

SELF PRESERVATION - occupational hazards for the practitioner

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Repetitive Stress Injuries: *'Upper limb disorders are the commonest cause of sickness absence in the UK ... and often lead to long term disability'* (Solicitors Journal March 2008).

In those affected, the overused soft tissues respond with swelling, weakness, numbness, tingling, and generalised discomfort in the hands and arms. Some will go for years without problems and then develop symptoms in their hands and arms, but others performing the same tasks may be entirely unaffected.

Back problems are best avoided by good position – pay attention to seated posture. The operators chair should not be so high as to cause you to look down to see the work-site. There should be no reason to raise the shoulders or work above elbow height. Work from a case or trolley and avoid bending down too often... those objects most often needed should be in the upper draws, whilst those needed only infrequently can be stored lower down.

Frequent and repetitive movements of the hand and wrist may lead to Repetitive Strain Injury (RSI). Hand and finger cramps, trigger finger and carpal tunnel syndrome are all Repetitive Stress Injuries.

The main factors associated with RSIs are repetitive actions, forceful movements, awkward postures, excessively tight-gripping, poor work organisation, stress, cold and vibration.

The use of appropriate nippers is highly recommended. Cantilever nippers (consider the 'Liston' pattern if your hand is small) magnify the grip and absorb much of the 'break-through' shock - which is unpleasant for the patient anyway, and is best made minimal. Use only the tips of the blades, taking multiple, small snips. If the nippers are hard to close there is too much nail between the jaws. Forcing the jaws to close may result in the patient experiencing a sharp pain, almost like a sting, and they will become wary of what you intend to do next.

Epicondylitis of the elbow, shoulder strain and neck or back strain are further RSI manifestations. Positioning and support of the patient to allow work at the appropriate height is vitally important to the optimal use of the arm, wrist and hand. If it is necessary to raise the shoulder to use the hand, the patient is too high or the operator sitting too low. If it is necessary to bend the back, the patient is too low or the operator sitting too high.

One of the worst positions regularly adopted by workers in our industry is that of sitting directly at the end of the patient chair. Best working is done from the side. The right-handed worker would do best to sit partially to the side of the patients' right foot in order to use the right hand and arm optimally. Left-handers would sit to the side of the patients' left foot. In the domiciliary setting, putting the foot up on the operators' knees precludes this measure. There is simply no substitute for a secure footstool or leg support, and this will allow the freedom of movement about the foot that is necessary for effective treatment. It may be something else to carry, but it needs to be considered as an essential to safe working. It must not be used for longer than necessary, or else it will cause the patient to experience joint pain from forced extension of their knee.

Dust exposure

Nail dust is sharp and organic. Much of it contains fungal material and nail drill work should be kept to an absolute minimum in recognition of this fact. Many workers in this industry suffer with their nasal sinuses and/or rhinitis (dripping nose). Investigations often reveal raised immunoglobulin (IgE) levels, a sign of long-standing, low-grade inflammation of the nasopharyngeal tissues. Eyes may also be affected, with constant redness, inflammation and 'watering' leading to drainage down the nose.

Dust control is important. Dry drills may collect much of the dust, but the finest particles pass through the filters. Wet drills give better dust control, and should be considered for all work - including domiciliary. Recent models are surprisingly lightweight and much more portable than of past years. Masks are just

slightly better than nothing at all. A dry drill used with a water-spray bottle allows much of the advantage of the wet drill to be gained without the higher expenditure.

Sit back from the job, and avoid inhaling deeply when close to the point of dust production. Some workers hold their breath or exhale slowly as they use the handpiece.

And take care not to create dust when emptying the drill's dust-collection bag. Dispose of the old bag, complete with contained dust, into a 'Clinical Waste' bag. Emptying the bag for re-use is a false economy and exposes the practitioner to a second, perhaps more concentrated exposure to dust. Nail dust is organic, sharply abrasive, and keratinous.

Eye trauma

Flying nail particles should not occur! Safety glasses should be totally unnecessary if good nail-trimming technique is practiced. Once the nippers are closed upon the nailplate, the face of the nipper should be covered with finger or thumb before the nipper is closed. This contains and controls all nail parings. Any other technique is inferior, and puts you at risk of receiving a toenail clipping in the face, the eye, up the nose or even in the mouth! The particles leave the nippers at considerable velocity - and they can sting!

Ergonomics

Positioning ourselves and our equipment is important to avoid postural strain and fatigue. We need to defend our joints, limbs and backs from excessive or protracted stress. Try to avoid working on the floor, sitting too high so that we need to raise our shoulders, and twisting our necks to be able to see what we are doing. Ergonomic principles need to be incorporated as an essential part of our technique

Eye strain

The strain of close observation at the same distance all day can cause the muscles that shape the lens to become fatigued and the lens to set into that focus. Looking up and focusing on some distant object relieves the eye muscles. Regular blinking is good for the eye, wetting and cleansing its surfaces. Close observation tends to depress the normally automatic blink response.

Gloves

Sensitive skin may react to latex gloves, or the powder with which they are dusted. Powder free gloves are available for those whose problem lies with the powder. Alternative gloves are available - vinyl or nitrile are good substitutes and are only very slightly more expensive.

Gloves bring their own safety issues. Consider the case of the wet glove with blood on its surface. If the glove be caught with the rotating bur (a constant risk and a not-infrequent event), the glove will be wound to its elastic limit before it breaks, elastically rupturing and spattering the blood everywhere when it does so. For this reason, and because gloves reduce surface perception and spoil dexterity to some extent, many operators choose to restrict glove use only to those cases known to require gloves. The argument that your patient may have unrecognised AIDS, HIV, Hep B, MRSA, HPV, etc, is largely a theoretical risk that should be taken seriously, but without hysteria - use common sense. Hand-washing before and after treatment episodes lowers any risk of infection to the operator.

Used instruments

Used instruments need to be isolated until they can be cleaned. Disposable blades should be removed immediately upon cessation of treatment, and the instruments placed into a puncture-proof container, well away from clean instruments.

When cleaning used instruments, it makes sense to begin the process by soaking them in an antiseptic pre-soaking solution. Add a dash of Dettol or Savlon to the water, and let them soak for 10-15 minutes. This will soften any deposits on the instruments, and loosen debris so that it will be more readily removed by the subsequent stages of cleaning (ultrasonic cleaning, rinsing, autoclaving). When manipulating used instruments, orientate them so that the sharp ends all point in the same direction, making stab-wounding less likely. Some workers advocate wearing heavy duty rubber or Kevlar 'puncture-resistant' gloves for the soaking/washing/brushing parts of the process.

Sedentary occupation

Because we do most of our work sitting down, we ought to do something physical when not at work to maintain healthy fitness levels. Typical long-term consequences of little exercise are the gaining of excessive body weight, poor cardiovascular state and peripheral arterial disease. However, as we observe in our patients, we are not the only sedentary group. Choice of lifestyle is a wider choice not entirely driven by occupation.

Scabies

There are more than 20,000 cases a year of scabies.

'One of the first symptoms is intense itching, especially at night. Tiny mites lay eggs in the skin, leaving silvery lines with a dot at one end. The rash can appear anywhere, but it often starts between the fingers.' <https://www.nhs.uk/conditions/Scabies>

The mites burrow through the skin to lay their eggs.... if you see lesions like this on the feet or hands of clients, avoid skin contact - wear gloves! If you begin to itch, seek help immediately.



Viral contagion – Zoonoses – CoVID 19

CoVID-19, properly called 2 (SARS-CoV-2) is highly contagious and spreads by droplet transmission and touching of infected surfaces. People that have suffered infection from this agent are thought to shed the virus up to six weeks after recovery. Wear gloves, mask and eye protection and work quickly to reduce exposure time, then disinfect surfaces, furniture and all regularly touched surfaces on completion. Bleach solution kills the virus. Wash hands thoroughly in soap and water. Used Personal Protective Equipment (PPE) is discarded into Clinical Waste.

There have been previous pandemics involving zoonotic viruses – Spanish flu (1918), severe acute respiratory syndrome SARS (2002), and Middle East respiratory syndrome MERS (2012).

In 2020, 2 (SARS-CoV-2) caused a global pandemic and more than 40,000 UK deaths in the first five months following recognition. UK businesses were obliged to cease trading, and the population (all but essential workers) were kept in isolation ('locked-down') for many weeks and then were only let out as long as they practiced 'social distancing'. Many businesses, both large and small, had no income for many weeks and many businesses were lost. Those professions particularly at risk are those where we come into close proximity to patients. In these instances we must follow government advice and not take risks.

There can be no guarantee that something of this sort will not happen again. The best defence for us against loss of our businesses is the relationship that we can make with our clients.... trust, integrity, clear communication, clean and reliable service with technical merit. This should allow us to resume working as soon as it is safe to do so. We must not forget that we offer a service to our clients. Poor service – no clients.... no clients – no practice. We must practice safely.

SELF-PRESERVATION

Responses should be submitted on A4 paper and should be of sufficient length to demonstrate full understanding of the topic. Single word answers are not permissible. Try to answer in one or two short paragraphs, not more than a 1/4 page per answer.

Q1. Discuss repetitive stress injuries. How can we defend ourselves against them?

Q2. How can we control or avoid generating nail dust?

Q3. Why should we be concerned about nail dust, and how should we dispose of it?

Q4. How can we recognise scabies and defend ourselves against infection?

Q5. How could we remain informed about the progress of a pandemic viral infection that has caused government to impose a lockdown?

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