



WRMSD: How do you stay healthy? What can we learn from the experiences of sonographers?

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What do we already know?



What were the experiences of my study participants



How can these experiences inform 'best practice'



Top Tips

The Problem....

Average prevalence of WRMSD for health and social care workers in the UK is 1,430 per 100,000 [HSE, 2022]

Region of 80%+ of sonographers reporting symptoms of WRMSD with an estimated 20% of these may develop a career ending injury [Gibbs and Edwards, 2012; Sommerich et al, 2018]



Part 1: Defining the Phenomenon...



Repetitive Strain Injury [RSI]

Muscular-skeletal Disorder [MSD]

Work Related Injury [WRI]

Work Related Muscular Skeletal Disorder [WRMSD]

Work Related Upper Limb Disorder [WRULD]

Work Related Upper Extremity Disorder [WRUED]

Part 1: Causes of WRMSD



Part 1: Signs Symptoms (Stages of Progression)

Initial

- Joint Fatigue
- Aches +/-swelling/warmth
- Joint Stiffening
- Intermittent pain
- Tingling/pins & needles/burning

Progression

- Weakness
- Numbness
- tenderness +/- swelling
- Reduced grip strength
- Reduced range of movement
- More frequent pain

Chronic

- Loss strength/sensation
- Reduced Co-ordination
- Loss of range of movement
- Continued pain/discomfort even when not undertaking task
- Inability to do everyday tasks

Benefits of WRMSD Training

Opportunities to share ideas with fellow sonographers and different ultrasound departments

Demonstration of WRMSD prevention by Physiotherapist

Introduction to Alexander Technique

Advice from Health and Safety Experts

Ambidextrous Scanning Techniques

Reassured/acknowledgement of a 'culture of denial'

Alternating sitting/standing scanning

Additional 'slave' Monitors

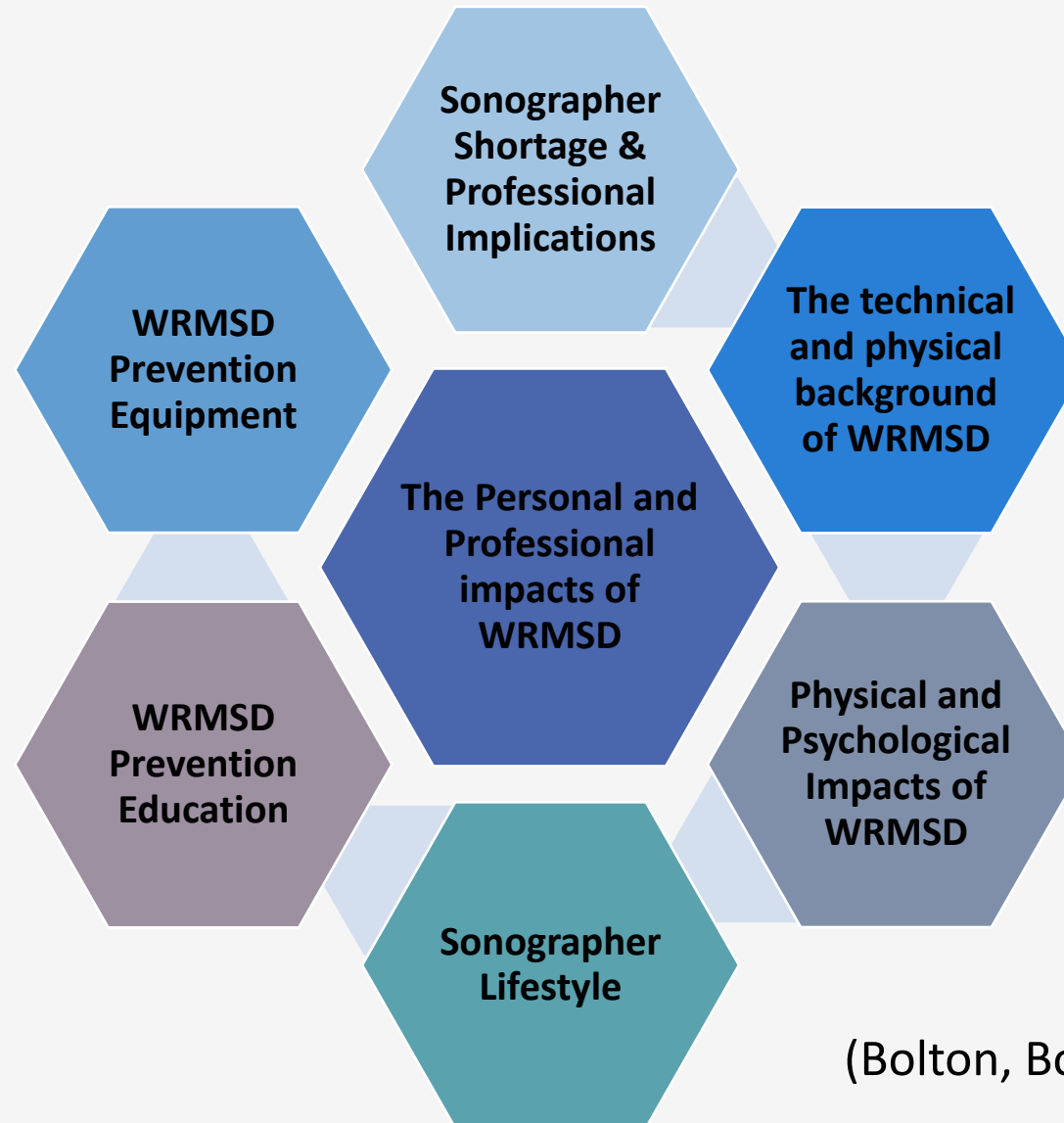
Voice Activated Controls

(Adapted from Gibbs and Young, 2011)

Training

Areas taught and put into practice to a greater extent	Areas taught and put into practice to a lesser extent
<ul style="list-style-type: none">•Maintain a upright posture•Avoid leaning over patients for long periods of time•Adjust monitor height appropriately•Do not abduct arm greater than 30 degrees•Minimise grip on transducer•Less prolonged pressure on the patient (with probe)•Regular mini-breaks	<ul style="list-style-type: none">•Use of support cushion to support arm•Encourage appointment staff to book a varied list (incorporating mini breaks)•Textured examination gloves to maximize grip on transducer•Muscle strengthening exercises

Part 1: Personal Impacts of WRMSD on Sonographers



(Bolton, Booth and Miller, 2020)

Part 2: My Research

**‘Ideological Dilemmas and Work-Related
Musculoskeletal Disorders in Ultrasound Practice: An
Interpretive Phenomenological Analysis of the Lived
Experiences of Sonographers’**

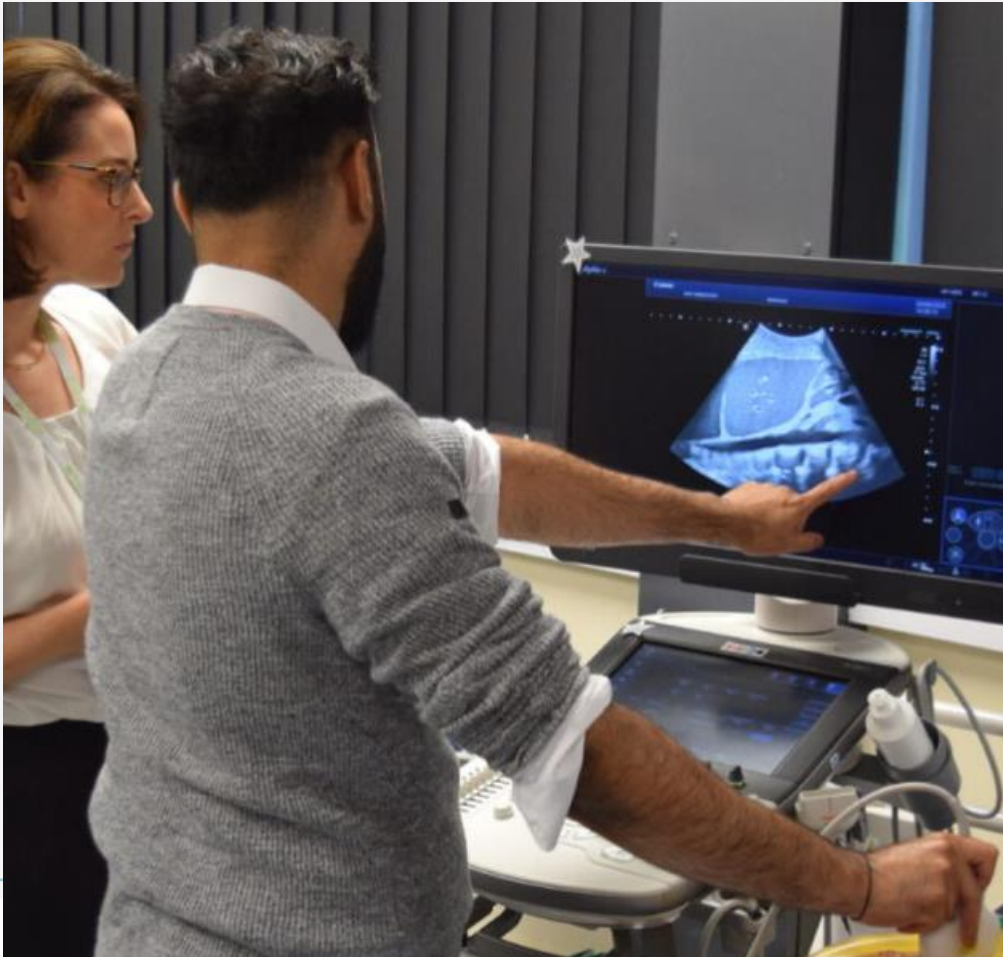
Part 2: Method: A Model of Interpretive Phenomenological Analysis (IPA) was used as the framework for the study:

1. Purposive sample of 9 experienced sonographers from across the UK

2. Semi-structured interviews, recorded and transcribed verbatim

3. Interview data was analysed using a model of interpretive phenomenological analysis (IPA)

Superordinate Theme One: WRMSD, Sonographer Identity, Attribution and Context



What Sonographers Attribute to the Causes of WRMSD

Resistance to Labelling 'I am not this but...'

'It's not work, it's age'...Blaming other Factors

Making Sense of Vulnerability and Risk

Sickness, Pain and impact on Self

Health and Fitness, and Self-Preservation

Participant Quotes...

*“I first trapped my nerve in my neck and **nobody would tell me exactly what was happening**. Every time I went to scan something went worse, I either dropped the probe or started with cramps so every time I went back to my job to try it again something went worse”*

*“even though I wouldn’t class myself as having a work-related injury, what I tended to **suffer** from after a week of scanning was **a lot of tension** and I think that was as much to do with the **stress of work** than actually injuring yourself”*

Participant Quotes...

*“to me the only other way of reducing it [WRMSD] is to overcome the issues that are causing it which to me are the **overstretched lists, the overstretched sonographers**, the time that is given for examination plus the time that is given during the actual working day to sort of relieve the stresses that you have on you, and **I can't see that in the foreseeable**”*

*“I think given the pressures that we've had just recently and the amount of locums that we've to have in, I think **the management** is just coming round now to looking at **building up the sonography team**”.*

Participant Quotes...

*"I think the knowledge [regarding WRMSD prevention] out there is getting more prevalent but it's probably not as high up as it should be. It could be increased a bit more. Erm Yeah, I just don't think, it's not that **I don't think it's important enough, I think people think there are more important things to worry about**".*

*"I think **we need a different perspective** on it. **You can get blind to certain things** when you're actually in the role yourself and you can't possibly look beyond that".*

*"That's it, why are you doing that and why are you doing that, and how come there's so many of those, and you just say, **'well that's what we do'**"*

*"I suppose because I've had my injury for years for me it's been more about a **better awareness of what I'm doing** and thinking about things before I do it. I think it's because every time I moved it hurt so **I had to stop and think**, well what can I do so it doesn't hurt? And I think **when you're in pain you tend to be more thoughtful** and aware of what you're doing."*

Superordinate Theme Two: WRMSD and the Cultural, Professional and Environmental Perspectives of Sonographers



Sonographer Culture 'it's what we do'

Professional 'this is our job'

'The Best Images'

'The Best Diagnosis'

Professional Codes?

Exasperation, Faceless Attribution and Anxiety

Workaround

'Cutting legitimate Corners'

Workload, Pressure and Stress

Physical Environmental Impact on Sonographers (and experiences)

Participant Quotes...

*“All I felt like I was doing for my last, well probably a couple of years in the NHS, was just **going to work, scanning as many patients as we could fit in in a day and going home at the end of it and there was nothing in between to sort of help to build the team up or support the team, there’s just nothing there any more really”***

*“it was about **stopping and thinking** rather than just doing and we’re all on **that kind of treadmill** where we just do things **automatically and we’re not aware of it”***

*“Well I think the **bottom line is people are here because of their vocation. That’s the bottom line. You don’t want to not help people”***

*“Because the patient, yeah, you see obviously the clinical implications and **you think if you were that patient”***

Participant Quotes...

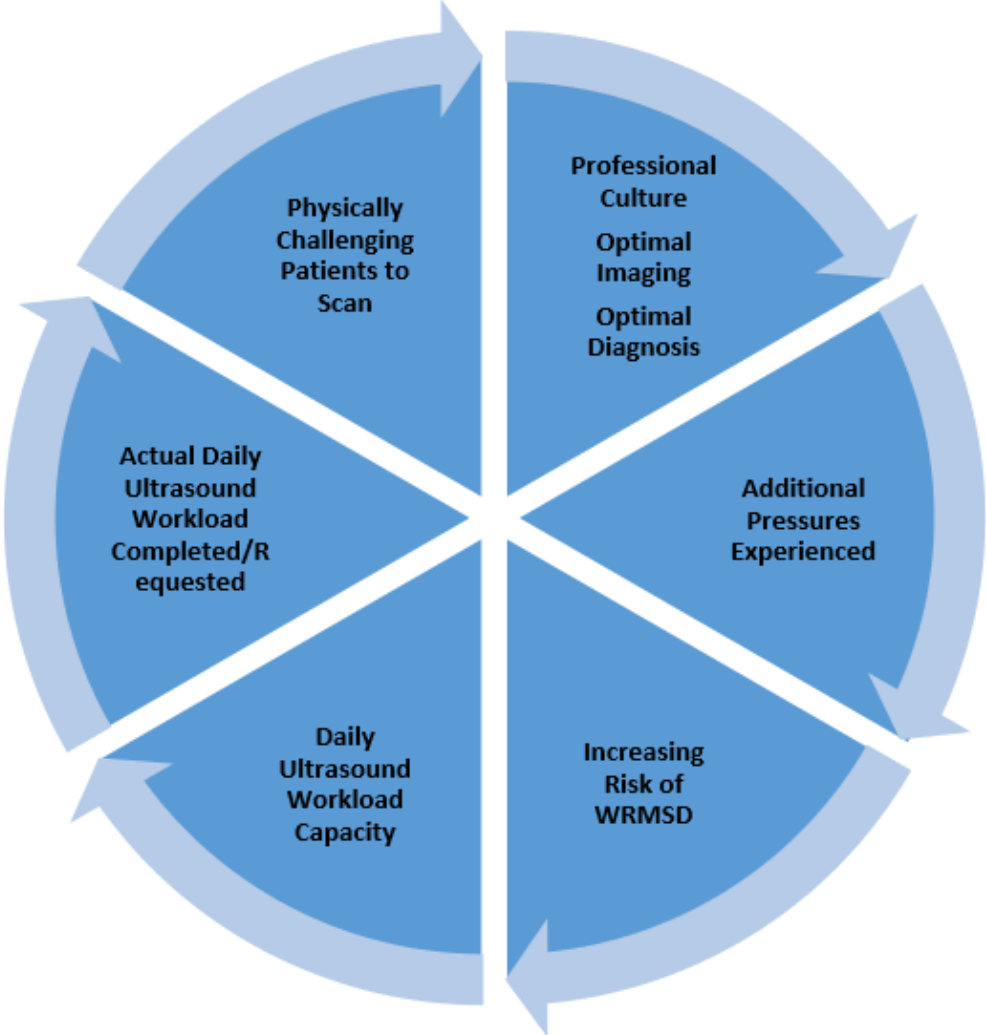
"I think we need a different perspective on it [WRMSD]. You can get blind to certain things when you're actually in the role yourself and you can't possibly look beyond that'. That's it, why are you doing that and why are you doing that, and how come there's so many of those, and you just say, 'well that's what we do'"

"Yeah because in true sonographer style, you still try your hardest to get decent images so all you do is push harder and obviously you're putting more pressure on your shoulder"

"I just think that we all have pride in our work and that we don't like to be defeated. This is our job so a radiologist will always say, 'go for a CT, go for MR', but we don't have that to fall back on. This is our job, scanning"

"I think it's tricky because you can say this scan requires 20 minutes, this scan requires whatever, but it is always going to be down to that individual sonographer who has somebody knocking on their door saying, "This patient really needs a scan or they can't come back for whatever reason" whether it's a clinical reason why they need the scan that day or whether it's a convenience reason, you're always going to have that, so I don't really see how you get round that"

How Sonographer Culture and the Challenges of the Role Inter-relate



Superordinate Theme 3: Ideological Dilemmas



Practical Necessities of Scanning versus WRMSD Prevention techniques

Acknowledging versus Denying WRMSD

Increasing Workloads versus Physical and Emotional Pressure from the Job

Personal Needs of Sonographers versus Perceived Imposed Pressures

Awareness of the Need to Change versus Compulsion to Carry On

Practical In-situ Judgement versus Experiential Ethical Judgement

Increasing Workload versus Decreasing Resource

Participant Quotes...

*“Yes, I think you’ve still got some who just **think it’s in people’s heads** in the same way that some doctors think it’s in people’s heads in the same way that some people think [other condition] is not a real thing. I do think **there’s a problem with individual perceptions**, but there’s also the issue that **you can’t see injuries** sometimes. If you’ve no swelling and no redness [] there’s nothing visible, and I must admit I did at one point **think I was going mad** [] cos there were no signs”*

*“It’s just in the **nature of the job and the people who do it**. But I think the **more education** they get the more they might just **stop and think**, and in terms of where you might just fly through it and get on with it, you might stop and think you’re gonna get some **where there’s no choice and you have to get the patient done**, but in the other scenario where you’re just getting busy, **you just forget**, that will be less likely if you’re trained properly, so that it’s still worth doing that”*

Participant Quotes...

*“I think it’s a **lack of knowledge and it’s a lack of – it’s [sigh] almost like they want to get the day done**, and they just want to get through it. You know, you’ve got your patient on the bed and to get the patient in the optimum position, knowing the optimum position would just take that extra two minutes and even though it sounds quite extreme, I just think sometimes they **just can’t even spare that extra two minutes**. So I think it’s **not just education**, I think there’s other things that affect it as well”*

*“Yeah, I think the problem is with students, they get so **focused on the [job]**, they just get **engrossed in what they’re doing**. It’s either concentrating on what they’re looking at or what the machine’s doing or talking to the patient and then eventually trying to do all those together”*

*“I think **more experienced staff know** when to say “Ultrasound isn’t the technique for this [patient], it needs another examination” and I think the **junior staff perhaps need to be told to stop**, and you can only go so far before you reach a limit”*

**Acknowledgement of
the challenges of their
professional role**

**Altruism and being a
'good' sonographer**

Conclusions

**Sense of tension
between 'Personal self'
and being a sonographer**

Ideological Dilemmas

Part 3: WRMSD: How do you stay healthy? What can we learn from the experiences of sonographers?



All CASE accredited programmes should now include WRMSD prevention training



Educational sessions for sonographers (Perhaps as part of employer mandatory training)?

Continued...



Multi-professional working group to help focus on the key issues and strategies to resolve



Continued drive to resolve the staffing shortages



Create WRMSD 'champions' in departments to support colleagues



Key conversations must continue with relevant professional societies and committees

Part 4: Top Tips for Sonographers...



Be mindful of self and working practices



Talk to colleagues/peers



Consider lifestyle and own physical and mental wellbeing



Think about your own workload and identify the key challenges



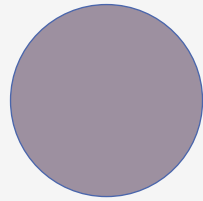
Explore whether there is any further equipment or resources you need



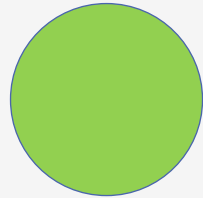
Take ownership of looking after yourself and be proactive

Body Mapping

https://www.sor.org/system/files/document-library/public/sor_body_mapping_health_safety_reps.pdf



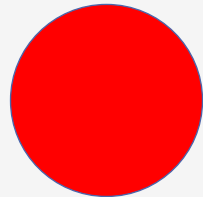
aches/pains
that go



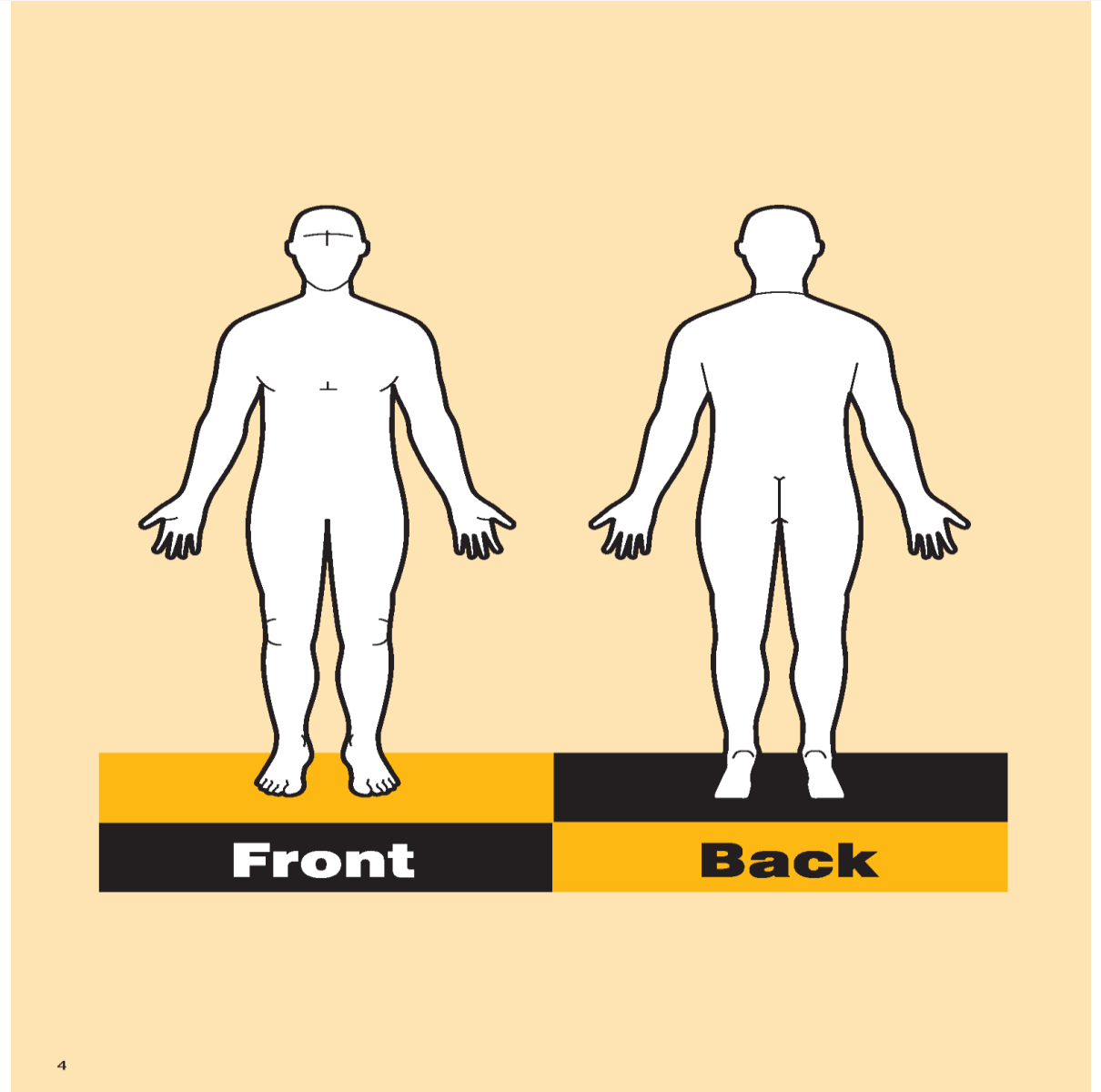
Pins & Needles
&/or numbness



Shooting pains



Continuous
pain even
out of work



Part 4: Top Tips

Here are some additional resources to help you:

[Health & Safety Executive](#)

[Society of Radiographers](#) (Body Mapping)

[Society of Radiographers WRMSD](#)

[Society & College of Radiographers - Nigel Thomson](#)

[Fit for work](#)

[Fit for active work](#)

[Society of Diagnostic Medical Sonography](#)

[Industry Standards WRMSD Sonography USA](#)

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Society and College of Radiographers (2019a)) http://www.sor.org/sites/default/files/document-versions/2019.3.10_scor_bmus_guidelines_amend_mar_2019_final.pdf

Society and College of Radiographers (2019b) <https://www.sor.org/news/no-statutory-regulation-sonographers-society-expresses-disappointment-and-dismay>

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