



Fitness Frontline

The clinical diagnostic assessment of personally generated joint and muscle pain



Miller Health



PREFACE

The **Clinical Diagnostic Assessment** of personally-generated joint and muscle pain is a musculo-skeletal health and fitness program. It is designed to provide you with an assessment of the likely causes of **personally-generated musculo-skeletal dysfunction**, particularly lower back dysfunction.

A significant proportion of joint and muscle pain occurs as (without a regular flexibility training program) muscles tighten up and take the skeleton out of alignment. Over the years, (without a regular and systematic strength training program) muscles become weaker and fail to provide the skeleton with adequate support.

The Clinical Diagnostic Assessment is a general fitness assessment, not a specialist medical or physiotherapy assessment. It aims to determine which muscles are tight, which muscles are weak and provide participants with a program of flexibility and strength exercises designed to get the skeleton back into better alignment, better supported by strong muscles – and pain free.

It's only after people have received a Clinical Diagnostic Assessment report aimed at determining the likely cause of particular joint or muscle dysfunction, that anyone can prescribe an appropriate treatment program to restore poor function to good. Without the best possible diagnosis of causality, the rehab prescription is likely to be 'potluck', with the treatment frequently directed at the site of the pain and not the site of the underlying cause of the pain.

Radiological imaging is a limp and useless tool in determining causation. It tells you 'what is', not what's caused 'what is'.

Caveat: there is more than one way to determine causation of joint and muscle pain.

ABOUT

The Clinical Diagnostic Assessment is a **fitness program** developed by graduate physical education teacher and registered fitness practitioner John Miller.

John is experienced in providing people with fitness advice and prescribing fitness exercises that are safe for normal, healthy human beings and those who would like to be healthier. If done regularly, the exercises are likely to lead to an improvement in skeletal alignment and muscle strength. These two factors are the foundation of good musculo-skeletal health.

The Clinical Diagnostic Assessment is an integral part of a three-pronged musculo-skeletal fitness program:

- Global Back Care - ebooks
- Back in Alignment - fitness centre-based flexibility and strength class
- Clinical Diagnostic Assessment

Clinical Diagnostic Assessment of personally-generated joint and muscle pain

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1. INTRODUCTION

CLINICAL DIAGNOSTIC ASSESSMENT ONLINE

By taking part in the online version of the Clinical Diagnostic Assessment you'll be able to gain a clearer appreciation of the underlying cause of your joint and muscle pain and lead to the prescription of a series of flexibility and strength exercises that are most likely to restore poor function to good.

This document illustrates in detail the nature and scope of the assessment.

The diagnostic assessment comes with an exercise prescription, the **Back in Alignment** strength and flexibility training program. It's a program designed to treat the cause of the problem by loosening tight muscles, strengthening weak muscles and getting the skeleton back into better alignment.

It's a prescription that you can 'take' yourself. In fact, it's only you, yourself who can administer it. That's why it's the cheapest rehab program there is.

Most joint and muscle pain is personally generated. In the case of lower back pain, tight muscles attached to the pelvis have taken the pelvis and the bones above it out of alignment. Only on the rarest of occasions is lower back pain caused by a lack of rubbing, crunching, heating, cooling, vibrating, strapping, electronic muscle twitching, hanging-up-side-down, gadgetry advertised on late night TV, doping, surgery...!

THE CATCH

There is just one catch. I can give you the program, but I can't do it for you.

What I will do is:

- conduct the assessment either one-on one in a room, or online using Zoom
- suggest and then teach you the exercises you need to do to get your skeleton back into better alignment
- provide you with the PDF copy of the Global Back Care and Back in Alignment ebooks that provide a more detailed outline of your condition and the exercises designed to restore poor function to good
- arrange two Zoom follow up meetings to see how you're going.
- invite you to contact me by email seeking further advice.

You, the individual,
can do more for
your own health
and wellbeing than
any doctor, any
drug, any exotic
medical advice.

US Surgeon General 1979

2. GETTING READY

Zoom

Download and instal Zoom.

Set up your camera

Prior to the start of a Zoom assessment, set up your camera so there is plenty of room in front of it for you to adopt a range of diagnostic postures.

In some postures you'll be standing, in others you will be seated or lying on the floor.



Camera assistant

For the assessment to go smoothly, if it is online via Zoom it is probably best that you have someone assisting in moving the camera so that it can follow you around as you adopt the various diagnostic postures. A tablet is an ideal piece of equipment.

What to wear

It is recommended that you come in bare feet and wear shorts, and tee-shirt. Bring a pair of socks, sandshoes and a pair of long trousers with you.



Equipment

For the assessment of knee function, if possible have a high/bar stool in the room.

An ottoman or chair would be useful in the hip function and knee pain assessment.



Privacy Policy

We are committed to maintaining your privacy.

We collect personally identifiable information, like names, email addresses, phone numbers and the results of the assessments.

I am the only person who has access to any information you provide. I do not share any information with other people or organisations unless you or your workplace or doctor have requested it. You have my assurance on that matter. Your personally identifiable information is kept secure.

If you have any questions, queries, comments, concerns or complaints about our privacy policy you may contact me at john.miller@millerhealth.com.au and 61 424 391 749

John Miller

3. PERSONAL INFORMATION

Please complete the following details prior to the assessment and email it to: john.miller@millerhealth.com.au

Name:

Email address:

Phone number:

Age

Gender Male Yes Female ☐

Weight Kg Height cm

Percent body fat If you have a set of bathroom scales that also measures percent body fat, include that measure.

**Please complete the indemnity on page
8 prior to the online assessment.**

4. OUTLINE YOUR ISSUES OF CONCERN

First, tell us why you're seeking a musculo-skeletal health diagnostic assessment.

Tell us which parts of your body are causing you concern – i.e., which joints and muscles are painful. Some areas may be extremely painful, some just niggles. Give us a good description.

Let us know what *you* think is the cause of the problem(s).

Be as expansive as you wish.

Keep in mind that despite the fact that this assessment is designed to provide people with lower back, hip, knee, neck and shoulder pain, clues as to the likely cause(s) of the pain.

The Diagnostic Assessment is a general fitness program, not a medical assessment. Its focus is on providing you with clues as to which muscles are responsible for taking your skeleton out of alignment and giving you clues as to whether your skeleton is being well supported by a strong musculature.

Your comments:

5. INDEMNITY – before you start

The **Musculo-skeletal Risk Factor Profile** and the **analytic postures** in this **Clinical Diagnostic Assessment** have been developed to provide you with a set of performance-based measures from which they can gauge the status of your musculo-skeletal health.

For a high proportion of people in poor musculo-skeletal health, the underlying problem is a fitness problem, (not a medical problem) one generated by a lack of strength and flexibility.

In this assessment you'll be given a clear idea of which muscles are weak, which muscles are tight and which muscles are likely to be the underlying cause of your back pain.

The premise is that weak and tight muscles move bones out of alignment. Joint and muscle pain is a symptom of this mis-alignment. Unless you have been involved in a traumatic accident, it is highly unlikely that a single incident will have brought about this misalignment.

At the end of the assessment, you'll receive copies of Global Back Care suite of ebooks that are most appropriate to your condition(s). Each book contains the exercises we recommend you do to get yourself back into a pain free state.

Because we have no idea of your current physical condition, we need to provide you with some safety advice and request that you look after yourself during the exercise sessions. If initially you are not in good musculo-skeletal health, perform the exercises gradually and keep within your own limits.

To signify that you have read the safety information below, place a tick in each of the boxes.

1. Whilst it is unlikely, there is a slight risk that you could injure yourself during Back in Alignment sessions. You may strain a muscle, particularly if you haven't done any strength or flexibility exercises for a long time. This is a risk you need to be aware of and one which we cannot shoulder. Work within your own limits. ☐
2. Initially you may feel stiff the day after an exercise session. This feeling of stiffness is normal for people who haven't been involved in a regular strength and flexibility training program. However, as tight muscles loosen off, your strength improves and your skeleton is better aligned you'll experience less joint and muscle pain. ☐
3. If there is conjecture about the safety of some of the exercises we recommend, we will point out those safety concerns. ☐
4. If you don't want to do an exercise, don't do it. ☐
5. If it hurts while doing an exercise, stop doing it immediately. ☐
6. If a doctor, manipulative therapist or fitness practitioner has said 'Don't do that exercise', don't do it. We're not going to argue with doctors, therapists and fitness practitioners in their absence. ☐
7. Look after yourself. ☐

Please sign on the dotted line to confirm that you've read this advice and are happy to participate in the exercise part of this program.

Provider You Date/...../.....

6. SPECIFIC JOINT CONDITION ASSESSMENT

	Exceptionally painful	Painful	Twinge	Mostly pain free	Score						
	1	2	3	4	5	6	7	8	9	10	
1. Lower back. Rate the current condition of your lower back.											
	0	1	2	3	4	5	6	7	8	9	10
2. Upper back. Rate the current condition of your upper back.											
	0	1	2	3	4	5	6	7	8	9	10
3. Neck. Rate the current condition of your neck.											
	0	1	2	3	4	5	6	7	8	9	10
4. Right shoulder. Rate the current condition of your right shoulder.											
	0	1	2	3	4	5	6	7	8	9	10
5. Left shoulder. Rate the current condition of your left shoulder.											
	0	1	2	3	4	5	6	7	8	9	10
6. Right wrist. Rate the current condition of your right wrist and hand.											
	0	1	2	3	4	5	6	7	8	9	10
7. Left wrist. Rate the current condition of your left wrist and hand.											
	0	1	2	3	4	5	6	7	8	9	10
8. Right hip. Rate the current condition of your right hip.											
	0	1	2	3	4	5	6	7	8	9	10
9. Left hip. Rate the current condition of your left hip.											
	0	1	2	3	4	5	6	7	8	9	10
10. Right knee. Rate the current condition of your right knee.											
	0	1	2	3	4	5	6	7	8	9	10
11. Left knee. Rate the current condition of your left knee.											
	0	1	2	3	4	5	6	7	8	9	10
12. Right lower leg. Rate the current condition of your lower leg, and foot. Do you suffer from shin splints, Achilles tendonitis ...?											
	0	1	2	3	4	5	6	7	8	9	10
13. Left lower leg. Rate the current condition of your lower leg, and foot. Do you suffer from shin splints, Achilles tendonitis ...?											
	0	1	2	3	4	5	6	7	8	9	10
14. Right foot. Rate the current condition of your right foot. Do you suffer from heel pain, plantar fasciitis, malformed toes											
	0	1	2	3	4	5	6	7	8	9	10
15. Left foot. Rate the current condition of your left foot. Do you suffer from heel pain, plantar fasciitis, malformed toes											
	0	1	2	3	4	5	6	7	8	9	10

/150

7. MUSCULO-SKELETAL RISK ASSESSMENT

Below is an outline of the tests in the Risk Screen. Complete the risk screen on the next page.

1. Current condition This is a subjective assessment of how you perceive your current, overall level of musculo-skeletal health. Take into account aches and pains and limited mobility and function compared with when you were 'at your peak'.	
2. Body composition. How close are you to your ideal weight? You can estimate the number of kilograms over your ideal weight. In a clinical situation we'd use percent body fat.	
3. Lower body strength – squat How many squats can you do 'til exhaustion? Your bottom must reach the crease at the back of your knees. If you've got sore knees either don't proceed or proceed with caution.	
4. Abdominal strength – sit-ups with feet 'til exhaustion. There is evenly divided conjecture about whether it is safe to do situps with feet held. I believe the exercise is safe. Many people cannot do 1 situp without their feet held. Proceed with caution.	 If it hurts, stop doing it
5. Upper body strength – press-ups 'till exhaustion, men on toes, women on front of thighs. If you've got painfully sore shoulders either don't do this exercise or proceed with caution – and don't do too many.	
6. Flexibility – sit and reach Sitting on the floor, with feet outstretched in front of you, see how far down past your toes you can reach with your fingers. Keep your knees straight.	 
7. Ability to sit up straight with legs crossed With legs crossed and hands clasped behind your back, see if you can sit up straight without falling over backwards.	
8. Shoulder function – wall test. Stand with your back to the wall. Place your hands in the surrender position with elbows, forearms, wrists and fingers flat back on the wall. Score 10 if you can do this with ease. Score low if you have difficulty getting into this position or lower still if, when your forearms are vertical, they are a long way from the wall.	
9. Strength training behaviour Number of times a week you train .	
10. Flexibility training behaviour Number of times a week you train.	

MUSCULO-SKELETAL RISK ASSESSMENT

1. Current condition.

How would you rate the current condition of your musculo-skeletal system?

Dreadful										Excellent
0	1	2	3	4	5	6	7	8	9	10

2. Body composition: how close are you to your ideal weight?

Current weight Ideal weight

Kg over ideal wt	>25	<25	<20	<15	<10	<7	<4	<2
	3	4	5	6	7	8	9	10

3. Lower body strength – squats – until exhaustion #.....

Squat so your bottom goes down to at least the crease in the back of your knees and stand up straight with legs fully extended.

>6	6	8	10	12	14	16	18	20	22	24
0	1	2	3	4	5	6	7	8	9	10

4. Front of body strength – situps feet held - until exhaustion #.....

Men on toes, women on front of thighs.

>6	6	8	10	12	14	16	18	20	22	24
0	1	2	3	4	5	6	7	8	9	10

5. Upper body strength – press-ups – until exhaustion #.....

Men on toes, women on front of thighs.

>6	6	8	10	12	14	16	18	20	22	24
0	1	2	3	4	5	6	7	8	9	10

6. Hamstring flexibility – sit and reach. How far down can you reach.

Can't touch	Fingers			Palm			Wrist
0	4	5	6	7	8	9	10

7a. Left buttock flexibility – sit up straight, legs crossed, hands clasped behind back.

Right leg under	Big fail	Nope	Almost	Just	Good	Perfect
	0	1	2	3	4	5

7b. Right buttock flexibility – sit up straight, legs crossed hands clasped behind back.

Left leg under	Big fail	Nope	Almost	Just	Good	Perfect
	0	1	2	3	4	5

Ttl

8. Shoulder function – stand against the wall, arms vertical in the 'surrender' position. The further they are away from the wall (in cms) the lower the score.

>15	15	13	11	9	7	5	3	2	1	Flat
0	1	2	3	4	5	6	7	8	9	10

9. Strength training behaviour

Do you have a regular strength training program. Sessions per week.

0		1			2					3
0	1	2	3	4	5	6	7	8	9	10

10. Flexibility training behaviour

Do you have a regular flexibility training program. Sessions per week.

0		1			2					3
0	1	2	3	4	5	6	7	8	9	10

The 'pass mark' is 70/100.

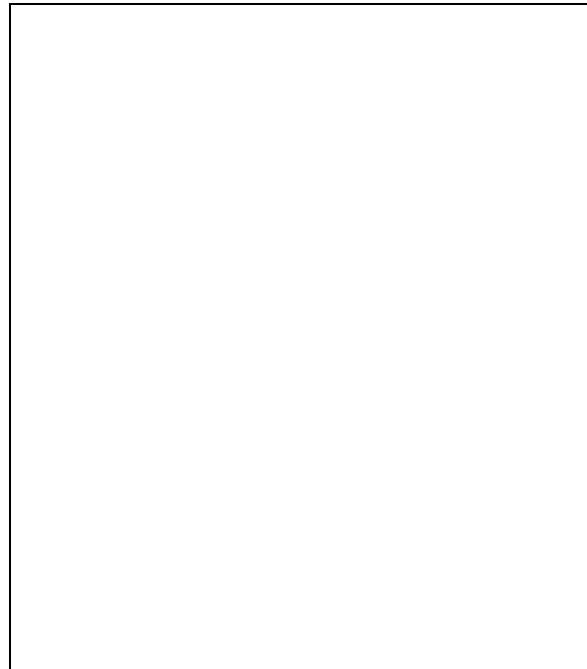
TOTAL/100

8. POSTURAL ANALYSIS

Your examiner may take screenshot images of you in the various diagnostic postures outlined in this section and insert them into this template.

1. Standing up straight – front on

Stand up straight, front on and with feet comfortably apart.



Is your body in good alignment?

Are you perfectly in alignment or are you leaning to one side? Are the palms of your hands facing the outside of your thighs or do you see mainly knuckles? Are your shoulders level? Are the tips of your fingers level? Are your feet square or pointing in or pointing out?

Poor form

Good form

0	1	2	3	4	5	6	7	8	9	10



Comments:

2. Standing up straight – side on

Stand up straight, side on straight with feet comfortable apart. Don't even think of holding your abdomen in!



Standing up straight – side on

Based on your own personal assessment, is your body in good alignment?

Poor

Excellent

0	1	2	3	4	5	6	7	8	9	10

Comments:

3. Sitting up straight – calf and hamstring flexibility assessment

Sit up against a wall, legs straight and backs of knees on the floor. Push your bottom back as close to the wall as you can.

Which muscles feel tight when you push your bottom closer to the wall.

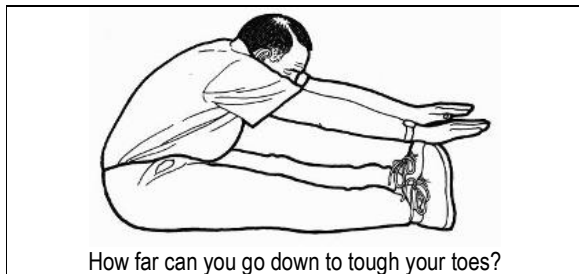


Rate how well you performed the task.

Bottom, cms from the wall.

Poor					Excellent					
20	18	16	14	12	10	8	6	4	2	0
0	1	2	3	4	5	6	7	8	9	10

4. Sit and reach – calf and hamstring flexibility assessment



Sitting on the floor, with feet outstretched in front of you, see how far down past your toes you can reach with your fingers. Keep your knees straight.

Poor				Excellent			
Can't touch	Fingers			Palm			Wrist
0	4	5	6	7	8	9	10

Comments:

5. Right buttock flexibility assessment

Can you sit up exceptionally straight with your legs crossed; left leg under the right, right leg over the left and hands clasped behind your back? If you can't, it means your right buttock is too tight. It means that your pelvis is out of alignment, which in turn means there is a high likelihood that the bones above and below it are also out of alignment.



Right buttock function test – front on.
(Give this fellow a score of 3/5!)

Rate how well you performed the task.

Poor

Excellent

Couldn't do it – fell over backwards.						Only just. Back in a 'C' shape.		Easy and up straight with hollow in lumbar spin		
0	1	2	3	4	5	6	7	8	9	10

Comments:

6. Left buttock flexibility assessment

Can you sit up exceptionally straight with your legs crossed; left leg under the right and right leg over the left – and hands clasped behind your back? If you can't, it means your left buttock is too tight. It means that your pelvis is out of alignment, which in turn means there is a high likelihood that the bones above and below it are also out of alignment.



Left buttock function test – side-on.
(Give this fellow a score of 3/5!)

Rate how well you performed the task.

Poor

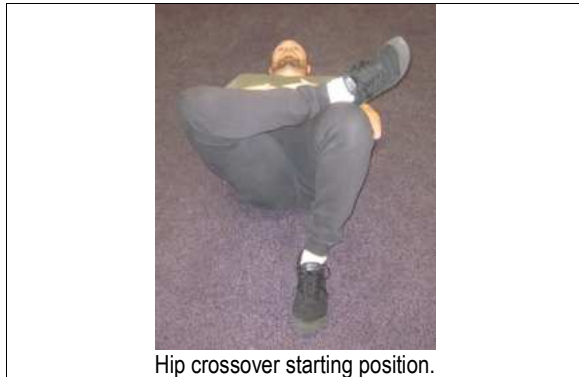
Excellent

Couldn't do it – fell over backwards.						Only just. Back in a 'C' shape.		Easy and up straight with hollow in lumbar spin		
0	1	2	3	4	5	6	7	8	9	10

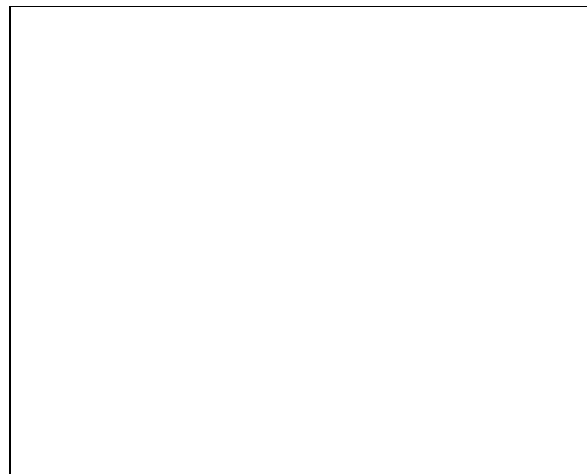
Comments:

7. Hip crossover mobility assessment – twisting to the left

Start lying on your back with feet flat and knees up. Put the side of the heel of your right foot up near the top of your left thigh (but not on the knee). Ideally right lower leg should be at 90 degrees to left upper leg.



Then drop the left knee and right foot onto the floor on the left side of your body



Poor

Excellent

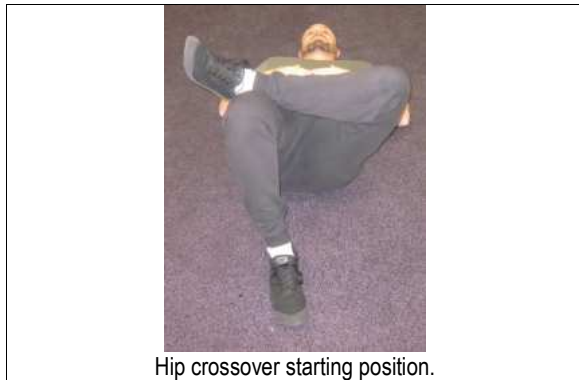
Couldn't get knee and foot to rest on the floor – too painful. Painful when buttock massaged vigorously.	Only just – right side of body tight.			Left knee and right foot easily on the floor.		
0	5	6	7	8	9	10



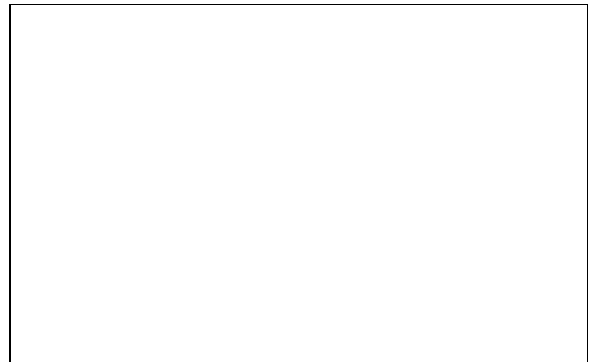
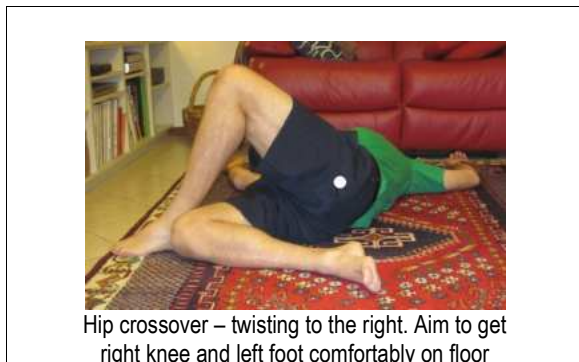
Comments:

8 Hip crossover: twisting to the right

Start lying on back with feet flat and knees up. Put the side of the heel of your left foot up near the top of your right thigh (but not on the knee). Ideally left lower leg should be at 90 degrees to right upper leg.



Then drop the right knee and left foot onto the floor on the right side of your body.

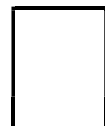


Rate how well you performed the task.

Poor

Excellent

Couldn't get knee and foot to rest on the floor – too painful. Painful when buttock massaged vigorously.	Only just – left side of body tight				Right knee and left foot easily on the floor.	
0	5	6	7	8	9	10



Comments:

9. Right hip function

Along with the hip crossover exercise, this exercise will provide you with clues as to the cause of any dysfunction in your hips.

To check your right hip function, lie on your back with your left leg on an ottoman (or a chair) and the right foot on the floor, leg bent at the knee, with your foot resting against the ottoman.

Move the right knee down toward the floor. If it's functioning well, you'll be able to rest the knee on the floor with ease. If it is dysfunctional, it won't go anywhere near the floor.

See how close to the floor your knee can go.

Report on how well you can do it, whether it's painful or not and if you notice any differences between the sides.



Right hip function test.

Rate how well you performed the task.

Knee cms from the floor.

Poor

Excellent

20	18	16	14	12	10	8	6	4	2	0
0	1	2	3	4	5	6	7	8	9	10

Comments:

10 Left hip function

Along with the hip crossover exercise, this exercise will provide you with clues as to the cause of any dysfunction in your hips.

To check your left hip function, lie on your back with your right leg on an ottoman (or a chair) and the left foot on the floor, leg bent at the knee, with your foot resting against the ottoman.

Move the left knee down toward the floor. If it's functioning well, you'll be able to rest the knee on the floor with ease. If it is dysfunctional, it won't go anywhere near the floor.

Take a photo to see how close to the floor your knee can go.

Report on how well you can do it, whether it's painful or not and if you notice any differences between the sides.



Image 9

Give yourself a personal rating on how well you performed the task.

Knee cms from the floor.

Poor					Excellent					
20	18	16	14	12	10	8	6	4	2	0
0	1	2	3	4	5	6	7	8	9	10

Comments:

11. Super thigh and buttock flexibility assessment: twisting to the left

Wear shoes and mid-length socks for this test.

Lie on your back with your legs straight. Swing your straight right leg over your body so your right foot touches the floor. Your left leg will bend slightly when you do this.

Once the right shoe is on the floor on the left side of your body, see if you can grab hold of the toe of the shoe on the straight right leg with your left hand.

If you can't grab the toe of your shoe, either grab the laces of your shoe or your sock. Just make sure the right leg stays straight and your right shoulder and arm are flat on the floor.

Take the photo at your 'most stretched' position.



Rate how well you performed the task.

Poor form

Good form

Trousers held near knee		Cuff of trousers		Sock		Laces		Toe – easy
0	3	4	5	6	7	8	9	10

Comments:

12. Super thigh and buttock flexibility assessment – twisting to the right

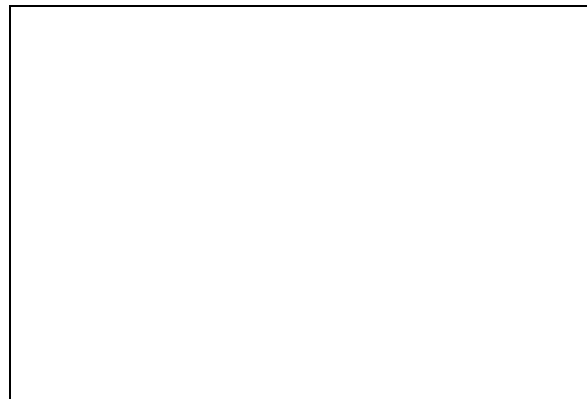
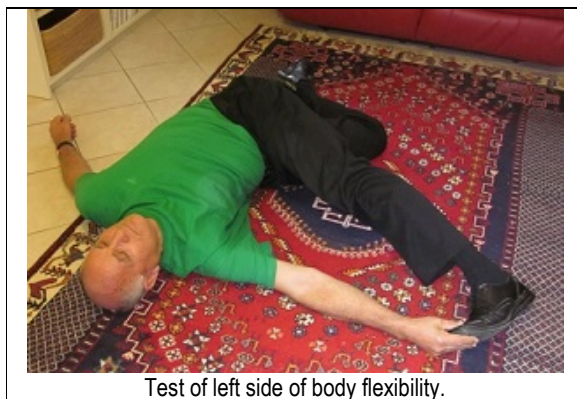
Wear shoes and mid-length socks for this test.

Lie on your back with your legs straight. Swing your straight left leg over your body so your left foot touches the floor. Your right leg will bend slightly when you do this.

Once the left shoe is on the floor on the right side of your body, see if you can grab hold of the toe of the shoe on the straight left leg with your right hand.

If you can't grab the toe of your shoe, either grab the laces of your shoe or your sock. Just make sure the left leg stays straight and your left shoulder and arm are flat on the floor.

Take the photo at your 'most stretched' position.

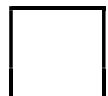


Rate how well you performed the task.

Poor form

Good form

Trousers held near knee.		Cuff of trousers		Sock		Laces		Toe – easy
0	3	4	5	6	7	8	9	10



Comments:

13. Feet over head – general mobility assessment

Lying on your back, can you take your feet over your head and grab hold of your toes – with back of hands on the floor.

This is an exercise you would have had no difficulty doing as a child.



Heels over head

Rate how well you performed the task.

Poor

Excellent

Couldn't do it at all.			Feet 30cms from the floor.				Easy. Feet touch the floor	
0	3	4	5	6	7	8	9	10

Comments:

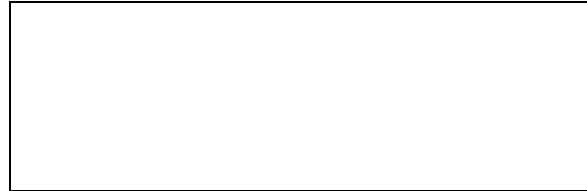
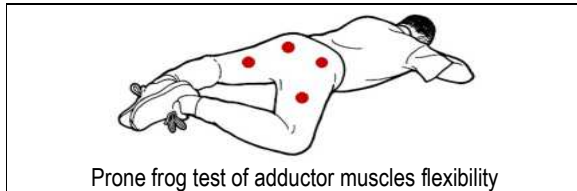
14. Prone frog – inner thigh (adductor) muscles flexibility assessment

This position takes a bit of getting in to. Start on hands and knees with your knees as wide apart as you can get them, soles of your feet together and toes resting on the floor.

Take your body forward, with toes on the floor and see how close you can get your abdomen to the floor – with your chin resting on your hands.

This is a difficult position to get into because its frequently the case that the adductor muscles attached to the inside of your thighs and the back of your pelvis (and lower vertebrae) are too tight.

Get someone to stand over you and dig their thumbs into your buttock and hamstring muscles in the places indicated by the red spots. Observe how tender those spots are and whether one side is more painful than the other.



Rate how well you performed the task.

Poor

Excellent

Abdomen further than 10cms from the floor					Abdomen within 10cms of the floor				Abdomen touching floor.	
0	1	2	3	4	5	6	7	8	9	10

Pain experienced when right buttock is massaged vigorously.

Poor

Excellent

Excruciatingly painful					Painful				No pain at all.	
0	1	2	3	4	5	6	7	8	9	10

Pain experienced when left buttock is massaged vigorously.

Poor

Excellent

Excruciatingly painful					Painful				No pain at all.	
0	1	2	3	4	5	6	7	8	9	10

Pain experienced when right hamstring is massaged vigorously.

Poor

Excellent

Excruciatingly painful					Painful				No pain at all.	
0	1	2	3	4	5	6	7	8	9	10

Pain experienced when left hamstring is massaged vigorously.

Poor

Excellent

Excruciatingly painful					Painful				No pain at all.	
0	1	2	3	4	5	6	7	8	9	10

Comments:

15. Right knee function – quadriceps flexibility assessment

This test will also assist in determining the cause of knee pain. Do this test with shoes on.

Stand about 30cms away from a bench or stool about the same height as a kitchen bench. You may need something to hold onto for balance.

Place the toe of your right shoe on the bench. Stand up straight with a hollow in your lumbar spine and lean back as far as you can toward the bench.



Right leg quadriceps function test:
front on and side on.

Rate how well you performed the task.

Poor

Excellent

Knees 20cms or more apart.			Knees 10cms or more apart.		Knees less then 5cms apart				Knees together	
0	1	2	3	4	5	6	7	8	9	10

Pain experienced when leaning back.

Poor

Excellent

Excruciatingly painful					Painful				No pain at all.	
0	1	2	3	4	5	6	7	8	9	10

Comments:

16. Left knee function – quadriceps flexibility assessment

This test will also assist in determining the cause of knee pain. Do this test with shoes on.

Stand about 30cms away from a bench about the same height as a kitchen bench. You may need something to hold onto for balance.

Place the toe of your left shoe on the bench. Stand up straight with a hollow in your lumbar spine and lean back as far as you can toward the bench.



Left leg quadriceps function test:
front on and side on.

Rate how well you performed the task.

Poor

Excellent

Knees 20cms or more apart.			Knees 10cms or more apart.		Knees less than 5cms apart				Knees together	
0	1	2	3	4	5	6	7	8	9	10

Pain experienced when leaning back.

Poor

Excellent

Excruciatingly painful					Painful				No pain at all.	
0	1	2	3	4	5	6	7	8	9	10

Comments:

17. Knee and ankle function

This exercise will really let you know what the condition of your ankles and knees is like.

Kneel down with your feet underneath your bottom and the laces of your shoes pressed against the floor.

Lean back as far as you can.



Knee and ankle function test.

Rate how well you performed the task.

Pain experienced when leaning back.

Poor

Excellent

Excruciatingly painful or couldn't do it at all.					Painful				No pain at all.	
0	1	2	3	4	5	6	7	8	9	10

Comments:

18. Shoulder function

Stand with your heels, backside and shoulders against the wall.

See whether you can get the back of your forearms, wrists, hands and fingers comfortably flat against the wall when in the 'surrender' position.

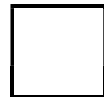


How do your shoulders feel?

Poor

Excellent

A lot of pain					Some pain				Loose – no pain	
0	1	2	3	4	5	6	7	8	9	10



How far are your forearms, wrists and fingers off the wall when they are vertical?

Cms from the wall.

Poor

Excellent

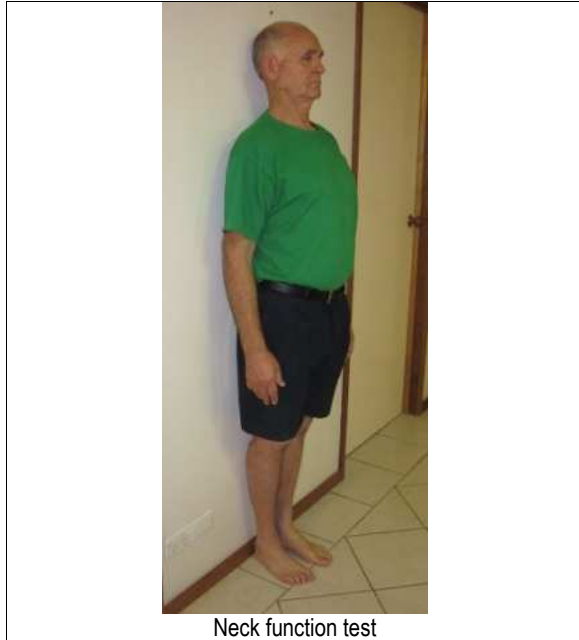
20	17	15	13	11	9	7	5	3	1	Flat against wall
0	1	2	3	4	5	6	7	8	9	10



Comments:

19. Neck function

Stand with your heels, backside and shoulders flat against the wall. Then put your head against the wall. Does it go flat back against the wall so you can see the skirting on the other side of the room, or do you look up toward the ceiling?



How does your neck feel?

Poor

Excellent

A lot of pain					Some pain				Loose – no pain	
0	1	2	3	4	5	6	7	8	9	10

Where are you looking when your head is against the wall?

Poor

Excellent

Up at the ceiling					Up toward the cornice at the other side of the room		Straight ahead		Skirting on the other side of the room		
0	1	2	3	4		5	6	7	8	9	10

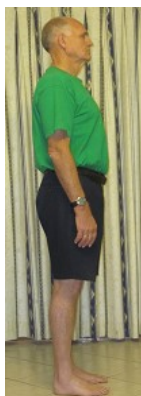
Comments:

You're all done.

9. POSTURAL ANALYSIS OVERVIEW



1. Standing up straight - front on



2. Standing up straight - side on



3. Sit up straight



4. Sit and reach



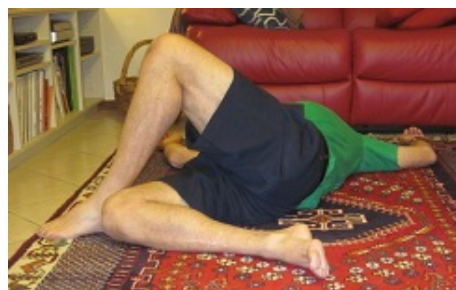
5. Right buttock function



6. Left buttock function



7. Hip crossover to the left



8. Hip crossover to the right



9. Right hip function



10. Left hip function



11. Super thigh and buttock flexibility - left



12. Super thigh and buttock flexibility - right



13. Feet over head – general mobility.



14. Prone frog adductor flexibility



15. Right knee function



16. Left knee function



17. Knee and ankle joint function



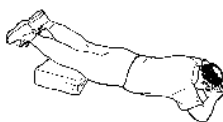
18. Shoulder function



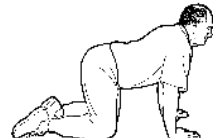
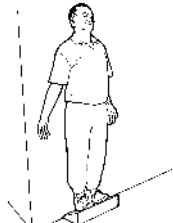
19. Neck function

9. KEY FLEXIBILITY EXERCISES

If you're in acute back pain, do the first three (shaded) exercises for the time suggested. Incorporate hip crossover into your regular maintenance program for a minute each side. For (shaded) hip crossover 20 minutes is good, 30 better and 40 best. The sit up straight buttock stretch, the hamstring stretch and super hip and thigh stretch are essential exercises.

Static back 20 minutes  This is the most comfortable position for anyone with a crook back. Lie in this position for 20 minutes or more to settle down muscles attached to pelvis and spine.	Supine groin stretch – 20 minutes each side  Laying on back, one leg on bolster the other on the floor. Relax in this position for 20 minutes each side.	Hip crossover – at least 20 minutes, 5 minutes a side over and over.  Start with the heel of the right foot up toward the top of the left knee. Push the right knee way from you. Then drop the right foot and left knee onto the floor on the left side of your body.
Hip stretch  Tuck the right foot behind left knee. Take right knee over close to the floor on the right side of your body. Repeat on left side.	Super hip and thigh stretch  Start with feet together and extended. Swing the right leg out over the left and grab hold of the right foot with your left hand. Keep your right shoulder on the floor. If you can't grab your foot, grab your sock or the bottom of your trouser. Repeat on other side.	Heels over head  You used to be able to do this when you were a kid. Start doing it again. 30 seconds is enough. With every breath you breathe out, creep back a little further. When you can hold your toes with the back of your hands on the floor, report back!
Sit up straight buttock stretch  Sit with both legs straight out in front of you. Fold the left leg under the right and then the right over the left. Prop yourself up on your knuckles and lean forward for 20 deep breaths.	Hamstring stretch  With legs outstretched hold on to lower leg as far down as is comfortable. Bend knees slightly and place hands further down, then straighten legs. Do for times, each time extending the stretch.	Reverse frog - knees out  Knees out, soles of feet together, chin on chest and front of pelvis on the floor. Let your feet hang down.
Cobra  Keep pelvis on the floor. Stretch upwards. Breathe out and feel lumbar spine loosening off.	Reverse cobra  Place a cushion underneath your knees. Do this exercise for as long as you like.	Buttock stretch  Start on hands and knees. Place right leg over the left, onto the knee and the laces and then slide it back and prop on your elbows. Repeat other side.

Alternate cat and dog stretch

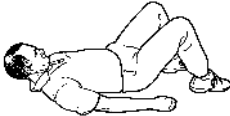
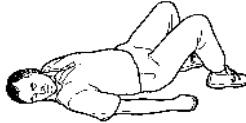
Hip flexor stretch  On one knee with the other foot well forward, pelvis arched and back straight. Stretch forward to loosen groin muscles.	Cat stretch  With hands close together under the chest, tuck the tummy in, push the pelvis forward and get a high arch in thoracic spine. Breathe out. Alternate with dog stretch.	Dog stretch  With hands close together under your chest, poke your bottom out and get a hollow in your lumbar spine. Breathe in. Alternate with cat stretch.
Quadriceps stretch  Place foot on With every breath you breathe out, lean back further. This is a must do for knee pain.	Calf stretch  Stand for 3 minutes with back to wall on sloping board.	Pillow squeeze  Sit up straight, hollow in lumbar spine and shoulders pinched. Squeeze pillow 15 times.

NECK, SHOULDERS AND ARMS - strength and flexibility exercises

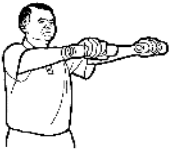
Stretch band and pulley exercises  There are a multitude of strength exercises you can do using stretch bands at home and using pullies in the gym.	Doorway squeeze  Stand with one foot just inside a doorway and push forward to stretch the muscles of the upper back. Do 20 repetitions.	Arm circles  With palms down and thumbs pointing forward, circle arms forward 20 times. Turn palms up, point thumbs back and circle backwards 20 times.
Shoulder blade pinch  Squeeze elbows back to pinch shoulder blades. 20 times.	Elbow squeeze  With knuckles on temples, swing elbows back as far as you can and then to touch at the front. 20 times.	Pull your head in  Pull your head in underneath your armpit and stretch the muscles at the back of your neck. Do this for a minute each side.

Neck isometric strength/stretch  Push the head against the right hand for 7 seconds, relax and let head flop toward the shoulder. Repeat two more times, then do the same thing to the left.	Neck isometric strength/stretch  Looking out over your right shoulder, push the head against the hand for 7 seconds, relax and turn head further behind. Repeat twice then do the left side.	Shoulder stretch  With a partner, one person pulls the elbows back to stretch the muscles at the front of the shoulder.
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NECK STRENGTHENERS AND MOBILIZERS

Neckups  Lift head up toward the chest. Don't let head touch the ground until you've done 10 repetitions.	Eye to shoulder  Lift head up a centimetre and then turn toward right shoulder and then left. 5 times each side.	Ear to shoulder  Lift head up a centimetre. Take right ear toward right shoulder and then left ear to the left shoulder. 5 times each side.
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SHOULDER STRENGTH ROUTINE - WITH DUMBELLS - build up to 4 'laps' of the routine

Arms to the front  4 repetitions	Arms to the side  4 repetitions	Arms above the head  8 repetitions
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FOREARM AND WRIST STRENGTHENER

With spring grip  Squeeze the spring in and out 20 times each hand.	With dumbbell  Lift the weight 20 times with palm up, to the side and down. As you get stronger increase the weight.
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