



Scottish & Southern
Electricity Networks

MSD

Musculoskeletal Disorder covers any injury, damage or disorder of the joints or other tissues in the upper/lower limbs or the back.





Musculoskeletal Disorders

Size of the problem

- Over **200 types** of MSD
- **1 in 4** UK adults affected by chronic MSDs
- Low back pain is reported by **80% of people** at some time in their life
- MSDs are the **most common reason** for repeated GP consultation
- **60% of people** on long term sick leave cite MSDs as cause

Approximately 70% of all sickness absence is due to psychological ill health or musculoskeletal disorders.





SECTION

1. Operational Staff

2. Office Based Staff

3. DSE Assessments

4. Ergonomics



SECTION 1.

Operational Staff

Never stretch beyond your level of comfort.

Stand with feet spread shoulder-width apart and knees slightly bent.

Move in and out of stretches slowly.

Hold each stretch for 8-10 seconds at a comfortable level and breathe normally.

Keep your head up and eyes forward to protect your back.

Relax fully after each stretch

- **The Warm Up**



The Warm Up

Warming up muscles through rhythmic activity large muscle groups

- Step side to side (8 times)

While continuing to side step

do the following:

- Shoulder shrug motion (8 times)
- Bench press motion (8 times)
- Incline press motion (8 times)
- Backstroke motion (8 times)



- **Neck**



Neck

Targeting neck and collar muscles

- Tilt your head slowly forward and tuck your chin
- With head up and eyes forward tilt your head to the right while extending your left arm, palm parallel to the ground pushing downward
- Repeat with your head to the left and your right arm pushing down palm parallel to the ground

- **Tricep**



Tricep

Targets triceps and lats

- Stand straight with slightly bent knees, feet shoulder width apart and head up
- Raise your right arm and place your palm between your shoulder blades
- With your left hand grasp your right elbow and pull up and back gently
- Repeat sequence with your left arm



- **Skyward Reach**



Skyward Reach

Targets biceps, lats, forearms, spinal muscles

- Reach straight up, hands forward, rise on toes and hold
- Continue reaching but lower heels and flex wrists so fingers point down
- Turn hands in and hold
- Turn hands out and hold
- Bring arms down slowly

- **Shoulder Release**



Shoulder Release

Targets Shoulders and Upper Back

- Stand with feet shoulder-width apart
- Extend arms behind back and clasp hands
- Tilt your wrists upward slightly
- Pull your hands up gently by bending at elbows; hold the stretch



- **Chest**



Chest

Targets chest, biceps, and forearms

- Extend your arms fully in front of your body and parallel to the ground
- Spread your arms slowly until they are straight out at your sides
- Slowly pull arms in at elbow and push back out

- **Shoulder**



Shoulder

Targets Shoulders and upper back

- Keeping your hips and shoulders facing forward extend your right arm straight forward with your thumb up
- In that position swing your arm left across your chest
- Turn your head in the opposite direction and grasp your right elbow with your left hand pulling gently
- Repeat with your left shoulder

- **Forearm**



Forearm

Targets Wrists, Hands, and Forearms

- Extend your right arm and raise your hand at the waist, with fingers pointing up
- With your left hand, pull fingers/palm back gently to your level of comfort
- Next, point fingers down and press against the back of your right hand
- Repeat for the left arm

● Calf



Calf

Targets calves and achilles tendon

- Stand with your left foot forward
- Extend your right foot 2-3 feet backward in line with your left foot
- Keep your back straight, head up, eyes forward and both heels flat on the ground
- Bend your left knee slowly and lean forward until you feel the stretch, bracing both hands on your left knee
- Repeat sequence for left calf

● Hamstring



Hamstring

Target Hamstrings and Back Thighs

- Extend your right foot at a slight angle, 1-2 feet in front of left foot
- Lift toes on right foot, keeping the heel on the ground
- Lean forward slightly at the waist and brace yourself with both hands on your left thigh
- To enhance this stretch, draw your toes up further or extend them down
- Repeat for the left hamstring

• Quadricep



Quadricep

Targets front thighs

- Stand upright on left leg and bring your right foot up behind your thigh, keep your knees together (you may want to support yourself against a wall or a colleague)
- Grasp the foot with your right hand and pull up gently
- Bring right heel close to your buttocks and hold the stretch
- To enhance this stretch, push foot against hand or pull leg back
- Repeat for left thigh

SECTION 2.



Office Based Staff

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- **The Daydream**



The Daydream

Gently pull each elbow to the opposite side overhead. Just pretend you're under a Tahitian waterfall and need to scrub your shoulder blades.

- **The Carpet Gazer**



The Carpet Gazer

Remaining seated, extend your legs and reach toward your toes. Stare at the blueish-gray office carpet or search for lost paperclips for 20 seconds.

- **The Half-Bear Hug**



The Half-Bear Hug

Hug one knee at a time, pulling it toward your chest. Tell passers-by you just need to be held and they will soon leave you to your stretching.

- **The Olympic Diver**



The Olympic Diver

Clasp your hands in front of you and lower your head in line with your arms. Pretend you actually know how to dive correctly, and use this “proper technique” to impress your office companions.

- **The Almost-Aerobics Reach**



The Almost-Aerobics Reach

Extend each arm overhead and to the opposite side as you imagine a lycra leotard clad 80’s aerobics instructor goading you toward a fabulous body.

- **The “Who Cares if I’m at Work” Shrug**



The “Who Cares if I’m at Work” Shrug

Raise both shoulders at once up toward the ears. Drop them and repeat as you explain to your boss that you are, indeed, listening with interest.

- **The Freedom Search**



The Freedom Search

Clasp hands behind your back, push the chest outward, and raise the chin. Count yourself lucky if you’re not looking at suspended ceiling tiles and fluorescent bulbs.

Tip: If you’re feeling really tight, try holding the pose for longer.

- **The Spine-Popping Chatterbox**



The Spine-Popping Chatterbox

Cross your legs and alternate twists toward the back of the chair. Use the rear-facing position to comment on your neighbor's color-coded file system with near genuine admiration. *Tip: Exhale as you lean into a stretch for a greater range of motion.*

- **The Happy Cheer**



The Happy Cheer

Clasp hands together above the head, stretching upward. Follow up with “jazz hands” or “spirit fingers” or some other equally classy dynamic phalanges stretching activity.

- **The Leaning Tower of Cheer**



The Leaning Tower of Cheer

Repeat The Happy Cheer, but lean arms and shoulders to the side—as if you’ve had too much to drink and the floor really *is* on a slope under your chair.

- **The Dead Robot Dance**



The Dead Robot

Lean your head forward and slowly roll from side to side. Like Bender’s last act.

- **The Selfie Headshot**



The Selfie Headshot

Gently pull your head toward each shoulder. Think of the worst facebook profile pic you’ve ever seen—the one in which they tried to pose like a model but ended up looking off-kilter and half-blinking.

Tip: With each stretch, you may find yourself more flexible. Don’t go further than is comfortable.

- **The “Get Back to Work” Finale**



The “Get Back to Work” Finale

No stretch here, silly. This is where you drop the deskercise routine and get back

SECTION 3.

MSD



DSE Assessment

Risks from Display Screen Equipment (DSE) use include upper limb disorders (aches and pains in the hands, wrists, arms, neck, shoulders, back etc) and visual difficulties (eyes can become tired and existing conditions can become more noticeable).

At SSE DSE Assessments are undertaken by the employee, with trained DSE Assessors available if the self assessment identifies a risk

When should an assessment be done?

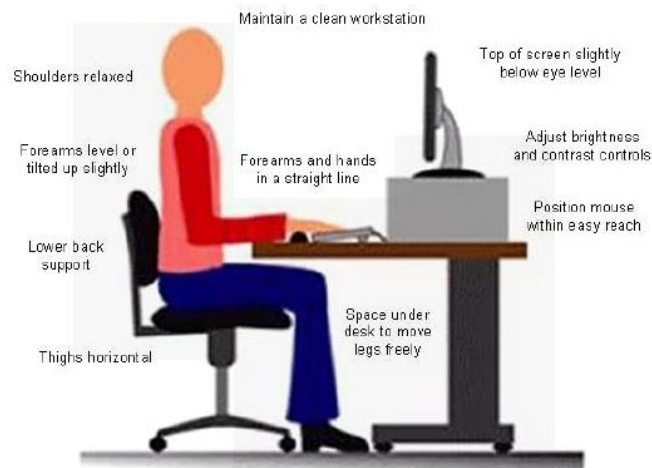
- **DSE Assessments need to be undertaken:**
 - **When an employee starts a new job**
 - **Changes their workstation**
 - **Design of the workstation changes significantly**
 - **If an employee experiences any discomfort at the workstation – report any discomfort to your supervisor**
- **DSE assessments should be undertaken regularly at least every 2 years**

Display Screen Equipment (DSE) – Assessment Form
FO-SHE-208-001



Display Screen Equipment (DSE)

How to sit correctly – the basics



To ensure that those employees requiring an eye test are identified and have an eye/eyesight test as defined in the Health and Safety (Display Screen Equipment) Regulations

SSE will reimburse an employee for eye and eyesight testing up to a maximum of £20.00 (Eye tests are free in Scotland), and for DSE glasses up to a maximum of £50.00



SECTION 4.

Ergonomics



How can ergonomics and human factors improve health and safety?

Applying ergonomics to the workplace can:

- Reduce the potential for accidents;
- Reduce the potential for injury and ill health;
- Improve performance and productivity.

Ergonomics is about better fitting the task and equipment to user.

Ergonomics from the Greek - means 'work science'.

Ergonomic equipment is designed for tasks and environments in such a way as to improve:

- Health and Safety
- Comfort
- Performance
- Satisfaction

To assess the fit between a person and their work, you have to consider a range of factors, including:



The job/task being done:

- The demands on the worker (activities, workload, work pacing, shiftwork and fatigue).
- The equipment used (its design in terms of size, shape, controls, displays, and how appropriate it is for the task).
- The information used (how it is presented, accessed, and changed).
- The physical environment (temperature, humidity, lighting, noise, vibration).

The individual's physical and psychological characteristics:

- Body size and shape.
- Fitness and strength.
- Posture.
- The senses, especially vision, hearing and touch.
- Mental abilities.
- Personality.
- Knowledge.
- Training.
- Experience.

The organisation and social environment:

- Teamwork and team structure.
- Supervision and leadership.
- Supportive management.
- Communications.
- Resources.

SOME USEFULL TIPS.

- Use two hands instead of one for a task --to reduce excess demand on a single muscle group.
- Use tools that are right for the job and proportioned for your body.



- Use power tools instead of manual tools when possible.
- Take frequent breaks from repetitive motion tasks.
- Avoid repeating awkward movements or holding yourself in awkward positions..
- Change positions, stretch often to improve blood circulation, and take breaks regularly.

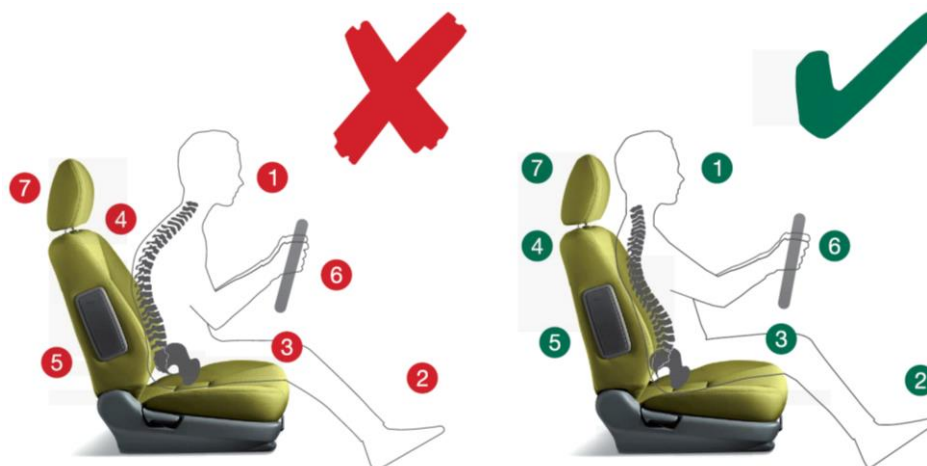
LAPTOPS

Tips for using laptops:

- Use a docking station. A docking station consists of a full monitor, keyboard and mouse and uses the laptop as the hard drive. This allows the user to follow ergonomic best practices.
- Use an external mouse and keyboard. The track ball on a laptop is difficult to manoeuvre and the keys on the keyboard tend to be smaller.
- Keep your wrists as straight as possible while keying. Position the keypad at elbow height.
- Ensure your carry bag has padded shoulder straps. A ruck sack type bag is preferable to the one shoulder strap or briefcase types as the weight is more evenly distributed.



Tips for drivers.



Make the following adjustments **BEFORE** driving off

1. Raise seat as high as is comfortable to improve vision of road, ensuring adequate head clearance on roof
2. Slide seat forward until feet can fully depress all pedals without stretching
3. Tilt seat cushion to support length of thighs, avoiding pressure on back of knees
4. Adjust back rest to support length of back up to shoulders and allow easy reach of all hand controls
5. Ensure backrest is correctly adjusted to provide even pressure in the lumbar region of the spine.
6. Adjust steering wheel for comfortable reach (shoulders relaxed and elbows slightly bent), without obstructing knee clearance or view of display panel
7. Adjust head rest to reduce risk of injury in the event of a car accident
8. Adjust all mirrors to maximise view of road
9. Position Sat Nav within visual field, but without obscuring view of road

References / Further Reading

Health and Safety Laboratory for the Health and Safety Executive 2011. **Exercises to reduce musculoskeletal discomfort for people doing a range of static and repetitive work.**

The Chartered Society of Physiotherapy (Link to the exercise leaflet)
http://www.csp.org.uk/uploads/documents/CSP_FTW_inside_v21.pdf

SSE, Training Brief Display Screen Equipment TB-RS-SHE-208-001 ver 1.01

SSE, DISPLAY SCREEN EQUIPMENT ASSESSMENT STANDARD RS-SHE-208

Health & Safety Executive, Ergonomics and human factors at work: A brief guide.

