The OOS Client Information Booklet
(OOS, CDT, RSI, gradual process injuries)

First edition 1994, The Occupational Overuse Assessment and Rehabilitation Team.
Second edition 1995, The Occupational Overuse Assessment and Rehabilitation Team
THE OCCUPATIONAL OVERUSE SYNDROME (OOS/RSI) CLIENT INFORMATION BOOKLET

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THIS BOOK CAN BE IMPROVED WITH YOUR HELP.
If you are an occupational physician, health nurse, occupational therapist, physiotherapist, or anyone with ideas or suggestions for ways in which this book could be changed to better meet the needs of people with OOS, please write to Physical Sense, PO Box 1749 Christchurch, or email: Booklet@oos.co.nz.

Foreword
The information in this booklet has been gathered from years of experience of a multi-disciplinary team working with OOS clients. It is part of the OOS Assessment & Rehabilitation Team’s philosophy to empower their clients through education and knowledge. It is the intention of the team to provide this booklet for their own clients, however, other health professionals may find that this book has client value.

The client has a greater chance of recovery if referred early, and this early intervention will reverse the OOS progression.

Acknowledgement
Our first edition was a combined effort by Tricia McGuinness (occupational therapist), Jane Baker (occupational therapist), Delia Baskerville (editor) and myself. At the time we worked together as the Occupational Overuse and Rehabilitation Team. I thank Tricia, Jane and Delia for their team spirit and willingness to share their knowledge.

Ietje van Stolk (physiotherapist)
Why is this booklet so important to you?

We believe that you should liken yourself to an injured athlete, rather than see yourself as a "patient". Imagine an injured athlete wanting to recommence competition. He/she would not be passive in their treatment. He/she would actively participate.

*It is the same for you*

From experience, we know that those clients who play an active role and are goal directed, are the ones who achieve the best results. To achieve success, you first need to understand what causes OOS, what OOS actually does in your body, why our treatment is as it is, and how you can help yourself at home, work and in recreation.

*So read carefully*

**GENERAL INFORMATION**

What causes OOS?
The Department of Labour states:

*“One of the favourable explanations for OOS is that it is caused by muscles being held tense or tight for too long.”*

The shorter and tenser the muscle, the harder it pulls on the places it attaches to (e.g. the bone). When this happens in the forearm the pull at those attachments and tendons causes irritation and inflammation of those areas. This will be noticed as pain in the elbow and wrist. When this happens in the neck and shoulder area, it will be noticed as local pain, stiffness and sometimes headaches. The nerves run right through the muscles. Tension on the muscles causes pressure on the nerves. As the muscles shorten, the nerves running through them have a tendency to shorten as well. This causes the nerves to radiate pain throughout the arm. Triggerpoints are areas in your muscles, where a few muscle fibres have contracted in a knot. These knots (the hard and painful areas in your muscles felt during massage) weaken and shorten your muscles and can cause referred pain. Example:

![Scaleni](image1)

![Pectoral minor](image2)

These triggerpoints are your muscle's reaction to continuous irritation. In most cases, there are multiple causes for this irritation. These could be: repeated actions without breaks; constant static posture resulting in constant muscle contraction; lack of healthy blood flow; bad posture resulting in continuous high loading of some muscles, etc.

As you can see, your thumb pain can originate in your neck. Pain in your little finger or forearm can originate in your chest. This is the reason that your therapist may treat an area, other than where you are experiencing pain.
**Effect of OOS on your body**

So, we have just read that OOS is caused by muscles being held tense or tight for too long.

Muscles need more moments of relaxation.

Bad posture and incorrect ways of moving during work will contribute to the tenseness of your muscles.

Research has shown that there is a direct link between muscle strength and OOS.

For various reasons, the patient can feel very stressed at work (e.g. bonus system; unrealistically high workloads; doing work for several managers; being unassertive because of fear of redundancy; lack of feelings of power and decision-making).

**How can you counteract this?**

Reorganise your work rhythm. Implement breaks and micropauses. Learn how to physically relax so those micropauses and breaks will be of real benefit. Release tensions during sport most days of the week.

Work visit by occupational physician, occupational physiotherapist, health nurse or occupational therapist. Advice and exercises to develop good posture (physiotherapist). Be critical about your posture and work habits yourself.

Improve your muscle strength with exercise. A swimming programme can be of great help (ask your physio for advice). Start only after the worst of your pain has been treated.

There are courses which can be followed which are designed to empower patients to make the transition to a new work role. This service addresses issues like self esteem, self confidence, assertion, stress and time management, and conflict resolution in the workplace.

**How physiotherapy can counteract this**

Deep tissue massage and myofascial release techniques will relax the muscle and, therefore, the blood supply to the muscle will increase. Massage techniques will deactivate the triggerpoints. It can be helpful to teach a relative or friend how to massage (they are welcome to come to the clinic).

Relaxation (through a seven-step relaxation instruction programme). Lengthening exercises (especially home exercises). Deep tissue massage and myofascial release techniques.

Ultrasound with use of anti-inflammatory gel, deep frictions on the attachments and tendons.

Neural release techniques. Nerve lengthening home exercises. All the above techniques, and especially the relaxation, will relax and lengthen the muscles and, therefore, take the pressure off the nerves.

**What causes your pain?**

The existence of triggerpoints will cause local and referred pain.

Your muscles have gone short and tense.

The short, tense muscles pull very hard at the attachments on the bone which causes inflammation and irritation of the muscle attachments and/or tendons (wrist/elbow pain).

The pressure on the nerves and shortening of nerves causes radiating pain (e.g. through the arm).

The normal result of working and living a modern life with a limited amount of balanced exercise is that it unbalances your body. Examples are: short chest muscles; decreased blood flow in your arms; weakening of your grip strength; a decrease of range of movement in some joints; a tightening of your nerves and the presence of triggerpoints. These are all normal and reversible reactions to modern life and are not signs of illness or sickness. They are totally reversible with your and our help.
Is there a certain personality type that is more predisposed to getting OOS?

The most commonly recognised personality factors that some people with OOS present with are:

- very conscientious behaviour patterns
- regularly works through breaks
- does overtime, or takes work home
- sets self high goals
- work rate very high
- poor relaxers

A predisposition to OOS, plus a poor work station and high work load, may combine with personality traits to produce OOS. But personality traits alone will not produce OOS.

How active can you be with your arm? How should you react when you feel pain?

There are many different opinions about this issue. Many health professionals advise the patient to rest (e.g. the arm) as much as possible. Our advice is:

If the pain is very acute, give the painful area rest at home. Try to continue at work, add breaks, micropauses, stretches, task variation and improve your posture.

Which activities can you resume?

Contrary to many other health professionals, we say: If the activity causes you “after-pain”, note the intensity before you omit the activity. Try the activity three times, and note carefully the after-pain each time. Ask yourself the following questions:

- Is your body in pain because it has to adapt to the new activity?
- Is this after-pain actually “adaptation pain”?
- Are you in pain because this activity is actually harmful to your body?

If the after-pain becomes less and less after those three times, then it was mainly “adaptation pain”. If the pain has increased over those three times, then the activity is harmful to your condition, so do not continue. Adaptation pain to restarting after rest is common. Therefore, stopping an activity straight away after the first adaptation pain could restrict you unnecessarily.

If an activity causes you pain immediately, as you are performing that activity, then your body is definitely warning you that this activity is harmful and will increase your pain. This is “immediate pain”, not “after-pain”, and should be seen as a warning signal from your body to make you stop temporarily, do some stretches, adjust your posture and try again.

Note: It is important that you only stop your activity temporarily. You should continue your activity after a short rest and stretch period. Try to continue in a slightly different manner. It is a mistake to give the affected area total rest. Resting the affected body area results in stiffness and weakness. This weakness causes you to feel the discomfort even sooner. So stay as active as possible without forcing through immediate severe pain.

Pain

My memory and concentration are poor since my OOS. Is this usual?

Yes, pain will impair your concentration span so that when you store information in your memory it is more disorganised. This makes recall of the information difficult. The careful use of a diary can be a helpful memory aid during this temporary phase of memory impairment.

Should I be continuing my hobbies, interests and sporting activities when I am in pain at work?

Stop activities initially if they cause you pain during the performance of the activity. Also stop activities if they cause you pain after the performance of the activity, if the pain does not decrease after three repeats of the same activity.
When you have a reduction of OOS at work it is then time to slowly introduce activities in five-minute units, only, initially. Do not continue with any activity that causes prolonged pain. If it causes after-pain, don’t forget the three-times rule!

**Often my pain is okay at work, but it gets worse when I sit at home doing nothing at night!**

Often when we are involved in absorbing work activities, we block out pain (like shutting a gate). As soon as we stop work and relax, it suddenly seems that the pain “pours through the gates”. This can be prevented by setting your watch to help you remember to relax and micropause during absorbing tasks throughout the day. This will stop the build-up of pain at night. There are excellent computer programs available that remind you to take brakes and micropauses during computer use.

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**Pain Management**

It is recognised that in some cases OOS not only affects your work role but also your partner, your family, and your home and leisure activities.

Because of your injury you may feel:

- constant pain
- irritability
- anxious from day to day
- concerns, e.g. financial problems
- bored
- confused
- self doubt
- unconfident
- unable to set limits and say no
- angry
- guilty
- defeated

These factors will affect your ability to communicate with your workmates, partner, family, and friends.

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**Injury and pain can sometimes lead to anxiety.**

These anxieties will place pressure on your personal and work relationships. This tension leads to despondent feelings and muscle tensions. **Your pain will increase.**

It is vitally important to employ strategies to deal with your pain.

Tell your physiotherapist, occupational therapist, occupational health nurse, ACC case manager, or your GP when you feel you need help with these issues.

You may be referred by your general practitioner to a specially trained therapist, or to a programme which specialises in pain management.

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**Work**

*I have been told to slow down, take pauses and exercise during work. I find this very stressful!*  

Initially, it will be stressful for you to do your job differently. Some people feel they are being lazy, or are concerned that they will be considered “shirkers”. Often, high bonus targets can exacerbate OOS, but doing less can often mean getting less money and slowing down a whole production team. You and your doctor, occupational health nurse, or occupational therapist need to discuss this carefully with management.
KEYBOARD OPERATION

IDEAL SITTING POSTURE
- Head up and slightly forward
- Chin in
- Shoulders back and relaxed
- Elbows at least 90°
- Wrist straight
- Lower back supported
- Knees at least 90°
- Whole foot supported

Adjust all components of the chair first. Then keyboard height, screen position, hard copy and other items.

NOTE:
Relieve body tension throughout the day, e.g. allow shoulders to relax.

WORK STATION LAYOUT
- Maximum Reach 550–650mm
- Optimum Reach 350–450mm
- Work surfaces organised so that materials, equipment and controls can be easily reached.
- Try not to twist to view hard copy. If possible, position yourself directly in front of it with the terminal to one side. Alternatively, align the hard copy directly above (or below) the screen.
- Glare and reflections on the screen eliminated by correct position of work station and correct lighting.

WORKING CONDITIONS
- Seek (or provide) adequate training in use of word processing technology and adjustment of office furniture.
- Ensure management recognises need for regular breaks, job variation and that excessive workloads are avoided.
**Tips for mouse use**

- Never reach to the mouse. The mouse should be next to your keyboard. Your upper arm should be behind the plane of your chest. Try to use relaxed “all-of-arm” movements without side bending your wrist.
- Know as many short-cut keys as possible, use those instead of your mouse.
- Do not squeeze your mouse, rest your relaxed hand on top of your mouse.
- Avoid small movements (they create muscle tension and promote squeezing). Lower the mouse speed. Recommendation: the width of your mouse pad should be the width of your screen, the height of your mouse pad should be the height of your screen.
- Use your mouse with your least painful hand or alternate sides.

**Specific advice for non-clerical jobs**

It is hard to give good specific advice for non-clerical jobs, as there are obviously endless variations depending on each different job. However, make sure that you have had advice in safe lifting techniques, if lifting is part of your job.

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**Advice on working techniques**

*OSH of the Department of Labour gives you the following advice on working techniques*

Safe working techniques all relate to the way muscles apply tension.

**The way that joints are held while tasks are performed:**
- Avoid marked bending up at the wrist, particularly if sharp movements or force are involved.
- Avoid excessive sideways wrist bending during movement or in holding sustained hand positions.

**The motions and movements used to accomplish tasks:**
- Avoid repeated turning of the forearm (along its length).
- Avoid over-spanning wide opening and gripping movements of the fingers.
- Don’t apply excessive force in squeezing movements.
- Use a power grip (as when holding a hammer) rather than a pinch grip (as when holding a pencil).
- Avoid repeated shock loading to the hand, wrist and arm from the use of a hammer, or by tugging, jerking or from sharp torque reactions.
- Avoid repetitive picking up with the hands. (As when moving a pallet of paving blocks from the front gate to the back yard.)
### WORK STATION DESIGN CHECKLIST

There are many examples of work station design checklists based on ergonomic principles. The following* is one of the best-known and lists the basic principles of design for work stations and equipment:

1. The worker should be able to adopt an upright and forward-facing posture.
2. Where vision is a requirement of the task, the necessary work points should be visible with the head and trunk upright, or just with the head inclined slightly forward.
3. All the work activities should permit the worker to adopt several different but equally healthy and safe-postures without reducing their capability to do the work.
4. Work should be arranged so that it can be done, at the worker's choice, in either a seated or a standing position. When seated, the worker should be able to use the backrest of the chair, at will, without necessitating a change of movements.
5. The weight of the body, when standing, should be carried equally on both feet, and foot pedals should be designed accordingly.
6. Work should not be performed consistently at or above the level of the heart. Where light hand work above the heart must be performed, rests for the upper arms are a requirement.
7. Work activities should be performed with the joints at about the midpoints of their range of motion.
8. Where muscular force must be exerted, it should be by the largest appropriate muscle group available, and in a direction co-linear with the limbs concerned.
9. Where a force has to be exerted repeatedly, it should be possible to exert it with either of the arms, or either of the legs, without undue force.

**NOTE**

This checklist describes the 'shape' of the body as it should be positioned at the work station. From this and anthropometric data (see below) the size of the work station can be estimated.

These two starting points lead to an initial work station design which serve as a basis for a trial. Results from such a trial can then be used to refine the design. Sometimes, several rounds of trial/redesign are required before a work station will cater for the acceptable percentage of users.

OSH has published a fuller set of checklists for the analysis of management systems and workplace design to prevent OOS (see Bibliography).


### ANTHROPOMETRIC ESTIMATES FOR NEW ZEALANDERS

The data in this appendix are given as a guide only. They can be used to obtain some initial measurement for the dimensions of work stations but they can never, used alone, define what will be convenient for a large range of users.

Some of the data will indicate the minimum distances required between parts of work stations for body clearance (#6 below), or for reaching to objects in front of the body.

Some useful rules of thumb:

1. Bench height. Set the bench at standing elbow height less about 50mm. The exact height will depend on the type of work to be done and the height of the item being worked on. Precision work needs to be higher, for example, but not so high to cause people to work with raised shoulders.
2. Add an appropriate amount for shoes _ for men, 25mm, and women 45mm _ but depending on the situation and the type of footwear worn.
3. Knuckle height is a useful reference point for the height of handgrips and support rails.
4. Finger height is a useful reference point for the minimum height of controls.
5. Thigh thickness is a useful minimum distance for the clearance between seats and the undersides of desks or work stations.
6. Buttock-knee length is a useful reference for the clearance between a chair back and any vertical sides of a work station or desk that are an obstacle for the knee.

One valuable aspect of the table is that it demonstrates just how much short and tall people vary in their dimensions, and the consequent variability that may need to be built into a work station.

Changing your work station alone, will help, but if you do the following you will get a quicker resolution of your OOS.

Vary your tasks into 20 minute time units (it may need to be less initially), e.g.

20 minute typing, 20 minute general clerical.
Slow down your typing/writing and general work speed.
Micropause (10 seconds every five to 15 minutes).
Relax during natural work breaks and make sure you have your full work breaks.
Exercise every 30 to 60 minutes as taught.
Plan to avoid peak work and avoid overtime
Practise your new “relaxed” keying style and work methods. (Ask your therapist/nurse/doctor about this method.)

+ Head up
+ Chin in
+ Upper arm alongside your body (not in front)
+ Shoulders dropped
+ Come down onto keyboard
+ Vary worktask
+ Hips, knees and elbows at 90°

Some practical hints towards changing your work situation

1. **Hourly breaks**
   For most of us, the day looks like this: start … coffee break … lunch … tea break … finish.
   To have a hourly break you only have to have a break somewhere on the dotted lines. Often one feels embarrassed to suddenly stop working, but it should be possible to go to the toilet or get a drink of water. Do this somewhere on the dotted line. Do some of the necessary stretches on your way, and linger for a few minutes to allow yourself to relax a bit.
   Make sure you spend some time during your lunch break out of the work environment. Also spend at least five minutes doing your exercises (including the relaxation exercises). If necessary, use the toilet for those five minutes.

2. **Micropauses**
   Be aware of all natural pauses, i.e. waiting for a screen change to come up. Basically, every little moment that your hands are not actually doing something (you are looking, thinking, or talking) let them relax (by your side, or in your lap). If there aren’t enough natural pauses (you are supposed to pause very briefly every five to 15 minutes), then it is often handy to time how much work you do in three minutes and stop at each, e.g. third of a pile, half a page, eight cheques, etc.

3. **Task variation**
   Find out which of your tasks is the least strenuous, and break that task up into short timespan periods. Use those periods as relaxing tasks between the more difficult tasks. Find out which task is the most strenuous, and divide that task as much as possible over the entire day.

4. **Assertiveness**
   Often we are asked to do extra tasks, and it is difficult to say no. Instead of saying no, you could say: ”Yes, I will do that, but I am also doing this, please tell me which task I should give priority to”.
   If the boss feels both tasks have priority, he will have to find someone else to do it. If not it will be a relief for you to know that the boss is aware that other tasks will slow down because of the extra work.

5. **Fitness**
   There is no better stress release than working up a sweat three times a week. Cycling, brisk walking, jogging, swimming, can all do the trick. If it is difficult for you to include this in your life, you could consider a home trainer in front of the television, or park your car 20 minutes (brisk) walk away from work.

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On-site work assessment

What to expect

If you are experiencing pain at work due to OOS, occupational physicians, health nurses, physiotherapists or occupational therapists can assist you by:

- assessing your work station
- assessing your work methods
- assessing your work rate/flow
- liaise with management over work organisation, peak periods and bonus systems affecting work
- plan graded work programme attendance and return-to-work programmes
- provide equipment for trialling and adapt work station (includes chair trialing)
- prescribe appropriate splints or adapted equipment
- liaise with ACC/employer over any issues related to work payment/time off
- assist you to manage pain in the work place, and to reduce pain by education, bio-feedback training, relaxation, etc.
- help you to resolve any conflict with management that may have occurred due to misunderstanding, or lack of knowledge on OOS

If my pain is very high at work and I am having difficulty, what should I do?

Once your work station and work method has been adapted it is wise to discuss the following options with your physiotherapist, general practitioner, general health nurse or occupational therapist, if your pain is still not manageable:

a. Avoid certain tasks, i.e. negotiate different lower-hand loaded duties until the pain level becomes manageable
b. Limit certain tasks, i.e. reduce keying to 10 minutes in every hour
c. Reduce hours of work, e.g. four hours a day, but divide these over seven hours so that you will have hour breaks.

If I have been off work and I want to return to my job, what is the best way to return?

A slow, graded return is always more successful than a quick return to full-time hours. Below are some options to consider:

Remain on ACC and start at two hours a day, Monday, Wednesday and Friday. Second week do two hours every day, then increase by one hour a week

Continue until you achieve full-time hours. If you get pain, stay on the same level of hours a little longer until you feel in control again.

If work causes your symptoms or aggravates them, it is wise to have your worksite and workhabits assessed. Contact your occupational health physician, the occupational health nurse of your firm, or your physiotherapist. Your ACC case manager will also know who to refer you to.

Returning to courses or study:

Excessive writing under pressure can irritate pain.

The following is recommended:

1. Always tell your tutor, disabilities officer and health centre (at polytechnic or university) about your condition.
2. Avoid writing as much as possible. Use a dictaphone. Photocopy another student’s notes. Highlight hand-outs or prescribed texts. Use a Pilot Explorer pen, or a Pilot Hi Tecpoint V7 with pengrip, or special pen grips with other ink-based pens.
3. For exams, get a doctor’s note requesting special exam conditions for internal and external assessment: more time allocated; a writer for exams; and dictaphone responses to written exam questions.
4. Ask your occupational or physiotherapist to assess you for pen grips, splints, angled work surfaces, writing board, as well as your actual writing method.
5. Make sure your elbows are at 90° in relation to your table and your forearm is totally supported.

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An occupational therapist can assist the person with OOS to be better able to cope with daily tasks, and thereby reduce the level of induced pain wherever and whenever possible. Further application of these ideas will aid in recovery by reducing muscle stress. The relevance of the following hints to you will depend on the severity of the injury, the area of injury, and whether one or both arms are involved.

The major point to remember is that once a person has been diagnosed as suffering from OOS, it is in their interest not to further aggravate the OOS condition, while still maintaining essential daily activities necessary for one’s living patterns, e.g. cleaning, dressing, working, etc.

There are many practical hints and, if appropriate, special aids and equipment you can use in your home to assist your management of daily activities. For example, specially designed knives and potato peelers reduce strain on your hands. Tap turners can be fitted to your taps to make turning easier. Larger foam handles added to your toothbrush or shaver encourage better grip.

These special aids and equipment assist with many activities. However, most importantly, a person with OOS must first learn to modify their lifestyle to allow adequate rest breaks into their day. This is essential in their recovery to allow healing to take place.

To achieve optimum rest, other family members must take an increased responsibility for domestic and related tasks. Their assistance, support and understanding of the pain and frustration related to OOS is essential.

An occupational therapist will assist you in your management of OOS by demonstrating correct ways to position your hands and body when holding equipment, also teaching you new methods of balancing your workload. Information on what to avoid and what methods are effective in reducing arm stress and consequent pain will be provided.

A visit to your home by an occupational therapist will enable assessment of your working area (i.e. kitchen, computer desk, baby changing, etc.), to advice correctly regarding easier work methods.

Learning new methods at home will allow you more pain-free time to explore new hobbies or interests.

Remember, early intervention is very important. Start taking positive steps to learn new methods that will prevent further injury to your arms. A home visit and further information can be discussed with your case manager.

GENERAL POINTS TO REMEMBER

After you have reorganised your workload and reallocated jobs to others, you will still have tasks to do yourself.

The following suggestions can help you to reduce strain on inflamed tissues, e.g. tendons and muscles, while you are doing your work.

1. **Work with the arms comfortably by the sides**, e.g. avoid hanging out washing. If you have to raise above chest height use a trolley and a platform if necessary, or better still use a drier.
2. **Avoid tightly bent elbows.** The best height for bent arms’ work, e.g. ironing, is elbow/waist level. For straight-arm work, e.g. washing up, you should be able to put your hands flat in the sink when standing straight.
   - Resting one of your feet on a small box (3-4”) encourages a straight back when standing, (both feet when sitting).
   - Bad posture aggravates the existing back and shoulder problems. When reaching up, support one arm with the other.
3. Work with the wrists in a straight (neutral) position.
4. **Avoid forceful heavy tasks.** Can someone else do it? Is it really necessary, or could it wait, e.g. pruning, spring cleaning? Can the task be modified? e.g. * Leave large rubbish bag near front and carry out rubbish in small quantities to reduce distance over which heavy bin is carried. * Will workers come in and collect? A wheel bin can be a good purchase.
5. Select equipment with larger rather than smaller handles. Handles on existing equipment can be built up using foam rubber or bradflex.
6. **Test tools and equipment for balance,** lighter is not necessarily better. Poor balance forces the muscles to work harder, and tends to cause the wrist to be held in other than straight (neutral) positions.
7. Spread the load, use two hands where possible.
8. **Avoid maintaining prolonged postures,** e.g. spread the newspaper and books on a table to read.
9. **Avoid use of vibrating equipment.** Vacuum cleaners, lawnmowers, etc. should be avoided. Hair dryers can be hung on a hook on the wall and you can stand in front.
10. Break up tasks and spread them over time to reduce strain on muscles/tendons, e.g. 10 minutes cleaning.
twice a day is much better than 20 minutes or more, all at once.
11. Carry with the arms close to the body, so that the body can be used to provide additional support. Better still, use a back-pack and if you use a shoulder bag, use alternate shoulders whenever possible.
12. If an activity causes immediate pain at the time _STOP_. Relax, stretch, try again in a different way.
   Pain is a warning sign, and is to be respected. (See page 5.)

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### PRACTICAL HINTS

#### Preparation of meals

Do as much as you can ahead of time. Spread the tasks over the day, or do some the day before. When making stews, casseroles, etc., make extra quantities and freeze some.

Use simple menus (e.g. canned fruit or baked apples will save work on dessert), and emphasise the one-bowl methods in your choice of recipes.

**Pumpkin:** Douse in hot water for a few minutes to soften skin before peeling. Or leave skin on.

**Steam all vegetables,** using a sieve if you do not have a steamer. No draining of heavy pots with this method.

**Electric frypan:** Useful if you cannot manage the oven, and cooks anything from a roast to a cake. Microwave: Can use lightweight containers.

**Taps:** Lever-type taps are easier to turn than the conventional pronged type. Some of these can be fitted with levers. Ask family members not to turn taps off too tightly. A tap turning aid should be used.

**Detergent:** Easy to handle in a plastic container, and less likely to spill than soap powder in a carton if dropped. Transfer detergent into pump bottles.

**Built-in handles:** Use on cutlery, utensils, saucepans, etc. _foam rubber may be taped around a handle to the desired thickness.

**Draining vegetables:** A french-fry type basket available at supermarkets fits any sized saucepan, and avoids the problem of draining. A strainer serves the same purpose. Alternatively, empty contents of pot into a colander in the sink, or use a perforated spoon to lift vegetables from pot without draining.

**Vacuuming:** An extra long flexible hose means you do not have to shift the vacuum cleaner as often. An extra pipe means you do not have to bend as much.

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### Stress

![Figure 1: Muscle Tension vs Pain](image)

**Explanation of figure 1.**

Too much muscle tension will eventually cause pain.

We need a constant base tension on our muscles to function.

When relaxed (situation A) our base tension is low and we can load a lot of additional tension before it gets too much.

When stressed (situation B) our base tension is high and we can only cope with a limited amount of additional tension.

This explains why mental stress alone can increase your pain levels without any change in the physical load.

The physical load in situation C is not painful when you have base level A, but would be painful if you had base level B.
We all suffer some stress in our lives. The body reacts automatically to stress. We cannot influence that behavior. Here are just a few examples of what our body does to prepare us for action.

- Our heart rate increases.
- Our breathing rate increases.
- Adrenaline pours into our blood stream.
- Our muscles tense.

Some of us react well to stress. The above still happens but once the source of stress is removed, we easily revert to our “pre-stress” state. Our heart, and breathing rate return to normal, as does our muscle tension and adrenaline levels. However, if we have too many stresses in our life, or our body simply doesn’t cope as well with stress, it can happen that we remain in this “ready for action state”. We than permanently carry too much muscle tension and adrenaline, and have a permanently increased breathing rate and heart rate. An increased breathing rate can actually cause very disturbing symptoms. If you recognise any of the following symptoms, please tell your physiotherapist.

Symptoms of hyperventilation include:
- Frequent yawning,
- Frequent sighing,
- Breathlessness,
- Tightness in chest,
- Lack of concentration,
- Palpitations,
- Painful muscles (especially neck, shoulder and chest area),
- Lack of self-confidence,
- Tingling sensation,
- Hypochondria,
- Dizziness,
- Upset stomach,
- Clammy hands,
- Nightmares,
- Anxiety,
- Sex problems.

As you can imagine, feeling stressed makes it harder to recuperate from any illness. Muscle tension is part of the OOS problem, so we should aim to eliminate as much unnecessary muscle tension as possible.

THE COMMON PATHWAY THROUGH GRIEF

After a major injury it is a normal process to grieve over the loss of the ability to do work, hobbies, home tasks and sports without pain. It is necessary to do “grief work” even though it is psychologically painful. This helps us to move on and learn to adapt and change, e.g. learn new methods, new hobbies and sports. Outlined below are some of the stages of grief you may have experienced:

1. Denial. It is commonplace to ignore your pain and hope it will go away. This may be due to the fact that you do not want to make adaptations to your lifestyle.
2. Expression of feelings. You may be experiencing unexplained tears and anxiety attacks.
3. Body reactions and changes. You may sleep too much, or too little, or experience a change of appetite.
4. Depression and panic. You may be experiencing sadness due to the loss of ability to partake in your normal work, home and leisure activities. You may experience panic because you feel you are facing a life of pain. This may be due to the fact you no longer feel in control of your life.
5. Guilt. You may be experiencing thoughts of “if only?” or self blame. You cannot see OOS. Some people believe it does not exist. You may be thinking you are a fraud.
6. Anger. You may be experiencing real but irrational feelings. Why me? Why couldn’t this have happened to someone else.
7. Idealisation. A reverence for the past. My life was perfect before OOS.
8. True realisation. Good and bad. Thoughts such as “even before my OOS I didn’t get on with my boss”.
9. New ways of coping with life. I’d like to try new hobbies, interests, relax a bit more, ask my kids to help more, try to approach my job differently, etc.
10. Living with the loss. An adjustment, resolution, and feelings of being in control again through lifestyle changes and balanced, healthy management of your body.
What can you expect from the future now that you have been diagnosed as having OOS?

Your future will depend on how you handle your condition.

We are probably all raised with the message “grit your teeth, ignore the pain, and carry on”.

! THAT ATTITUDE WILL HAVE TO TOTALLY GO!

You will have to learn to listen to your body. Acknowledge the pain, learn to feel where your limitations are. Also you will have to realise that something has caused your pain.

The pain is mostly caused by an accumulation of a number of factors such as:

- Too much pressure at work (have you been assertive enough?).
- Bad posture and work habits.
- No relaxation moments, no breaks, no micropauses.
- No time for exercises in your busy daily life.
- Too much housework at home, etc.

These factors will have to be permanently changed, otherwise no matter how many treatments, massages, etc. you receive, your relief (if any) will only be temporary; your pain will return.

I have seen a number of patients leave my physiotherapy clinic totally free of pain. I warned them, as I knew them to be very ambitious, and high achievers; “You’d better be very careful otherwise I will see you back!” And, of course, I did see them back. High achievers as they were, with no pain at all, they gradually forgot all the good advice. And then the pain comes back.

Many patients need one or two relapses, (with severe pain and the necessity for further treatment) before they realise:

That they really have to reorganise their work (do not do all the typing non-stop in one go).

That they really have to take their micropauses and breaks every day, even on the good days.

That they really need to do their muscular and neural exercises every day, also the good days.

Most of us learn this the hard way, you can be the exception.

What is the prognosis when you seek treatment with severe OOS pain and you have decided to follow the recommended advice?

Nobody can be definite about that and it will depend on the kind of treatment you receive.

From the results in our clinic over the last five years we are able to estimate the following:

- 90% of the patients who have had their pain for less than a year leave this clinic free of pain (but they have to be very careful to avoid relapses).
- when the OOS pain has been there for more than a year, that percentage drops to 60%.
- the other 40% will leave the clinic with relief of pain and with knowledge about numerous strategies to relieve and handle the remaining pain.
- 97% of all patients are able to continue with normal work tasks and normal work hours. (according to 2002 clinic outcome measurements).

How many physiotherapy treatments will you need?

Our statistics are not totally reliable as the number of treatments given is strongly influenced by the amount of treatments granted and paid for by the ACC. Research in Great Britain indicates a treatment time anywhere between two months and two years.

In our experience, we need anywhere between eight and 18 treatments depending on the severity of the pain and the work tasks. In the rare case that the injury has become permanent, patients often choose to continue treatment once-weekly or fortnightly at their own cost. This enables them to continue doing their job which would otherwise be impossible. In some cases, the ACC will grant additional payment for treatment of relapses. We try to use as few treatments as possible, in case there is a relapse.