I was doing a lot of things wrong.

I treat my patients too low and, here's a new concept, I don't support my arms on the patient's body, shoulder or forehead! Therefore, my arms and shoulders are pushing against gravity and this creates musculoskeletal tension and static load – as it's known in the trade. My head should be upright as much as possible and flexed no more than 15-20 degrees.

Get visual

The visual focus of work – the mouth in this case – should be as high as I can get away with eg: at the level for threading a needle or peeling an apple. I should have a working distance of 35-40 cm at my trunk height.

My seating should be neutral to create a neutral spine with my shoulders over my hip joints and legs at > 110 degrees, and feet flat on the floor. We need to move the patient's trunk and neck over towards us and a Tempur pillow can be used to facilitate

this. Whenever we pick up an instrument from the tray, we should change position. Posture is also about movement and not maintaining a static pose.

Eventually, I was fitted for my loupes and, after an eye test and a two-week wait, they arrived. Great packaging – and weighing in at 16 grams – I adapted to them easily. If you are new to loupes, then be sure to ease yourself in gradually with 30-minute intervals of use initially, and then build up to half a session, then a full one, then a full day.

The lenses are truly bespoke, there is no fiddling around with getting a focus and a wide working field – good for the nerves and cross-infection, too!

It's genius

The prism in the lens angles the field of vision, together with an incline of the spectacle frames and lenses. This unison lifts the focal point up in what is called 'intuitive image shift'. The lift is bespoke and will change eye rotation from 25 degrees to 15 degrees, creating a large open working field by design and this changes your neck position – it's genius. I guarantee you will work straighter and more comfortably. I'm four weeks into my trial and I am really, really impressed. Usually on a Friday, after three days of full clinical work, my neck and shoulders are at critical level of strain with a searing pain across my scapulae – well not anymore! Loupes also improve your clinical work to a huge degree – they are a must. You will be surprised and astounded at what you see. You will see the teeth and gums differently, possibly debris and overhangs that you may have missed and you will see in detail the amazing work you do. **DH&T**



Amanda Gallie Amanda Gallie qualified from the University of Manchester School of Dental Hygiene in 1996 and is a part-time tutor at GKT London, working in private practice in central London. Amanda lectures on communication for the dental team and has a passion for periodontics.

Amanda is joined by Shaun Howe at the DH&T Conference next year. This will be the first non-association event for hygienists and therapists and is on the 8 February 2013 in London. Website www.dhandt.co.uk/event

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The Optergo MO concept, Prism Optics and the full range of Merident MO loupes and associated accessories are available from Optident.



Website www.optident.co.uk
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Online reading

The European Society of Dental Ergonomics (ESDE) has some wonderful resources on how to sit and where to position the patient. Website www.esde.org