

Introduction

I started to write an article to help show how people with long term health disabilities could enable themselves to get better health care from an impoverished medical system which on occasion because of shortage of funding could be possibly dysfunctional. Much of what I have attempted to write is also of benefit to the person who is seeking help with a minor problem and would consider that issues concerning long term health disabilities are of no concern to them.

Many medical practitioners are competent and caring. A small percentage are neither competent nor caring. A large number of medical practitioners are caring, but lack the necessary understanding and resources to be effective when needed. A patient who has to live with a health disability 24 hours a day learns a great deal about the effectiveness and ineffectiveness of medical practitioners and their treatments.. The medical practitioner sees a ten minute snapshot of the patient coping with their health disability far removed from the patient's everyday environment. If the patient is lucky the medical practitioner may have the notes of previous encounters for comparison.

The depth of knowledge that a medical practitioner is required to know and is able to remember may not cover the particular medical situation the patient experiences. The medical knowledge that a medical practitioner has and which the medical practitioner believes covers the patient's situation may be wrong. In some cases the application of incorrect medical knowledge could put the patient's health in serious danger if followed without careful monitoring of the patient.

Many consultations with medical practitioners result in a good outcome for the patient. However, a number of consultations generate difficulties for a patient with complex health problems. Here the patient needs to obtain new knowledge and skills in order to obtain a better outcome from the consultation. Unfortunately a large number of patients have a tendency to believe that they do not need to try and obtain new knowledge and skills. They have a tendency to believe that the medical practitioner is a font of all knowledge and understanding. Historically some Medical Systems encouraged this fallible belief. Patients have to find out by investigation and experience that there is a considerable lack of understanding by medical practitioners of how the human body works as an engineering system. What follows will I hope enable the patient to obtain some or most of the knowledge that is needed for a better outcome from a medical consultation and management of their condition.

Many people with long term health disabilities often find that they have to learn: how medical diagnoses are made; how medical research is conducted, and how medical records are written. Medical research will often record measurements that are easy to describe and measure and could ignore events that are difficult to describe and record. Medical investigators who make a living from medical research are often working to tight time restraints which can prevent more in depth investigations that are needed. Medical researchers tend to come from a gifted part of the population and tend to forget that many patients do not have the abilities medical researchers have. So stress factors which do affect medical researchers often can have large effects on a person of lesser ability. These stress factors may modify a health condition for a patient who has lesser ability. Environmental factors also have a part to play in the patient's health condition. Some of these environmental factors may not be recorded in medical research. There have been several scandals where it has been found that information has deliberately been hidden or modified because it affects the sales of a drug produced by a pharmaceutical company or for some other reason.

“Cracked” [ISBN: 9781848315563] a book written by James Davies Senior Lecturer in Social Anthropology and Psychotherapy at The University of Roehampton (London UK) details some of the misleading and dishonest research results that have been presented in Professional Journals and conferences.

55 “Bad Pharma” [ISBN 978-0-00-735074-2] a book written by Ben Goldacre in 2012, details how drug companies mislead doctors and harm patients.

In the New Scientist 6th September 2014 there was an article which referred to Diederik Stapel who in 2011 admitted to inventing the data in dozens of psychology research papers.. The New Scientist referred to 24 of Stapel's papers which are known to be fraudulent. The New Scientist in previous
60 issues has referred to fraudulent results in scientific papers by other Authors. This does raise the question how accurate is the knowledge that the medical practitioner is using to make a diagnosis and prescribe treatment.

Some medical trials have not been conducted with patients who have the relevant symptoms. There
65 have been issues where people are paid to go on drug trials. In order to go on a paid trial people make up symptoms to fit the requirements of the trial. This will give inaccurate trial results for the drug being trialled. Some people involved in medical trials have gone on a multitude of different trials all at the same time. This does raise the question of whether the results useful and relevant to a doctor looking for treatment for a particular condition.

70 In contrast the patient can have personal experience of difficulty in describing some experiences and can find that research on their particular health disability does not mention these events at all. This can put the patient in an awkward position. The medical consultant, who reads the research, may decide and could write in the medical records that the patient is making events or symptoms up
75 because the events reported by the patient are not described in the medical research. Medical research tends to consider one condition in isolation and the patient may present themselves to the medical practitioner with a multitude of different health conditions.

I have spent many hours discussing issues of long term health disability with various people. I
80 know from my own experience that it is impossible to obtain all the relevant information in a 90 minute interview. The person being interviewed often does not remember to convey all the relevant details at the time of the interview and remembers additional salient facts after the interview has concluded. Not only this, the interview sets in motion the accessing of issues in the mind of the person being interviewed. Things start to be cross-referenced and considered in a manner that was
85 not considered before. This process continues after the interview has finished. The results of this mulling over of information may not be available to the conscious mind for several hours.

I find it takes several meeting of 90 minutes to build information structures of an issue. Yet there is
90 this belief among many medical researchers that they can obtain all that they need in an hour long interview. Some medical health systems only allow ten minutes for a consultation. I will leave the reader to consider the implications of this in regard to the effective treatment of a patient's health condition.

95 Some people find it difficult to comprehend that some health conditions, both physical and psychological, cannot be fixed by a simple procedure. These health conditions require the ability to learn how to manage them effectively and efficiently. To learn effective and efficient management of a health condition can take a considerable amount of time, and a lot of research on the part of the patient. Despite this research, the patient can continue to face the impossible task of presenting
100 symptoms in a constructive manner which could enable a medical practitioner to understand and treat the patient's health disability and help the patient manage their health disability. This is further compounded if the patient develops and experiences several different types of health disability or ailments all at the same time. The signs that a patient observes may or may not be related to a treatable diagnosis.

105 The possibility of an incorrect diagnosis is increased if the medical practitioner has misheard or misunderstood the patient's description of their symptoms. Often the patient is not able to give a

complete description of their symptoms because they fail to understand what the medical practitioner needs to know or they forget to tell the medical practitioner everything they intended to. The management of some health disabilities can leave the patient suffering from mental exhaustion. 110 This in turn can prevent the patient from examining and remembering all the symptoms of their health disability. The mental exhaustion can also interfere with the patient's cognitive functioning and make communication with the medical practitioner more difficult for the patient. Many health practitioners often forget this. To manage a health disability sometimes requires that the patient is very tightly focussed on the management of the health disability. This can cause the patient to 115 ignore relevant and important symptoms. For the symptoms do not help the patient manage the health disability. The result is that the patient can fail to inform the medical practitioner of those relevant and important symptoms that they have ignored.

The Christian Bible states: "it is easier to see the speck of dust in someone else's eye than the plank 120 in your own." This quote varies according to what bible translation they read. It is sometimes important that the patient, rather than describing symptoms insists that the medical practitioner gives the patient a practical examination. Some symptoms present cannot be observed by the patient. Some symptoms present can easily be mis-described by the patient.

125 Some phobias may be exacerbated by poor breathing habits. Correct the poor breathing habits and the fear may still be present; however, the body's reaction to the fear does not aggravate the phobia because the breathing problem has been corrected. This is an example where counselling about the fear will not help because psychological counselling does not help poor breathing habits.

130 **Body of Text**

When you are given a medical opinion concerning a health disability there may or may not be a mechanism available to check the opinion's validity. The reasons for the given opinion tend not to be checked or explained. The opinion is often given so quickly that the patient has no idea how to respond and has no idea what criteria the doctor used to arrive at their diagnosis. There is a 135 tendency to believe that the medical practitioner is well acquainted with the condition particularly when the opinion has been given quickly. *This can be a false assumption and the patient needs to be aware of the assumption they are making.* If you question the validity of the medical opinion, you may be advised to seek a second opinion from another medical practitioner. You are certainly entitled to do so.

140 It can be felt that asking your medical practitioner for a second opinion demonstrates a lack of trust in their ability. This demonstration of a lack of trust might be thought to put the relationship with the medical practitioner in peril. When the second opinion is obtained the patient will need to go back to their medical practitioner and present the new diagnosis. This can be an uncomfortable 145 experience if the patient has had what they think is a good relationship with their medical practitioner for a number of years. The feeling is more threatening if the medical practitioner is a surgeon who could operate on you.

Obtaining a second opinion is often inconvenient and may be of no real benefit. The art of 150 balancing a social schedule, making time available, and travelling to see another medical practitioner is time consuming. Often the patient has not got this time available. If the patient sees the importance of a second opinion they will attempt to make time by modifying their social arrangements. The need to make time, time to re-arrange their social arrangements together with the mental exhaustion that goes with handling a long term health disability can make the obtaining 155 of a second opinion very difficult, if not impossible.

In many cases the patient will not be able to determine if a second opinion is important and will modify their life style to live with the inconvenience of the original diagnosis.

160 One of the difficulties involved in the handling of medical opinion is that it takes time for the patient's brain to handle unfamiliar information. I have found from my own experience that the older one is the longer it takes to handle unfamiliar information. To understand information you have just been given, you need a database of similar and related examples that you have acquired through experience. With medical opinion you often have no database of similar or related examples
165 with which to understand the opinion you have just been given. The medical practitioner in contrast has seen many examples related to the opinion they have just given.

The medical practitioner often wants a decision within a short time span. Unfortunately for the patient this time span can be less than the time needed for the patient's brain to handle unfamiliar
170 information. As someone older than fifty I have become very aware of this problem. My memory seems to indicate that I did not have this problem in my thirties. I am not sure whether this is because mental facilities are slowing down or it is because I am far more aware of the subtleties of issues now than when I was in my thirties.

175 The confidence of the medical consultant has been derived from the long experience of handling patients. The experience is that the more confident the consultant the quicker the patient believes them and the quicker the patient makes the decision that the consultant wants.

The nature of a medical consultation can push the patient to make a decision too quickly on issues
180 that they have not had enough time to:

- 1) mentally examine,
- 2) consider the consequences of to the required depth.

The consultant gives information too fast for the patient to comprehend and the patient may want to
185 give the impression that they understand what they have been told and not appear stupid. A well educated patient does not mind if their lack of understanding makes them look stupid, for they already proved their ability to understand in other fields of human endeavour. An uneducated patient can feel under threat if they do not understand what a consultant tells them. This can result in the uneducated patient not questioning what the consultant tells them. The lack of questioning
190 can result in treatment that does not fit the medical condition that they have. Both educated and uneducated patients often do not have enough time at a consultation to examine and consider the consequences of the information they are given to the necessary depth.

195 In my experience I have found that I have to examine data given to me in a consultation more than once. Before I can compare the medical data and come to an informed decision I have to go over the data several times. This analysis can take several days.

I have found from experience that I can get trapped in an information loop where I look at the same
200 information in exactly the same way on each and every occasion that I look at it. I have had to learn to look at data from differing viewpoints and search for extra information before looking at the data again. By leaving a generous time gap before looking again at the data I have found that I have less chance of getting into an information loop of looking at the data the same way time and time again. The internet is a very useful source of alternative information. Unfortunately this source of
205 alternative information may make the assumption that the patient has a greater understanding of medical information than they actually have.

There is a need for the patient to ask the medical practitioner to write information down and for
210 another appointment to be made. Unfortunately in some medical systems another appointment cannot be made before two weeks or a month has passed- three months in some cases. This can put undue pressure on the patient to make a decision they could later regret. The patients need to request time to research the options available when these pressures occur.

215 There are medical practitioners who exploit the inconvenience of obtaining a second opinion and thus avoid medical challenge and discussion as a result.

It would be more useful if the medical practitioner, when giving their opinion, was able to consider and explore the different possibilities that could arise from the symptoms presented by the patient. The patient often has not enough of a scientific background to ask for more detail from the medical practitioner. The medical practitioner often does not want to educate the patient to cover the patient's missing knowledge as this could be time consuming and fraught with difficulty. If the patient has no way to understand and determine the factors that lead to the medical practitioner making their diagnosis the patient:

- 1) is not able to determine if the medical practitioner's diagnosis is accurate;
- 225 2) cannot determine if they have given the medical practitioner a correct and complete description of their symptoms;
- 3) cannot determine if the medical practitioner has understood them the way they intended.

It becomes a matter of chance if the medical opinion is accurate with respect to the patient's medical condition. The probability of the medical opinion being accurate can vary quite considerably. Sometimes the patient is labelled with a condition that the patient is able to do something about or sometimes with a condition which they can do nothing about. Thus it is important that someone in the medical profession is able to guide the patient towards sources of appropriate medical knowledge and sources of management appropriate to the patient's circumstances. Sometimes the patient is diagnosed with a condition that they can do nothing about.

The patient can also find that they are up against a system which ignores or can deliberately forget that there are a multitude of diagnoses that can arise from their presented symptoms. The development of symptoms over a passage of time (hours, days or weeks) should enable a medical practitioner to distinguish one possible diagnosis from that of another. During this time, the health problem could appear to improve or actually vanish, removing the need to take any action, or modify the action required. The medical practitioner, however, often feels the need to make an instant diagnosis which often prevents the possibility of other diagnoses from being considered. This can be life-threatening to the patient if they are at the initial stages of a serious illness. The patient will often pick up unusual symptoms long before a medical practitioner is consulted and the medical practitioner has the ability to detect the unusual symptoms. The patient lives with the symptoms for hours on end. The medical practitioner has ten minutes, if that, to detect them. The medical practitioner often forgets that in a number of cases the causes for the patient's symptoms may lie in an entirely different area than where the patient detects the symptoms.

A patient has a fall in August. The patient reports to the doctor that they have back pain. The doctor prescribes pain killers because the doctor believes that the pain is due to problems associated from the fall. The daughter of the patient is suspicious of the diagnosis as it does not match what she is seeing in regard to the patient's behavioural lifestyle, and requests further investigation. At the end of September the patient has a chest x-ray and blood test. A CT scan and MRI followed at the end of November. It was found that the back pain was due to a tumour pressing on the patient's spinal column. The patient was found to have cancer in several areas of the body. The patient died shortly after the diagnosis of cancer was made. One is left with the thought that if the patient had been examined by the medical practitioner on initial reports of back pain, the patient may have been successfully treated for cancer. Unfortunately this did not happen and the GP did not act until the patient's daughter insisted on action being taken.

The patient needs to track and record symptoms over time to enable the original diagnosis to be checked. Advice concerning the tracking and recording of symptoms is rarely given to the patient. Just as often the tracking and recording of symptoms are not discussed. As a result the patient often

does not even consider that the tracking and recording of symptoms needs to be done.

270 If the patient does realise that their symptoms need to be tracked and recorded they may not know how to go about this task. This task is a skill. This task must be performed with other important social issues vying for attention. It is difficult to change one's focus of attention from the task in hand and record a symptom. The task in hand necessitates the person's full attention and the symptom which has manifested itself is forgotten.

275 This leads to the question of how accurate the medical opinion is and how much validity the recommended medical treatment has for a particular patient. Because there is no accurate tracking and recording of symptoms, recommended treatment tends to be 'one size fits all' in relation to a diagnosis. There is often no attempt to use the patient's illness- correcting mechanisms to help the patient manage their health condition more effectively. This could lead to the patient experiencing far more severe side effects from the recommended medical treatment than need be the case.

280 Medical practitioners check with their colleagues, computers or medical journals what the side effects are for a particular treatment. Unfortunately these side effects are related to other people not to the patient who is being given the treatment. Medical practitioners can forget that the patient can have a number of factors which modify the effects of the prescribed treatment. These factors which modify the treatment are not reported in the medical journals.

285 There is often a demand for the medical practitioner to be more efficient for reasons of cost. A more cost-efficient medical practitioner is not necessarily more effective at treating a patient's medical problems. The medical practitioner can often be less effective. Efficiency is determined by factors of time and cost and outcomes. These factors often tend to be looked at in terms of the activities of the medical practitioner and those who conduct medical testing and correlate the results.

295 The medical practitioner gets the results of medical tests. The medical practitioner often does not do the testing. Medical tests tend to look for specific indicators for specific medical problems and nothing else. During testing a partial response of the patient is recorded, not the full response. For example during a hearing test the issue of the patient being able to hear a tone is recorded, but not the issue of the patient not being able to distinguish the difference between two tones of slightly different frequency.

300 So sometimes a condition a patient has is not recognised. The cost to the patient when the medical practitioner becomes more 'efficient' is a factor that is often ignored. A more efficient medical practitioner who is less effective at treating a patient's condition can increase the costs to the patient and indeed to the NHS and the economy considerably. The risk of a serious condition not being detected, and thus not treated, can rise quite considerably. This is because the efficient medical practitioner can be so highly focused on one aspect that they ignore symptoms presented by the patient that would have a bearing on diagnosis.

310 In the sciences of biology, chemistry and physics there is consideration given to errors of observation. The errors of observation are used to determine how accurate a result from a scientific experiment is. The result from the experiment and its accuracy are recorded in the write-up of the scientific experiment. Medical practitioners have a tendency not to know what errors of observation are, nor even how to factor in errors of observation when they make their diagnosis. The erroneous belief among many medical practitioners is that the patient is able to list all the relevant symptoms. This can lead to errors of diagnosis that are not detectable.

315 For example: tiredness and depression can display similar signs or symptoms. A patient may not realise that they have not been getting the required rest that their life circumstances or health

320 requires. To illustrate; many adults adapt to eight hours sleep per night, although some adults need
less and some need more. Whatever the amount of sleep needed a routine is followed which
ensures the adult gets the sleep they need. A number of adults when they approach 60 years of age
start to find that they need to break their sleep to go to the toilet. A number of these adults continue
to follow the same sleep routine they followed as younger adults without realising that they are
325 developing a sleep deficit. The requirements of going to the toilet once or several times during the
night may lose them an hour of sleep. It often does not occur to many people that they need
somehow to compensate for the sleep deficit. This is an easy mistake to make as there are a lot of
people who seem to require very little sleep, or that is the belief. The other mistake is that we are
creatures who adopt routines because these make life easier. In their 20s, 30s, 40s and 50s people
set their alarm clocks for eight hours sleep. When the person starts to reach the problems of old age
330 in the 60s the ingrained habit of setting the alarm clock to eight hours remains the same and is never
questioned. Many people I have spoken to have never thought of altering their alarm clocks to
make allowance for the disturbed sleep because of the need to go to the toilet.

335 Much of the population often tries to emulate the life style of reduced sleep. This sector of the
population often does not realise that their sleep and rest requirements are a lot greater, or even that
the need for sleep could well increase as they get older. The symptoms the patient experiences
necessitate the patient going to their medical practitioner who diagnoses that the patient is suffering
from depression and prescribes antidepressant type medication. The medical practitioner in an
effort to be efficient does not always ask the patient questions that are relevant. They assume
340 deliberately or otherwise that the patient is capable of telling them everything that the medical
practitioner needs to know in order to make a diagnosis referred to as depression.

Some people have the mistaken belief that rest is the same as sleep. They forget that sleep refreshes
the mind and brain while rest refreshes the body. Rest and sleep are two different activities. The
345 confusion often arises because people are often too busy to study and notice the distinction between
the two. A person may get plenty of rest, but not enough sleep or plenty of sleep and not partake in
enough restful activity. Depression can be the result of not enough rest or sleep.

350 The depression caused by a deficit of rest and sleep cannot be cured by antidepressants, the
medication of first resort given to those suffering from depression. Added to this is the claim that
the medication takes time to act. While waiting for the incorrect medication to act the lack of sleep
and rest continues to accumulate.

355 The difficulty a patient has is that their available resources are constantly changing. The effect of
stresses on the available resources constantly changes. The resources that the stresses draw upon
and how much their available resources get reduced are dependent on the patient's previous
experience, ability and educational training.

360 Things can be more complex than this. New information can be on occasion perplexing. Part of
this perplexity is due to the need for the patient to access the different areas of their mental database
of factual information. There may not be the appropriate accessing of the different bits of database
information in the right order to enable the new information to make sense for the patient until all of
the patient's database is mentally sequenced in the right order. At the same time as this is happening
the patient attempts the task of not appearing to be an idiot in front of the person giving them the
365 new information. This takes additional resources away from the task of processing the new
information.

370 Unfamiliar information takes time to assimilate. How much time depends on both the information
complexity, and the emotions that the information generates. If the information is totally new there
can be a sense of panic when the information is not felt to be assimilated fast enough. This sense of
panic could slow the assimilation of information quite considerably as well as drain the available

mental resources.

375 Some stresses may drain the patient's resources without the patient realising that this is happening.
When mental resources are being drained, the patient needs more rest or restful activity to prevent
resource depletion and to build up mental resources. Often the patient has no knowledge of the
concept of resource depletion and they can enter into a situation where they do not have enough
380 mental resources to function effectively. The panic that can develop as a result of this will reduce
available resources further. What can be commonly referred to as depression may be the results of
resource depletion. It is easier for a medical practitioner to prescribe anti-depressants than to
determine if the patient is having problems coping with resource depletion.

The medical practitioner, instead of informing or educating the patient that they are not getting the
sleep/rest their circumstances require, prescribes anti-depressant medication instead. The patient is
385 thus not effectively helped. When the patient comes off the antidepressant medication many
months or years later the human body, which has compensated for the antidepressant medication,
complains. The patient, who may not understand how their body can develop side effects to
withdrawn medication, may wrongly assume that the original condition that they were prescribed
the antidepressant for is still present. The patient may consider that they still require the
390 antidepressant for their condition. It may never enter the patient's head that withdrawing from
medication that they have been on for a long period of time may produce problematic side-effects.
Many medical practitioners do not inform patients about the side effects of withdrawing from long
term medication.

395 The need to slowly withdraw from medication they have been on for long periods is often
communicated to patients by people who are not medical practitioners. This does raise serious
concerns about the failure of medical practitioners knowledge concerning safe drug withdrawal.

I feel the need to deviate from the threads of my argument to give a partial explanation that may or
400 may not necessarily match any university research medical paper in existence. I will attempt to
give a working hypothesis for the patient with the long term health disability which may or may not
match their own experience of events. If it does not match, then what follows may lay the
foundation for a patient to investigate.

405 I have a long term health disability as a result of road traffic accident. From my own experience I
have found that I needed to divert my attention constantly to address the deficits of my health
disability and the problems that it causes. This I have to do in order to keep my pain and discomfort
to as low a level as I can. I have limited resources. The constant attention I have to give to my
health deficit reduces the resources available for other forms of monitoring that normally takes
410 place automatically. The other forms of monitoring include monitoring the environment and the
functioning of the body. So I am doing two forms of monitoring: one automatic which I am mostly
unaware of and one conscious.

The automatic happens all the time. The conscious I choose and am aware of taking place. Without
415 realising it, I can deplete the resources available for the automatic monitoring with the result that
certain types of automatic monitoring which should take place do not. This can result in the health
of the body deteriorating which in turn leads to added stress. This can be a vicious cycle
particularly as it can increase the pain and discomfort in the area that is affected by the health
deficit. This happens by means of the body's feedback mechanisms.

420 I can make the mistake of giving more concentration to the area causing pain and discomfort. This
reduces the total resources that are available. It is easy to make the mistake of failing to realise that
the problem may lie with loss of automatic monitoring that should have taken place in other areas of
the body. This loss of monitoring can cause unknown effects which impact on the area of pain and

425 discomfort.

With good health the body absorbs the problem of lack of automatic monitoring without too much difficulty. With a health disability the area which is already sensitive and displays pain and discomfort has added pressure placed on it. This added pressure may be small but this small
430 increase often results in increased pain and discomfort. Increased pain and discomfort can impact considerably both on sleep quality and memory function.

Often the medical practitioner fails to clarify with the patient whether the patient has given them a complete description of their symptoms. The medical practitioner often fails to check that they
435 have correctly understood what the patient has told them. This is a potentially serious problem. The patient often has not had a medical education and speaks the language of their peer group and this language usage can deviate greatly from that used by the medical practitioner. This different language usage can result in the use of words which the medical practitioner will take to have an opposite meaning from that intended by the patient. To give an example from experience, a patient
440 told the medical practitioner about their silent migraine (seeing visual disturbances with no headache) experience on only five occasions. The medical practitioner on being told this, wrote in the medical notes that the patient has recurring headaches.

A patient has a diagnosis and is given treatment for it. Treatment in some cases may be a decision
445 to do nothing. All treatment has a tendency to be determined by the original diagnosis. The patient often fails to realise that the diagnosis they have been given has the possibility of being incorrect. Often for this diagnosis the patient is given a sequence of differing drug treatments until one is found to work. Symptoms are treated even if the assumed cause for the symptoms is incorrect.

A patient often considers minor symptoms too trivial and time consuming to report to the medical
450 practitioner. The patient also does not want to be considered a time waster as a result of reporting minor symptoms. The failure to report minor symptoms can result in an inaccurate diagnosis of a patient's health disability. Medical practitioners often do not help patients to report minor symptoms and the possibility of a life threatening illnesses being identified can be missed. For
455 example if there are traces of blood in the urine, urinary infections are assumed even if the cause for the symptoms is bladder cancer. Accurate diagnosis can be dependent on secondary minor symptoms which a patient may not consider important enough to tell a medical practitioner about.

The possibility of an incorrect diagnosis is often not considered until the treatment the patient has
460 been receiving fails to work or the patient's health deteriorates further. Often a patient is prescribed a treatment and the treatment continues indefinitely without any checking to determine if the treatment needs to be continued, stopped or modified. Sometimes the treatment the patient is given does not work even though the diagnosis is accurate. A need of review of treatment at regular occasions is thus important. Often the medical practitioner fails to inform the patient of the need for
465 this. The patient leaves it up to the medical practitioner to do the review at the appropriate time. The review may not take place for a variety of reasons.

The given treatment is one that is considered to work in other patients with the same diagnosis. The
cause for the treatment's failure may be due to:

- 470 1) the patient's genetic make-up,
- 2) the treatment only works in a particular combination of circumstances which is different from that presented by the patient
- 3) the reports of the treatment efficacy at the time it was trialled being inaccurate. Trials show that treatments tend not to work 100 per cent, but work on a percentage of trial participants. The patient
475 may belong to the percentage of patients that the treatment would not work for
- 4) certain foods eaten modifying the body's uptake of a drug or change the drug's effect. For example it is known that eating grapefruit can modify the action of some drugs quite considerably.

The patient may not realise this and would not consider reporting that they eat grapefruit to a medical practitioner

480 5) the statistics of the trial upon which the treatment was based being flawed. There are many trials with flawed statistics. Also the medical practitioner often reads a synopsis of the treatment trial which may mention the successes and not the failures even if there were failures present.

485 Sometimes a change in the way a drug is manufactured can modify its effect. For example, a particular heart drug began to cause the deaths of patients at what was previously was a safe dosage. It was found the drug was being made a different way. The tablet now consisted of a more finely powdered drug. The finer powder resulted in the body absorbing the drug faster. This resulted in a drug overdose. The old manufacturing process produced a drug tablet with a coarser powder which was absorbed more slowly.

490 What was needed after the new manufacturing process was to reduce the tablet size and to increase the frequency at which the tablet was taken so that the patient had less of the drug absorbed at a particular time. At the time the deaths were occurring the manufacturers had not informed the appropriate authorities that the properties of the drug in the tablet had changed. It was the same
495 tablet, the same chemical composition, it was assumed that there was no difference in potency, Thus there was no need to inform anyone.

A medical practitioner can make a diagnosis and as a result sends the patient for tests. The tests
500 come back negative. The medical practitioner could assume deliberately or otherwise that the patient has a mental health condition. (**Note:** many physical conditions can result in mental health problems and it is easy for the resulting mental health condition to receive attention rather than the physical condition which causes it.) The medical practitioner prescribes drugs for the assumed mental health condition. However the patient is not told the real reason why drugs have been
505 prescribed. The drug given is recorded in the medical notes. The name of the condition the drug is prescribed for is not recorded. The next medical practitioner who reads the medical notes assumes the patient has a mental health condition. The new medical practitioner may make the assumption that this has been discussed with the patient even though the patient may know nothing about it. The medical practitioner may not believe everything the patient says because they assume that the patient has a mental health condition.

510 When people think of psychopaths they think of an axe murderer or of Dr Shipman; rather than consider that there are people with varying degrees of psychopathic tendency. These psychopathic tendencies which are not as extreme as those of an axe murderer can exist in varying degrees among a number of medical practitioners. Under particular environmental stresses these psychopathic
515 tendencies manifest themselves in a manner that can cause damage to the patient in either the short term or the long term. It must always be considered that a medical practitioner may have a psychopathic tendency which could manifest itself when a particular background stress is present. Thus it is important that the patient is aware that they need to check the validity of the treatment that they receive. Too many medical practitioners tend to give the first treatment that they are
520 familiar with. They have had no complaints about this treatment in the past so they assume it must be okay.

The patient may not realise the extent to which a given set of symptoms may indicate a number of possible different health conditions, especially as many illnesses do not conform exactly to a
525 medical textbook definition. The medical textbook definition learnt by the medical practitioner may not have described the effects of a multitude of differing health conditions that occur at the same time. The symptoms for a particular illness may be different than that described in the medical textbook when a multitude of differing health conditions are present. The standard textbook definition does not describe the effects of a multitude of differing health conditions all occurring at
530 the same time.

Some of the medical textbooks, studied by the medical practitioner, may have been ghost written by a pharmaceutical company. If the patient has more than one health condition, both patient and medical practitioner may be unable to determine the way one health condition effects another. The symptoms the patient has may not make sense to either patient or medical practitioner. This could confuse the patient as well as the examining medical practitioner unless it was well understood that multiple health conditions were present and each health condition was affecting another through the body's feedback mechanisms. This can be compounded by the limited time a medical practitioner spends with the patient and possibly by the inability of the patient to explain their situation fully. Any treatment the patient is already receiving can confuse the interpretation of symptoms even more. Side effects of medical treatments create their own symptoms. It is often forgotten that the human body is an engineering system with various feedback mechanisms which can govern how the mind is aware and what the body can feel and do. The stress and mental effort that is placed on the patient when they live with their health condition may create a unique set of new symptoms which can confuse the interpretation of the patient's health conditions even more.

Many treatments are there to cure and relieve the symptoms that result from a particular diagnosis. In many cases it is found that the treatment fails to either cure or relieve the symptoms. In some cases the lack of medical progress has been covered up by the giving of a new diagnosis implying that it is the mental health of the patient which is suspect and this has been causing the problem. Instead of realising and considering that the health disability is causing mental health problems for the patient. The added stress of the health disability is raising the total stress being experienced by the patient and this may approach or exceed the patient's stress breakdown point. If the patient's stress breakdown point has been exceeded then all sorts of physical and mental problems could manifest themselves.

Many patients can regard the prescribed treatment as the cure for their health disability. The patient observes and responds with respect to how well their prescribed treatment relieves all or some of their symptoms. The medical practitioner observes and responds with respect to how well their prescribed treatment relieves the symptoms. The treatment is observed and responded to in regard to how well the treatment relieves a set of symptoms. The medical practitioner observes and responds in regard to how well their prescribed treatment works in relieving the patient's symptoms. This is mainly in the short term. In the long term there is usually no observation of symptom progression and possible recovery made after a particular prescribed treatment. There is also no long term observation of changes in the patient's health state after starting the prescribed treatment, nor is there much discussion on this issue.

A patient when they discover a new set of symptoms which affect their health often report them to their medical practitioner. If the symptoms fail to go away the patient gets used to these symptoms. The patient having got used to these symptoms no longer brings them to the attention of their medical practitioner. So a patient may have a set of symptoms for longer than three months and their medical practitioner may well not be informed of this because the patient has adapted to the symptoms as part of daily living. The medical practitioner may be alerted to another set of symptoms which the patient sees them for. It may be possible that the medical practitioner would not be informed about the symptoms the patient has had for a long time because the patient may no longer worry about the symptoms they have had for a long time.

I personally believe that there is a great lack of interest in observing long term symptoms by medical practitioners. A slight improvement in health can mean a patient can do a lot more activity — a situation which can improve the social life of a patient. The slight improvement is below the radar of the medical practitioner who is looking for major changes that they can observe.

I have made the rounds of seeing medical specialists for a condition I have. I have found that the

585 specialist I see is so specialised that they are unable to give advice on factors which affect the
condition. This is because factors which affect the condition are the province of another health
specialist. Often you do not realise this. You have to learn through careful observation of the
condition you have of the need to ask the specialist whether certain sets of factors affect the health
condition. It is essential to ask if only to prevent the specialist from prescribing treatment that has
590 no effect on what you have because the prescribed treatment has no effect on the other factors
which are affecting your health condition.

I suffer from long term pain. I have discovered from personal experience that handling pain for
months on end is mentally exhausting. I have also discovered that the stress of handling my pain
and the related health disability on a day to day basis pushes me close to my stress breakdown limit
595 and sometimes over it. Investigating my condition as best I can, I have realised the importance of
handling small stresses. The small stresses are stresses I can have some control over while the large
stresses I have no control over. When I was fit and healthy I could handle both small and large
stresses together with ease. Now I find the combination of small stresses and large stresses can
push my internal stresses over my stress breakdown limit. Hence I have found it very important to
600 observe and control the small stresses I subject myself to.

I have a great deal of interest in what slightly improves my situation and what does not. My
experience is that medical practitioners have no interest in these slight improvements. Because
there is no interest in these slight improvements the things the patient may be doing that instigate
605 the improvements are not recorded by the medical practitioner and may well be forgotten by the
patient at a later date. The slight improvement is an improvement which reduces or removes a
small stress. This removal of small stress can give the patient with a long term health disability the
ability to do a lot more before they hit their stress breakdown limit.

610 The side effects from a prescribed treatment may be small and may seem to be not worth bringing
to the attention of the medical practitioner. However, it takes mental effort to manage a long term
health disability. The small side effects from a prescribed treatment may be enough to cause major
disruption to the patient's handling of their long term health disability, because the side effects cause
stresses which may push the stress on the patient past their stress breakdown limit.

615 Some long term health disabilities cause mental exhaustion to the patient. Also the patient's attempt
to manage their condition can lead to mental exhaustion. The addition of small side effects from
prescribed medication together with mental exhaustion can cause the patient's health disability to
deteriorate considerably. When this happens the patient can be accused of having a mental problem.
620 There is often no investigation by the medical professional looking at the combined effects of
mental exhaustion and small side effects from prescribed medical treatment.

Many social activities require the ability to inhibit instant reaction to uncomfortable activities by
other people. The ability to inhibit instant reaction requires mental energy which does not
625 necessarily exist when the patient is suffering the effects of near mental exhaustion and they are
close to their stress breakdown limit. Also when the patient has to closely observe their health
disability, in order to function socially, they may not be in full control of their ability to inhibit
instant reaction to uncomfortable activities by other people.

630 The effort required for inhibition, management of a health disability, and the effects of mental
exhaustion from handling a health disability is often not considered by a medical practitioner. It is
often not considered by the health practitioner either. The attempt at diagnosis of a health condition
suffered by a medical practitioner's patient often ignores the effect of mental exhaustion and the
effect of the patient being close to the stress breakdown limit.

635 The development of a better management regime by the patient of their health disability is often not

640 considered by the medical practitioner when treatments are prescribed to treat the health disability. There is often no long term observation of side effects that arise from the prescribed treatment. It is common for any long term side effects of any prescribed treatment to be ignored by both medical practitioner and patient. Thus there is no record of side effects in the patient's medical notes.

645 If the patient has learnt to manage their condition efficiently and effectively then some or more of the original presenting symptoms of the condition can seem to disappear. The medical practitioner can confuse the loss of symptoms with recovery. The possibility of the patient effectively reducing symptoms by managing their health disability efficiently and effectively is often not considered by the health professional or even discussed with the patient. The importance of the patient learning to observe as part of their health management regime is often not an option on the health practitioner's radar.

650 What a patient often does not realise when they manage their health disability is that they are managing a physical system which works according to the laws of physics and engineering. Many medical practitioners are reliant on the use of drugs for treatment and make their diagnoses for treatment appropriate to what drugs are available. Many medical practitioners often fail to consider that the body is a system that obeys the rules of physics and engineering in the way it functions and in the way it interacts with the environment. The interactions of human cells with chemicals, hormones and other complex molecules also obey the laws of physics and engineering.

660 The human body comprises a large number of different types of system. Many have a large number of factors controlling their operation. Examples are the circulatory system, the nervous system, the breathing system ect. The human body is complex. It is an engineering system. It comprises various systems that exist and work together in some sort of harmony. The functioning of one system can affect the functioning of another system and vice versa. How one system functions in relation to another is dependant both on inter system feedback and the laws of physics and engineering.

665 When the body receives a shock to one of its subsystems there can be an effect on the other subsystems of the body. Some of these may exhibit visible symptoms. Medical practitioners often attempt to treat the visible symptoms and the relevant body subsystem that displays those symptoms. They often do not attempt to identify the entire problem. This may mean that the original cause remains untreated whilst the consequential effects receive treatment. Thus there may be treatment but it does not address the cause of the problem.

675 Sometimes the after effects of a shock to the body and the shock's effect on the feedback interactions between systems is large. The result is that the stress the body receives is greater than the stress breakdown point. When this happens there is major disruption to the harmonious functioning of the body. When the body is in this state, a small reduction in stress will lower the stress to the body to below the stress breakdown point. Lowering stress to below the stress breakdown point can result in a great improvement in the body's function. Often medical practitioners mistakenly confuse the effect of lowering of the stress that is just above the stress breakdown point to a stress of just below the stress breakdown point and the great improvement in a person's function as a placebo effect if no active medical treatment has been given. It is not a placebo effect. A placebo works for no given reason. Any engineering system malfunctions when stressed above its design limitations. An engineering system functions well when operated below its design limitations provided it has not been damaged by over stress.

685 Drugs are often compared to a placebo in trials. The concept of a placebo is that a non active ingredient could work in a healing capacity in some people. The people helped by the placebo effect are rarely interviewed if at all to determine why a non active ingredient worked in a healing capacity.

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The people who have been helped by a so-called non active ingredient are an unknown quantity, The changes to what is happening in their body system response has not been recorded in sufficient detail to actually determine if they:

- 1) were originally misdiagnosed;
- 695 2) were experiencing a change to the stress they were exposed to
- 3) were using their body differently both mentally and physically.

The effect of an intervention that modifies the stress of a person from above their stress breakdown point to below their stress breakdown point is an active intervention and hence cannot be placebo. However, it may not be seen as this because the stresses experienced by a person are rarely discussed with them. The effect of an intervention on a person with stress below their stress breakdown point is quite small compared to the situation that occurs when a stress is reduced from above the stress breakdown point to that of below the stress breakdown point. So the effect of the intervention may vary considerably between different people.

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There are many working systems in the human body and they work together in some sort of harmony. This harmony exists because of various feedback mechanisms. There are a number of different types of feedback mechanism and it can be difficult and sometimes impossible to determine what types or type of feedback mechanism is interacting between one system and another. The laws of physics and engineering often requires that one system has to make a compromise to the way it works and what it does in order to harmonise its working with another system. A health disability can interfere with the compromises that enable the various systems of the human body to work together in harmony. The health disability can disrupt this harmony in unpredictable ways. This disruption can affect all the different systems within the body because of the interactions and feedbacks that takes place between one system and another.

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A question that needs addressing: does each individual system in the body have a stress breakdown point. If the stress breakdown point for that system is exceeded what happens? I do not know the answer to this question. I can only make guesses and these guesses could be wrong. For when a system malfunctions a lot of systems connected to the malfunctioning system will also be forced to function differently in unpredictable ways.

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A proposed chain of logic is as follows. The systems of the body work together in harmony. This harmony occurs as a result of feedbacks between various systems.. If a system is experiencing stress above its stress breakdown point the system will malfunction. When the system malfunctions it will provide a feedback to other systems that the other systems will be unfamiliar with. The body could register the result from this unfamiliar feedback and the response to this unfamiliar feedback as discomfort. Some forms of discomfort will register as pain.

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A system will malfunction if it experiences stress above its stress breakdown point. If this system can reduce its stress to below its stress breakdown point then it should cease malfunctioning. This can be the case. However, it has been found that for some systems, malfunctioning will continue until the stress drops well below the stress breakdown point. Sometimes there is a time factor involved. Here the stress has to be reduced below the stress breakdown point for a period of time before the malfunctioning ceases. The only way to determine these factors is for the person with the health disability to study and investigate how their health disability manifests over a period of time.

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There are many variables which affect how a system works at stresses just below or just above its stress breakdown point. These variables can can be different at different times for all sorts of reasons that can be impossible to determine.

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745 There is the saying about weather systems. A butterfly fluttering its wings in New England can cause a hurricane in the south of England. The body with the way it functions and interacts with its environment is just as complex as a weather system.

750 The development of a strategy to contain and manage stresses below and above the stress breakdown point can take periods of time that are not short. This is because there is a need to observe the differing subtle differences of various stress events before effective strategies to reduce stress can be developed. Being able to modify the stress the system receives to below the stress breakdown point will hopefully improve the way a person's body functions in regard to their health disability.

755 If the stress on the system which is experiencing stress above the stress breakdown point can be reduced to a stress below its stress breakdown point then the system could cease to malfunction. The other systems will receive feedbacks that they are comfortable with. The body may no longer register discomfort or it will register reduced discomfort. Thus it can be hypothesised in some cases that reducing stress by a small amount in the right areas could greatly reduce discomforts such as unpleasant pain. This may not work in every case. It is known that in some cases a small stress
760 added to a large stress can take someone's stress above their stress breakdown point. Having gone over the stress breakdown point it will take a large reduction in stress before the malfunctioning systems will begin to cease to malfunction. There are cases where the stress has gone above the stress breakdown point and the system has never recovered from malfunctioning, although the system's reduction of stress to below its stress breakdown point has caused a reduction in
765 malfunctioning.

An analogy that can be considered is Hooke's law concerning the stretching of a spring. If the elastic limit of the spring is not exceeded, the spring returns to its original shape and size after the force is removed. If the force on the spring is greater than the spring's elastic limit the spring will
770 not return to its original shape and size. Another type of stress is stress cycling. It has been found on a number of materials continual applying and removal of stress below a certain level will have no effect on the material the stress is applied to. If the stress is above a certain level then the applying and removal of the applied stress will cause the material to break down after a particular number of cycles. The higher the stress the fewer the cycles needed before the material breaks
775 down.

Numbers of people have found after they have suffered mental or physical breakdowns that their ability to handle stress has become reduced and does not return to what their stress capability ability was before the breakdown.

780 A major system that can be easily modified, by physical and mental means, is the muscular skeletal system. The muscles enable a person to engage in:

- 1) Breathing activities
- 2) Eating and drinking activities
- 785 3) Removing waste activities
- 4) Sheltering from the weather activities
- 5) Foraging activities
- 6) Travelling activities
- 7) Reproductive activities
- 790 8) Certain sensory activities
- 9) Recreational activities

795 The list above indicates the importance that muscles have to the wellbeing of a person. Muscles that do not function well cause disruption to the well being of a person and that person's ability to obtain enjoyment from living activities.

Let us consider a simple muscle system such as the biceps. The biceps muscle consist of a large number of muscle fibres. Each fibre can contract to enable the bending of the arm around the elbow. The greater the number of muscle fibres that contract the greater the strength of the biceps.

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A muscle fibre as it contracts loses strength. The greater the contraction the less strength it has available. Thus it becomes important that enough muscle fibres are brought into play to enable the biceps to carry out its allotted task of enabling the elbow to bend against resistance. Sometimes what happens is that not enough fibres are initially brought into use to conduct the task of enabling the elbow to bend against a resistance. When this happens the muscle fibres still try to engage in their allotted task and can run into a malfunctioning feedback loop. The elbow cannot bend, so the muscle fibres try and contract even more. The muscle fibres find themselves weaker with the extra contraction. Over contracted muscle fibres can close off capillaries, small veins and pinch nerves. Over contracted muscles if they remain over contracted can become painful.

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There is no mechanism to tell a muscle fibre to lengthen out and return to the length it had before contraction. There is only a mechanism to stop contracting. My experience is that an over contracted set of muscle fibres can have great difficulty lengthening out again as anyone who has had experience of muscle cramp can verify. Most people have had experience of muscle cramp.

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However, what many people do not realise is that you can get micro-cramps. Here only a few muscle fibres go into cramp or over contraction. This type of cramp is barely noticeable, but can cause disruption to the smooth functioning of the muscular skeletal system. I am not sure if “micro-cramp” is the right word for the situation where only a few muscle fibres remain in an over contracted condition.

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I have found from my own experience that micro-cramps in one location can lead to muscle functioning difficulties in other locations. Spinal reflexes and other muscles attempt to compensate for these muscle micro-cramps. This often leads to over compensation with resultant feedbacks from the over compensation. This effect can end up as a feedback loop which effects the well bearing of the body.

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How much do micro-cramps alter the feedbacks that control movement? The problem of micro cramps needs close study. The effect caused by micro-cramps possibly varies from person to person and from muscle group to muscle group. The location of the micro-cramps within the muscle group could also have an effect and the effect cannot be easily predicted.

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Is it possible that:

- 1) A small amount of over contracted muscle in a particular area of the body can push a system in the body above its stress breakdown point?
- 2) A stress that is above a system’s breakdown point can be reduced to a stress below a systems stress breakdown point by a process of fixing muscle micro-cramps?
- 3) Long term pain and discomfort can be much reduced by a small improvement the functioning of the muscular skeletal system?
- 4) The technique of mindfulness can be used over a period of time to investigate and study how the functioning of the muscular skeletal system, under different environmental conditions, affects the improvement or decrement of a health disability that is present?
- 5) The technique of mindfulness can be used to investigate how the differing body tension states affect muscle output strength and emotional feelings to enable investigation of how to temper emotional feelings that lead to mental health overload.

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There are numerous muscle systems in the body. Each muscle system has groups of muscle fibres which are connected to a nerve. The nerve gives the instruction for the group of muscle fibres to contract. Some muscle systems could have 20 or more muscle fibres connected to one nerve.

850 Muscles which need more sensitive muscle control can have only five muscles fibres controlled by one nerve.

Proprioception is our "body sense". It enables us to unconsciously monitor the position of our body and depends on receptors in the muscles, tendons, and joints.

855 Proprioceptors and stretch receptors are connected to muscles fibres. These proprioceptors provide feedback on muscle length and muscle tension. The proprioceptors are connected to the spine by nerves. They provide information on muscle behaviour and have an influence on muscle strength, muscle tension and muscle movements.

860 **Muscle Spindles and the Stretch Reflex**

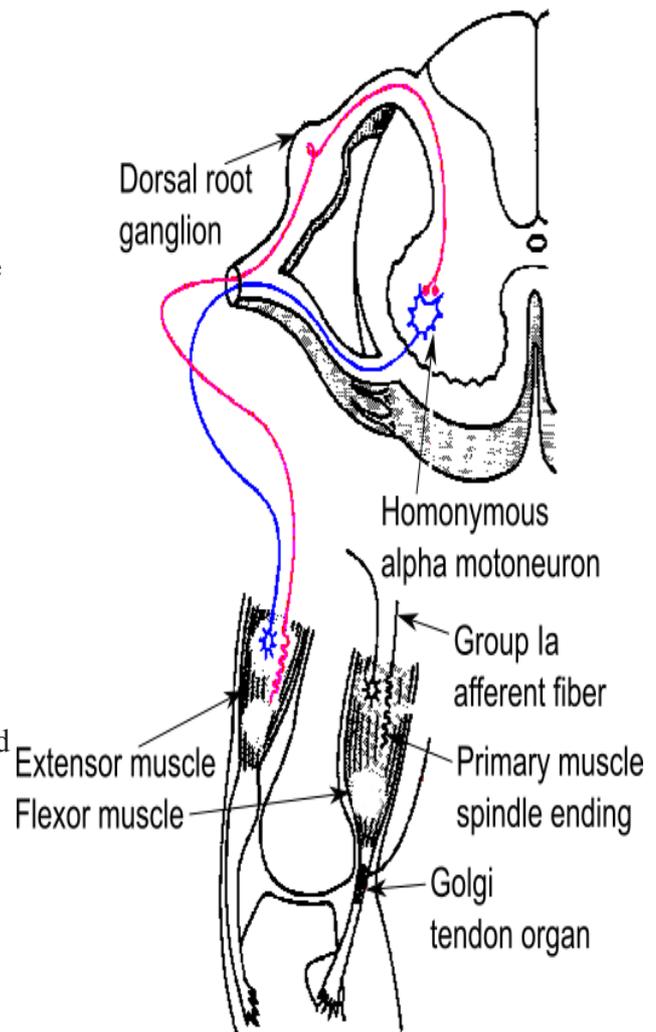
The knee jerk is both a stretch reflex and a spinal reflex. A light tap below the knee with a hammer sends a message to the spine which responds by reducing the strength of the flexor muscles behind the knee. The strength of the extensors in front of the knee are not weakened. The result is an involuntary kick of the lower leg. As can be seen in the diagram of the knee flexor muscles bend the leg. Extensor muscles straighten the leg.

870 The Golgi organ (which also has other names) senses changes in muscle tension. It is a proprioceptive sensory receptor organ that is located where skeletal muscle fibres attach to the tendons of skeletal muscle. It provides the sensory component of the Golgi tendon reflex.

880 When the muscle generates force, the sensory terminals are compressed and axons of nerves are stretched. Some nerves can be compressed. The sensory feedback generates spinal reflexes and supraspinal responses. This controls muscle contraction. The autogenic inhibition reflex is a sudden relaxation of muscle upon development of high tension. The autogenic inhibition reflex assists in regulating muscle contraction force.

885 During walking, sensor feedback mechanisms at the spine can excite as well as inhibit muscle contractions. This affects the timing of the transitions between the stance and swing phases of leg movements. The switch to autogenic excitation is a form of positive feedback.

895 Both spinal reflexes and cerebellum regulate movement. The spinal reflexes are also involved when there is no movement and various forms of muscle tension are present. Spinal reflexes and cerebellum interactions imply that when a health disability manifests itself a person may need to engage in learning new muscular coordination. There is also suspicions that after some minor illnesses muscular coordination may need to be re-learned in order to regain efficiency of movement.. If the muscular efficiency of movement has decreased there may be a knock on effect which increases the demands on the brain which in turn may lead to a decrease in mental processing of information.



Spinal reflexes and cerebellum regulation of movement requires timing synchronisation. For smooth, effective and efficient muscular movement spinal reflexes and cerebellum instructions must be synchronised so that individual muscular movements occur at the right time..

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In the paragraphs that follow I will be discussing the speed that information travels along nerves. I have no idea what these speeds are. The speeds will vary from one nerve to another. I will refer to the speed of travel down a nerve algebraically as 'X' metres per second, 'Y' metres per second ect. to give the impression of the differing speeds.

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The proprioceptor at a muscle fibre sends sensory information to the spine along nerves. The sensory information travels at X metres per second. It takes a short time for knowledge of an event at a muscle fibre's proprioceptor to reach the spine. There is a short time delay before the spine can act on the received information, create a spinal reflex and send an instruction to send over a nerve to the muscle fibre. The instruction travels at 'D' metres per second. There is a short time delay before muscle fibres can act on the instruction given by a spinal reflex.

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A record of the instruction given by the spinal reflex to the muscle fibre may be sent in the spinal column to the cerebellum. This information travels along the spinal column at Y metres per second. There is a short time delay before the cerebellum receives the information for processing. When the cerebellum receives the information, it processes it and decides what action to take. This takes a small amount of time. The decision the cerebellum makes concerning muscle movement travels back down the spinal column. There is a short time delay before the decision arrives at the nerve connected to the muscle fibre.

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The spinal nerve, connected to the muscle fibre, sends the movement instruction from the cerebellum at F metres per second. The cerebellum instructions may be processed by the spine. There is a short delay before the muscle fibre carries out the decision made by the cerebellum.

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The discussion on proprioceptors, muscle fibres, spinal reflexes and cerebellum control as discussed above is not the full story. There may be additional processing on top of these. Decisions are made by the conscious brain and passed to the cerebellum to act upon, i.e. 'I have to go to the shops and buy some food'. The cerebellum does not decide the issue of going to the shops or buying food. It does enable the movement of walking, waving of the hands and speaking. All of this movement tends to take place smoothly and efficiently unless a health disability is present. Emotions experienced by the mind presents another processing issue. A person's experience is that we can tell or guess what emotional state a person is experiencing by the way a person moves. This is almost a chicken and egg scenario. What came first. The chicken or the egg? First the movement or first the emotion?

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Does the emotion interfere with how the cerebellum gives movement instruction or does the cerebellum have to try and cope with the emotion present in the functioning muscles. Does the emotion present in the functioning muscles interfere with the feedback messages from the proprioceptors and the timing synchronisation of movement?

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Muscles do not feel emotion as far as I am aware. However, there is an emotional feedback loop somewhere in the nervous system which gives an overlay of instructions which affect muscle contraction rates and tension present in the muscular skeletal system. It is a reasonable metaphor to describe this as emotion present in the muscles.

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We feel emotion in the body. I think this is because when the mind starts to experience an emotional state it responds by doing things with the body and the body notices this. I think it is possible that the mind stores the memory of an emotion of an event in the muscles of the body. I am not sure how true this is because this cannot be tested by a psychologist doing a trial. It is a

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955 matter to be investigated by an individual in response to their circumstances to determine if it is true for them. It has been my personal experience, that when I change my muscular tension and the way I move, the memory of an event and the emotions that associated with that event change.

960 It is my experience that some emotions interfere strongly with muscle behaviour. Sometimes to the body's benefit and sometimes to the body's decrement. For example, as a cyclist, I have experienced the situation of a car pulling out of a side road and going straight towards me. The driver in the car had not been aware of my presence. My initial response was to scream loudly "watch out" and apply the cycle brakes. The scream was useful, applying the brakes was also useful as I was clearly seen by the driver rather than moving out of the car driver's eye contact. The motorist on hearing me stopped. My instinctive loud scream was an important emotional reaction which helped protect me from injury. The body being able to apply instant strength to the brakes was a result of the emotion. The emotion over ruled every other activity. During the emotional outburst I was aware of nothing other than the scream and applying the brakes.

970 An example where emotional response on muscle behaviour is detrimental is as follows: You have just parked your car in a field. You get out and lock the car door with a mechanical key. It is an easy sequence of movements to use the car key to unlock the door. However, if you see a bull charging straight towards you the ability to put the key in the door lock drastically decreases and takes extreme mental effort. The strong emotion caused by the threatening bull has interfered with the subtle control required to put a key in a lock and open a door. This is in contrast to ease at which the leg muscles can engage to run from the bull.

980 There are also processing of movement instructions by the eyes and ears which feed into the cerebellum movement centre as well as the spinal reflexes. There are also inputs from other parts of the body which influence cerebellum movement instructions. For example the sudden movement in the legs when a hand touches a hot object. This over rides what was taking place just before the hand touched the hot object.

985 The additional inputs which affect muscle movement moving decisions have to be synchronised. This synchronisation is needed to enable smooth and efficient muscle movement. Emergency movements to avoid danger need fast reaction rather than synchronisation. Protection of the body over rides small problems arising from lack of synchronisation. Constant lack of synchronisation in muscle movement will cause damage to the body so emergency emotional overrides need to be kept in check. What the eyes see and the ears hear have an effect on the processing of movement instructions. Spinal reflexes have an effect on movement instructions. When the eyes see good movement the body responds one way. When the eyes see movement that lacks smooth synchronisation the body reacts another way. This reaction can take several minutes to come to full fruition.

995 The decision maker, known as the conscious, gives the cerebellum the instruction go here, go there, stop, go. It leaves the muscle control of movement to the cerebellum and the spine unless a health disability is present. The health disability causes the conscious to notice a movement is uncomfortable or a muscle tension present is uncomfortable. The conscious says: the movement must be done in a different way. The conscious can decide to tell the cerebellum to do the movement in a different way so that it is not uncomfortable. The conscious has no idea of how the cerebellum enables movement to be conducted in synchronisation and may try and control the synchronisation of movement with the result that it makes the uncomfortable issues caused by the health disability worse. If the conscious does not receive information from proprioceptors then it would have less ability to control movement compared to the cerebellum which is likely to receive information from proprioceptors. The conscious may also try to control muscle tension. This action can make the synchronisation of muscle tension problematic as the conscious is not likely to be equipped to do this. Unfortunately the conscious may know no different and has to learn not to do

the things it should not. And to learn to do the things it should.

1010 The information from the nerve, which registers that this movement/muscle tension is uncomfortable has to reach the conscious. This takes a certain amount of time. The cerebellum which engages in the synchronisation of movement may be unable to engage in healthy synchronisation of movement when the conscious is trying to give instructions in muscle control.

1015 To recap, all movement and muscle control requires a lot of timing synchronisation to:

1. take account of the differing speeds that muscle control information travels along the nerve pathways;
2. Take account of the different control mechanisms that create muscle control information in different areas of the body that are separated by various distances.

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To process the the output from a proprioceptor located at a muscle fibre the spine, cerebellum and conscious may be all involved. It takes time for:

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- 1) A sensory input at a muscle fibre proprioceptor to reach the spine.
- 2) The reflex instruction from the spine to travel to the muscle fibres.
- 3) The sensory input that has arrived at the spine to be processed and sent to the cerebellum movement centre for further processing.
- 4) The cerebellum movement centre to process the information it has received and give a new instruction or keep the old instructions for the muscles.
- 1030 5) The processed instruction from the cerebellum to travel back down the spine and be processed in light of the spinal reflexes already carried out and sent to the muscles.
- 6) Instructions from the conscious to reach the cerebellum.
- 7) Instructions from the conscious to be acted upon by the cerebellum.
- 8) Instructions from the conscious acted upon by the cerebellum to reach the muscle fibres.

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To recap, muscle movement decisions have to be synchronised to enable smooth and efficient muscle movement. The question is: does the additional attempt to control movement by the conscious have a discernible effect? This leads to other questions which are:

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1. Does the additional attempt to control movement by the conscious interfere and prevent the synchronisation of efficient and effective movement?
2. Can the loss of synchronisation for efficient and effective movement as a result of a health disability be re-established by learning new skills?
3. Does the difference between a the movement of a young person and that of an older person the result of the need to continually control the movement in the older person?

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During the process of growing up the synchronisation of movement instructions is developed and refined. Most of the refining of fine movement control is done by a process of trial and error. The areas of the spine and brain that are involved in movement control synchronisation can be modified by the effects of a health disability. A health disability can replace efficient movement synchronisation control with inefficient and problematic synchronisation timings. When this happens, there is a need for movement synchronisation to be re-developed, and if possible re-established. What needs to be done, and how it needs to be re-developed, will vary from individual to individual and from health disability to health disability.

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1055 The redevelopment and re-establishment of movement synchronisation may be a time consuming process. It takes years to learn effective movements in childhood. Is it reasonable to assume that redevelopment of fine movement synchronisation could take weeks or months or more in an adult? This is further compounded both by the lack of knowledge concerning the need to do this, and the lack of knowledge of how to go about engaging in this process of re-establishing good movement

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synchronisation. Poor synchronisation of muscle behaviour and tension can present various

1065 symptoms that can be misinterpreted as a mental illness rather than a physical health disability
problem. This is because various mental states manifest themselves as differing kinds of muscle
tension and movement routines in the body. Not only this, these differing kinds of muscle tension
and movement routines can create additional stresses that can put a drain on available mental
resources. This additional drain could push someone's stress past their stress breakdown point. The
stress having gone beyond the breakdown point causes mental health symptoms. The mental health
symptoms cause diagnoses of mental illness. The psychiatrist attempts treatment of the mental
illness rather than the poor synchronisation of muscle movement which was the cause of the stress
overload which manifested in the display of mental health symptoms.

1070 Could it be that the present regime of painkillers, anti-psychotics or antidepressants could be a
wrong approach of trying to mask symptoms instead of tackling the cause which is loss of muscle
movement synchronisation timings?

1075 The following was reported in the New Scientist of 10 September 2014:

“A woman has reached the age of 24 without anyone realising she was missing a large part
of her brain. The case highlights just how adaptable the organ is.

1080 The discovery was made when the woman was admitted to the Chinese PLA General
Hospital of Jinan Military Area Command in Shandong Province complaining of dizziness and
nausea. She told doctors she'd had problems walking steadily for most of her life, and her
mother reported that she hadn't walked until she was 7 and that her speech only became
intelligible at the age of 6.

1085 Doctors did a CAT scan and immediately identified the source of the problem – her entire
cerebellum was missing (...). The space where it should be was empty of tissue. Instead it was
filled with cerebrospinal fluid, which cushions the brain and provides defence against disease.

1090 The cerebellum – sometimes known as the "little brain" – is located underneath the two
hemispheres. It looks different from the rest of the brain because it consists of much smaller
and more compact folds of tissue. It represents about 10 per cent of the brain's total volume but
contains 50 per cent of its neurons.”

1095 The above is good evidence that what is considered medically true may be totally wrong for a
particular individual. Decisions on what is true or false in medicine are decided often on what was
the status of the person who decided a particular truth was true. If the person was of high status,
their words tend to get repeated in educational courses for the next generation of medical
practitioners. Because of the high status of the person who originally gave the pronouncement no
one checks if the pronouncement given by this high status individual was true or not.

1100 The issue of what is true or false in medicine can be a big problem. The medical practitioner who
has learnt a particular truth, in order to pass a career making exam, may have to unlearn what they
believed was true and replace it with a new truth which may or may not be true and accurate.

1105 Much evidence is in existence on published trials which have never taken place and the results of
these trials were made up. There is further evidence of results of published trials, done on behalf of
vested interests, manipulated to give conclusions different to what actually were the trial results.

Treatments for particular conditions tend to be given on the assumption that particular symptoms
indicate a particular condition is present. Checking the truth of this is often not done.

1110 The process of redevelopment of movement synchronisation must start with observation by the
individual with the health disability. The process of movement and movement control may need to
be learnt from scratch. Many people do not have subtle knowledge and fine sensitivity of how they
move and are often unaware that this sort of knowledge could be helpful. Many people are unaware
of their own muscle tensions and how muscle tension varies from task to task.

1115 To help with redevelopment of muscle synchronisation there is a need to learn from someone the rudiments of fine sensitivity of how their muscles move.

The development of the needed observational skills takes time. This fact is often not realised by people who need to do the observing of their own movements and their muscle tension. It often
1120 requires input from other people who have had to develop their own skills of observing. These skills cannot be learnt from a book. There is a need for observational classes to enable the development of the needed skills for people with a health disability. There is a need for educational classes to enable the development of the needed observational skills. There is also a need for educational classes to enable people with a health disability to continually develop the skills needed
1125 to reduce the impact of the health disability. The educational classes will have the benefit of allowing the people with a health disability to network and share skills. The networking could enable development of new skills that people may not realise are needed. An example of such a new skill is the knowledge of the relationship between movement and emotion.

1130 **Examples of 2 people to do a job – one to do the thinking the other to do the doing**

Fuzzy logic describes how brain works in contrast to psychiatrist

When tired body tends to lean. Is this an attempt to cut down processing energy involved in handling large muscles?

1135

Power Output Considerations

The brain is designed to have a maximum power output. Above this power output the brain will overheat. Thus to keep the power output within a safe limit when some resources are used or over used other resources will reduce their availability or disappear completely.

1140

The brain has energy and nutritional requirements. They are supplied by blood vessels which can dilate to increase blood flow in order to allow the supply of more nutrients to areas that require them. The blood vessels transverse the brain. The areas the blood vessels transverse across can be areas that have high nutrient requirements or areas that require low nutrient requirements. The
1145 requirements of the areas requiring nutrient can vary considerably over time. The blood vessels are limited to how much nutrient that they can supply. This limitation of nutrient supply will have a bearing on how much activity an area of the brain can engage in. This means that as one area (Area A) requires more nutrient another area of the brain may need to reduce its activity in order to allow Area A to receive the nutrients it needs.

1150

This suggests that there are possible feedback loops that the brain engages in. The feedback loops are determined by the following issues:

- 1) How much nutrient does this area require?
 - a) Is their enough nutrient for this area to run one or more sub routines without running
1155 out of nutrient?
- 2) How much heat and power is this area producing?
 - a) Is the temperature above or below the safe limit?
 - b) Is the blood flow into this area cool enough to take away the heat if one or more sub routines run?
- 1160 3) How much much waste material to be removed?
 - a) Is there enough blood flow to take away the waste products when one or more sub routines run?
- 4) What is the overall power being produced and is it above or below safe limits?
 - a) Will the power produced be above or below safe limits when one or more sub routines
1165 run?
- 5) Is this area being starved of needed nutrient because other areas are taking the needed

nutrient upstream in the blood supply?

a) Will it be possible to turn off the sub routines running in the area up stream to enable the subroutines needed to run in this area?

1170 6) Is the area able to run a sub routine in such a way as to synchronise with other subroutines running?

a) Will inhibiting the subroutines running in another area enable the synchronisation of the sub routines running in this area?

1175 As can be seen above there are lots of things to consider for smooth and efficient running of the brain. The demands of managing a health disability can disrupt this smooth running.

1180 Mindfulness and meditation are tools for helping to enable and develop better observation skills. Better observing skills will enable each person who has a health disability to determine if improving the functioning of the muscular skeletal system will have beneficial effects in the reduction of pain and discomfort. Thus it may be possible for a patient to prove or disprove to themselves that minor stress reductions in some areas could have major beneficial effects on the functioning of their body. Perhaps the reason why the Alexander Technique or chiropractor treatment or yoga or other complementary medical treatment is so helpful to the health of a number of people is that these treatments can reduce the stress on a body system to below the system's stress breakdown point on a number of people. This possible truth has been ignored by medical practitioners who never consider or examine and investigate the effect of stresses on living systems when they make their diagnoses.

1190 There is also another effect which may or may not have a bearing. This effect comes about from the needs of the brain in regard to its nutrient requirements and its requirements not to exceed a maximum energy output. A health disability and the need to monitor its effects could well add additional nutrient requirements and loading stresses on the brain. If a particular small amount of stress requires work in the brain and an area which handles this stress is close to overload then their could be either body or mental malfunction or both body and mental malfunction. A slight reduction in this stress could reduce the possibility of overload and the brain does not malfunction.

1200 Using the techniques of mindfulness on myself, I have had the opportunity to study this issue of slight reduction of stress on functioning. This slight reduction has been beneficial in my functioning. This is anecdotal. However, I cannot see how this could be investigated using the standard medical trial system with all its problems of fraudulent results and lack of rigour when the individual person is considered.

1205 The professional researcher investigates by first getting a grant. To get a grant the researcher must make a research proposal and ensure that it meets the requirements of the ethics board. If the researcher, during a trial, notices an interesting effect that bears further enquiry it is impossible to include this in the research. If the researcher did enquire further when doing the grant aided research with trial subjects then the researcher could lose their ability to do further grant paid research as punishment. Medical research when done and published cannot get be repeated because the research publications have no interest in publishing the repeat of the research done with the same subjects or different subjects. This effect allows fraud to be conducted relatively easily. Many people have been subjected to psychiatrists who describe the mental problems the patients have which causes the symptoms the patients have. The real symptoms the patients had did not match the relevant item of medical research because the medical research results were fraudulently produced.

1215 Medical researchers have a requirement to meet family and lifestyle commitments as well as prepare for obtaining the next grant that will pay them. There is the very real need to publish results so as to remain in the employment of the establishment that they work for. There is a saying 20%

1220 of the work will get 80% of the result. An experienced researcher knows that spending more time
on a medical investigation is a law of diminishing returns and does not result in benefit to their
career. A researcher can only record results that are measurable and have repeatability when re-
measured. This means that a number of interesting effects seen in a trial do not get recorded and
1225 published as the researcher had no way of measuring these interesting effects. This has the result of
patients when treated in the real world suffering side effects that were found in a trial, but not
recorded as the side effects were not able to be measured.

“Bad Pharma” a book written by Ben Goldacre in 2012 ISBN 978-0-00-735074-2 has had an
interesting effect on lectures given by medical researchers. Before this book was written there was
1230 often little or no discussion of trials other than the results affecting the majority of patients with
regard to a particular drug investigation. After the publication of this book a number of medical
researchers began to discuss the effect on patients who were adversely affected by drugs and present
this to the public. Before the fifth Shipman inquiry many people who suffered adverse side effects
1235 from drugs were subjected to the stigma of having something mentally wrong with them diagnosed
by a psychiatrist. After the publication of “Bad Pharma” the evidence written in this book gave
patients some protection from the questionable practice of psychiatrists protecting the incompetence
of medical practitioners.

In 2014 many people could not get access to certain medical trial results to see what the trial
1240 actually said about a particular medication or about a particular investigation on a medical
condition. Patient confidentiality was one of the reasons given.

Life style changes can have an effect on a body's system. Some life style changes that can help
reduce stresses, from above the stress breakdown point to below the stress breakdown point, are
1245 food intake and sleep. Another is following an appropriate religious tradition which can help with
mental stresses.

Food intake effects can be complex to study because food intake nutrition is modified by the
microbes present in the digestive system.

1250 Sleep requirement and meeting that sleep requirement is another area that can be very variable
particularly with the presence of a health disability. My experience is that for me there has been no
predictable pattern, but there are clues which can be observed and acted upon.

1255 Religious tradition is worth exploring. The religious traditions have been going for thousands of
years. They survive because they have a beneficial nature which can be complex to unravel and
understand.

The three life style changes of food and nutritional intake, sleep and religious tradition observances
can be studied, observed and investigated by mindfulness and meditation to help determine what is
1260 beneficial and what is not. Another life style change is exercise to improve the usage of the
musculoskeletal system.

When a health disability, caused by illness or injury, lasts a long time the human body may need re-
adjustments to its feedback mechanisms in order to cope effectively. These re-adjustments may or
1265 may not occur. Medical treatment often ignores the need for re-adjustment of the feedback
mechanisms and tends to concentrate on the symptoms that are both easily treatable and seen.
Treating easily seen symptoms associated with a health disability does not necessarily treat the
underlying cause. With the underlying cause not being treated the health disability may change its
symptoms and a health disability still remains present.

1270 For example: On occasion I suffer from massive pain in my right arm. This is the result of pressure
on nerve roots in the neck. Some GPs I have seen have offered pain killers for the pain rather than

investigate the issue further. The actual cause for the pain has been a minor muscle spasm just behind my shoulder blade. On the face of it, this has no relation to pain in the arm. Further investigation by a chiropractor has traced the effect of the muscle spasm into the muscles in the neck with resultant pressure on the nerve roots. When the chiropractor treated the minor muscle spasm behind the shoulder blade the pain in the arm disappeared.

Various feedback mechanisms have caused the neck muscles to tighten. This tightening has caused too much pressure to be applied to the nerve roots associated with the right arm. The result is massive pain in the arm. The visible symptoms of tight muscles in the neck produce the massive pain in the arm. The temptation to a medical practitioner would be to prescribe muscle relaxants to relax the muscles. The primary cause for the problem – muscle spasm behind the shoulder blade would remain untreated. Muscle relaxants do not treat muscle spasm very effectively. The effect of the chiropractor providing treatment to remove the muscle spasm using their hands on the muscle spasm resulted in the neck muscles relaxing without any work on the tight neck muscles. With the muscle spasm removed the pain in the arm disappeared. The neck muscles relaxed on their own accord without any need for treatment.

These neck muscles were tightening as a result of various feedback mechanisms, and caused pressure to be applied to the nerve roots of the right arm. The result was strong pain. Visible symptoms of tight muscles in the neck could be ignored, as the cause for the pain in the right arm was a minor muscle spasm behind the shoulder blades. When the minor muscle spasm is relieved the pain in the arm goes away. The tight muscles in the neck cease to be tight. The discussion above gives an example of how visible symptoms are not necessarily causes for a particular health disability.

A health disability impacts on a particular system of the body (call it system A). The visible symptoms are caused by another system of the body (call it system B). The health disability does not directly affect system B. However, the health disability as a result of various feedback mechanisms has indirectly affected system B and produced visible symptoms. The visible symptoms may be a result of feedback mechanisms that have been caused by a system that is trying to harmonise its activity with systems that have been modified or compromised by the health disability. The example given above demonstrates how complex the relation between visible symptoms and causes can be.

Some causes for easily seen symptoms associated with a health disability cannot be treated. However, the feedback mechanisms that result from the untreatable cause can be re-adjusted, modified or taken note of. The re-adjustment comes by modifying how some parts of the body's physical system works together with another part of the body's physical system. The patient is often able to modify their physical and mental behaviour to take account of the effects of the health disability. With work, both mental and physical, the patient may be able to lessen the effect of the health disability.

For a person to make any effective re-adjustment, the body, as a multitude of different systems, needs to be observed working over a period of time. The health disability experience can only be observed and experienced by the individual with the health disability. There can be the belief that a medical practitioner with the access to medical research can know what will happen. Medical research results are the results of a trial on a number of people. Statistics shows that the results of a trial are not the same for each person. This occurs for various reasons. However, this does mean that each person needs to investigate for themselves what the results of a particular treatment, prescribed by a medical practitioner, will be.

Unfortunately there is often no language to describe what is seen, experienced and observed by the person investigating their health disability. Language depends on shared experience and you cannot

share internal experience. By observation and personal experience it is possible to develop system feedback adjustments which can reduce the effects of the problematic health disability. For a health disability of long standing it may be worthwhile for the patient with the health disability to attempt to discuss the observations with a medical practitioner in order to improve the ability and skill of observing. The health practitioner may not be able to understand the observations as seen by the patient. However, the medical practitioner may be able to help the patient understand what they have observed. By developing improvements in the skill of self observation it is possible to develop self adjustments in both mental and motor behaviour which can lessen the impact of the health disability.

1335 A health disability can modify how a particular system in the body functions. This modification may be too much of a modification to enable all the systems in the body to work together in harmony. The effects of a possible disruption to the harmony that exists, is unpredictable. There is great complexity of different feedbacks between the many different systems in the body. The body with a health disability attempts to create a new harmony between the various different systems. This new harmony may not be as efficient and effective as the old harmony that once existed. Mental and motor processes that once worked efficiently and effectively now may not be as efficient and effective as they once were. Because of a different mental load to the brain, as a result of the health disability, the brain may be forced to work outside its energy limitations. The result is that the brain may have to partially shut itself down on occasion in order to preserve its long term integrity as well as preventing overload conditions. So it is common for people with certain types of health disability to appear to suffer from depression. This is not depression. This is something different. The brain needs to recover from overload. Many medical practitioners do not recognise how much effort is required to handle a health disability. Many medical practitioners believe in the chemical imbalance theory, which may or may not be true, and prescribe anti-depressants instead of considering the amount of work a brain does in handling a health disability. The concept of the brain shutting down to avoid overload is never considered. The patient, as a result can be injured by the medical practitioner's treatment.

1355 It is also common for some people with a health disability to suffer more injury in collisions and falls, because the brain no longer has the energy available to completely monitor the body's balance and self preservation orientation mechanisms. The avoidance of falls and collisions is not as simple as ensuring the brain has enough energy available to monitor the body's balance and self preservation orientation mechanisms. This is because the body automatically responds according to its prediction of muscle behaviour based on previous muscle behaviour. Unfortunately, it is not always possible to predict muscle behaviour accurately as proprioception feedbacks to the spine and then on to the brain can be very variable. This variability comes as a result of tension in the muscles which reduce or increase the amount of information available from proprioceptors. Proprioceptors register change. If the muscle is in spasm and unable to move in the vicinity of its proprioceptor then no change in muscle occurs. Thus there is no output from the muscle's proprioceptor, even if there is movement elsewhere in the limb.

The health disability may cause one or more systems to function outside the range that enables them to function in harmony with system B. This can force system B to modify the way it functions. The modified system B then causes another system to modify how it functions. This modification then modifies yet another system and so it goes on. Various systems are modified in turn one after another. The result is that you can get a wave of modification travelling across the various systems of the body. When the wave of modification has travelled across all the various available systems, you can get a new wave of modification travelling back to the original one or more systems that were modified by the health disability. The result is that you may get continuous waves of unpredictable modification moving back and forth across the various systems of the body. These waves of modification can take place over a number of minutes, hours, days or weeks. The brain can find it difficult to take account of these modifications to how the body is functioning. The

1380 modifications that occur to the various systems of the body will modify how the health disability manifests itself. As a result the health disability will change its symptoms over a period of time.

The previous paragraphs can be difficult to understand for anyone who has no experience of studying engineering systems. So I will attempt to present an example. You apply too much pressure to a nerve. The nerve complains and malfunctions. The malfunctioning nerve can cause a muscle to respond by over contracting. The over contracting muscle reduces or prevents blood flowing through it. The circulatory system responds by increasing the blood pressure. The increased blood pressure can be measured. The over-contracted muscle interferes with the smooth functioning of movement. The sensitivity of what a limb is doing may be decreased. A joint can complain with pain in response to pressure on areas that should not be receiving increased pressure. The medical practitioner will treat the blood pressure. The medical practitioner will prescribe pain killers for the pain. Neither the malfunctioning nerve nor the over contracted muscle will receive treatment. The pain killers will mask the discomfort caused by the over contracted muscle. The body as a result of the prescribed pain killers is prevented from acknowledging the discomfort from incorrect muscle behaviour in the muscular skeletal system caused by the over contracted muscle. The nerve which malfunctions because of pressure on it will receive no treatment. The continual pressure applied to areas that should not receive pressure results in greater inflammation and tenderness. This greater inflammation and tenderness results in more pain and discomfort signals from the affected areas. Nerve signals which register increased pain and discomfort will eventually be unable to be masked by the prescribed regime of pain killers. The medical practitioner responds by increasing the dosage of pain killers for the patient. The over contracted muscle which is causing the increased inflammation and responding discomfort again receives no treatment.

The symptoms that a patient takes to a medical practitioner can be the symptoms that have resulted from several waves of modification to the systems of the body. It may be obvious what the dysfunction in the last affected system is. What may not be obvious is the health disability which was the cause for the presenting symptoms that now exist. The prescribed treatment may attempt to treat the dysfunction of the obviously affected system. However, dysfunction in a different system which caused the obviously affected system to present symptoms of dysfunction, may be invisible or overlooked. The prescribed treatment may affect several systems together, with the result that a new set of unpredictable symptoms may arise. The health disability which caused the problem has not been touched, and its existence may not have been considered or seen.

There is now a great danger that the next wave of system modification (resulting from prescribed medical treatment) will present a new set of symptoms. These symptoms will receive treatment from a medical practitioner as a health disability in its own right. The health disability which started the symptoms may not be investigated or receive treatment.

In some cases the patient experiences no recovery despite treatment. The patient may:

- 1) learn to manage their condition effectively. Despite the patient's ability to manage their condition effectively the management by the patient of their condition is often not recorded in the medical notes and what is recorded is that the patient has recovered. This is by written statement or by implication because the patient no longer seeks further treatment.
- 2) have learnt to live with their condition and this fact may or may not be recorded in the medical records.
- 3) give up trying to cope with their condition. Often no help is given to enable the patient to develop effective management strategies when no cure of the medical condition is possible.
- 4) may commit suicide or maybe engage in self harm of some sort when experiencing this situation
 - a) because the change to another lifestyle that can be just as fulfilling but takes up less mental resources is unable to be considered by the patient.
 - b) The change to another lifestyle can be an exhausting process for many people with long

term health disabilities. In comparison suicide or self-harm may take up far less of the patient's available resources.

1435 The medical practitioner records the progress of the patient in regard to the observed patient's recovery of their health disability. If there is no recovery, there comes a point where the health disability is no longer mentioned in the medical notes.

1440 When a patient is medically examined any old health disability the patient already has is often forgotten or ignored. Any long standing health disability, a patient already suffers from, has the ability to confuse the results of any medical examination that is designed to detect a newly acquired medical condition. This is compounded when the medical practitioner is only concerned with the newly acquired medical condition, a mistake that is easy to make if the medical records seen by the medical practitioner give no indication that the patient has a long term underlying condition.

1445 The medical practitioner often forgets or ignores the resources, needed by the patient, that are required to handle a long standing health disability. There can be a failure to acknowledge the fact that the patient with a long standing health disability has reduced ability and resources with which to handle a newly acquired medical condition.

1450 Reduced ability and resources impinge on the ability to get enough exercise and the ability to obtain adequate nutrients. The reduced ability to exercise and get adequate nutrients can cause the health disability present to deteriorate further. One of the things, I have discovered, as a long term pain sufferer is that the exhaustion that goes with this type of disability interferes with the ability to prepare and cook a meal.

1460 There is a need to network in order to gather the appropriate information to manage a chronic condition as well as keep both mental and spiritual health in good condition. There is much information available, some of which is grossly inaccurate. Some of the inaccurate information has been supplied by types of institution, government or charity or groups of various kinds. The protection against inaccurate information is to cross reference with information obtained by networking. One of the effects of a health disability is to reduce the ability to network leaving the person with a disability subject to the possibility of making judgement calls based on incorrect information that has been deliberately produced by an employee (volunteer or employed) that follows a particular agenda of misleading information produced by an institution.

1465 **Problem of NICE and evidence based medicine**

Medical records and medical research report on the effects of a medical treatment or investigations. What is reported in the documented investigation are a range of responses from a large number of people. Evidence based medicine makes use of the reported average response from an applied medical treatment. It tends to ignore patients who have given strange responses. These strange responses are ignored providing they report no serious injury or deaths to the patients. It is possible that the patient may be one who is going to give a strange response when subjected to an evidence based treatment. The medical practitioner has no way of knowing if their patient will have this strange response.

1475 In the UK NHS system there is much talk about evidence based medicine. This is obtained from medical records and medical research. The evidence based medicine is then applied to patients by matching diagnoses with evidence based medical treatments. In theory this is a good idea.

1480 However, this may not correspond to actual reality. In actual reality a medical practitioner may:

- 1) ignore side effects
- 2) not be told about the side effects a patient experiences
- 3) give repeat prescriptions without monitoring what happens to the patient. The medical practitioner can have the belief that a patient will report problems with the medication to

- 1485 them i.e. it does not work or has side effects
- 4) have given the patient an incorrect diagnosis – so the patient can get the wrong treatment.
 - 5) have not considered that the patient may have a multitude of health disabilities which may modify how the NICE evidence based treatment works as combinations of different medical conditions may interact with each other.
 - 1490 6) have not considered that the patient may be on a multitude of different drugs which may modify how the evidence based medicine prescribed to the patient works as combinations of different drugs may interact with each other
 - 7) have not considered that the patient's genetic make-up may seriously modify how the NICE evidence based treatment works
 - 1495 8) have not considered that the patient's individual bacterial fauna and flora may modify how the NICE evidence based treatment works
 - 9) have not considered that food items or other substances the patient is taking may seriously modify how the NICE evidence based treatment works
 - 1500 10) have not considered the patient's kidneys modifying the drug level in the body by working effectively enough to flush the given medications from the patient's body or not flushing the drug from the body effectively enough to prevent a build up of the medication to unsafe levels
 - 11) have not considered whether the patients age and gender may modify how the NICE evidence based treatment works.
 - 1505 12) has not considered that the treatment trial results which NICE base their conclusions on may have problems with incorrect statistical analysis.

The above list needs to be taken into account when evidence based medicine is considered. For example I suffer on occasion from very intense pain. I have found that certain antibiotics considerably reduce this pain within a couple of days. My medical notes show that this treatment works and is effective in my case. The GP who came up with this treatment by working with me and eliminating other causes of pain has retired. The medical notes do not give details on how the process of elimination was conducted (which is typical of medical notes). The replacement GP refers to the NICE evidence medicine and has said that there is no evidence that this works even though the GP has evidence that this has worked for me.

NICE has admitted that they do not consider individual based medical treatments. This effectively removes from the NICE database many treatments that people have found work for them.

1520 Painkillers are often given for pain. NICE has evaluated a number of different painkillers. A pain killer is designed to reduce pain by interfering with different nerve signalling pathways. They are not designed necessarily to remove the cause of the pain. For example pain caused by:

- 1) a torn muscle may be reduced by an appropriate painkiller. The pain is reduced, but the muscle remains torn until it heals. The patient on pain killers needs to be careful that they do not make the injury worse. Even then, the muscle when rejoined may have an area of weakness until the injury has completely healed. The reduction in discomfort which the pain killer enables may remove the ability of the patient to detect activities which damage the injury present. There is a fine dividing line between activities which aid healing and activities which impede healing. Pain killers may prevent the ability to distinguish between the two.
- 1530 2) An abscess may be reduced by an appropriate pain killer. However, the abscess is probably best treated by an appropriate antibiotic.

Thus it needs to be realised that evidence based medicine may not be always appropriate unless careful thought is applied.

Most people know what it is to yawn and stretch themselves. When you attempt to stretch yourself

1540 you will shorten and tense some muscles and lengthen others. When you engage in everyday movements you shorten some muscles and lengthen others. The act of shortening and tensing muscle can lead to joints being forced against one another in an unhealthy manner. Sometimes this can occur more often than is good for a healthy joint.

1545 When joints are forced together too often pain or discomfort type symptoms can present themselves. This pain can be medicated with the appropriate pain killer. However, the cause of the pain will not register as a painful event because the pain killer will mask the discomfort. Painkillers will prevent the patient detecting an incorrect muscle action. Often the patient will not realise that they need to stop tensing muscle in the manner that causes irritation to the joints. Tensing muscle in the manner that causes irritation to the joints creates the likelihood of the joints deteriorating further. I believe the deterioration of the joint is often referred to as arthritis often after less than 10 minutes
1550 of medical consultation. The incorrect muscle action on the part of the patient, which causes the problem is never considered. The diagnosis of arthritis that is given to the patient, by the medical practitioner, is often used as a means of not looking at what is happening. Looking at what is happening in regard to muscle coordination and putting in a regime to improve muscular coordination could lead to better quality of life.

1555 As one gets older the possibility of:

- 1) joints being damaged by
 - a) muscular action increases
 - b) poor muscular coordination increases
- 1560 2) muscles developing poor muscular coordination increases.

1565 Unfortunately many people do not realise that lack of good muscular coordination can cause health difficulties. An example of poor muscular coordination is that muscles can shorten and tense and not fully lengthen and untense after a muscular action. Untense (tense) muscles can severely reduce the blood supply supplying nutrients for muscular functioning. This reduction of blood supply can severely affect healthy functioning of the muscles. It is often not realised that having tense muscles in one part of the body can result in difficulty with moving muscles in other parts of the body. This difficulty occurs as a result of spinal reflexes. The spinal reflexes take muscular tension as input at one place and the output affects muscular tension elsewhere.

1570 There is often enough muscle strength to move a joint that is badly positioned even though this movement can cause wear and tear on the joint. The badly positioned joint is caused by faulty muscular coordination which is often not detected by the patient.

1575 Muscles which do not fully untense can leave a moving and functioning joint with too much pressure on it. Too much pressure on the joint will cause it to develop wear and tear injuries. A number of waste products generated by muscles which have a reduced blood supply will remain in the vicinity of the untense muscle. This can cause various types of discomfort and possibly interference with the functions of nerves.

1580 There is a tendency for the medical practitioner to attempt to mask the discomfort with pain killers rather than deal with the underlying causes which is

- 1) muscular action that lacks healthy muscular coordination.
- 2) Muscles that remain tense and do not untense.

1585 There is also a tendency for a patient to self-treat muscular discomfort with painkillers rather than take action to remove the cause of the discomfort. Taking painkillers for discomfort is not necessary removing the cause of the discomfort. Treating symptoms is not the same as removing cause. Removing pain and discomfort is not the same as replacing the muscle action which causes
1590 pain and discomfort with better muscular coordination that results in less pain and discomfort. Pain

can be an indication that you are partaking in unhealthy muscular actions.

1595 There is a tendency in the medical education of the medical practitioner to cause the medical practitioner to look at what is creating the problem now and what is the quick fix for this problem. Muscular coordination problems when they occur do not present a warning symptom that there is a potential health problem. Muscular coordination problems do not have a pill to fix them. Muscular coordination problems cause minor difficulties when they occur. It can take a number of years before the accumulation of wear and tear generates a perceived health issue which can be detected by a medical practitioner.

1600 There are many trials on drugs. Many of these are sponsored by the pharmaceutical companies because there are profits to be made by selling medical compounds (drugs, herbs, vitamins ect.). You cannot fix many muscular coordination problems with drugs. You can only improve muscular coordination by education of the patient by a skilled practitioner familiar with how muscles work.

1605 There are no trials of muscular coordination training because there is no money which can be made in this area by large companies.

1610 As there are no trials of muscular coordination training, many medical practitioners are unaware of the effects of poor muscular coordination. Many medical practitioners respond to poor muscular coordination problems by prescribing drugs.

1615 I have found from my own experience after breaking a bone in my wrist when fully awake that I did not have muscle spasms in my shoulder. However I have found that when I am half awake in a comfortable bed that it is easy to have very intense muscle spasms in my shoulder, and it could be difficult, if not impossible, to prevent myself from having these muscle spasms when stretching myself. If I had been on pain killers at the time this was occurring, it is likely that I would not have noticed that I had been having these muscle spasms. As it was, I found it very difficult to stop the muscle spasms. When I managed to reduce the activity of stretching the wrong way the continual pain in my shoulder reduced and the movement range of the shoulder increased. I later found out that muscle spasms into the shoulder often follow a wrist break in older people.

1625 The patient may have a minor health disability, the management of which stresses the patient. The stress may vary considerably from one time to another. This stress may exacerbate the symptoms of a new disease that the patient has developed or caught. (I am not talking about psychological aspects of a disease here.) “It is psychological” is a phrase sometimes used by a medical practitioner. More often than not the medical practitioner does not really understand what the psychological aspects of a health disability are or how a psychological state can lead to the manifesting of symptoms. With the lack of communication in this area together with the ignoring of how environmental factors can modify availability of the patient's resources there is much distrust on both sides (patient and medical practitioner). From my own experience I find the management of my health disability can be quite exhausting on occasion. The exhaustion can occur without prior warning.

1635 Occasionally I can mismanage the side effects of my health disability and the result can be psychologically disturbing. By trial and error I have learnt to cope with and respond to what takes place. It has taken many months to learn the various subtleties that can develop as a result of the various managing techniques used in the management of the health disability. Incorrect management can cause a lot of pain. Better management leads to a lot less pain. Many medical practitioners have a tendency not to understand what is needed to be done to develop effective management techniques.

1640 Without the small stress from a long term chronic condition exacerbating the symptoms of a particular disease the patient may well have ignored the disease that they have caught.

1645 Diagnosis can also be wrong because a patient could suffer from a number of problems that can overlap and therefore produce misleading symptoms. Misleading symptoms may also be produced by the actions of any medication the patient may be taking, although other unknown factors could also produce misleading symptoms. The taking of additional medication given to combat the symptoms the patient has may lead to a whole new set of symptoms developing.

1650 In many cases this may not be important as the effects of many illnesses are relatively minor or short term. In some cases a misdiagnosis could result in permanent damage or even the death of the patient.

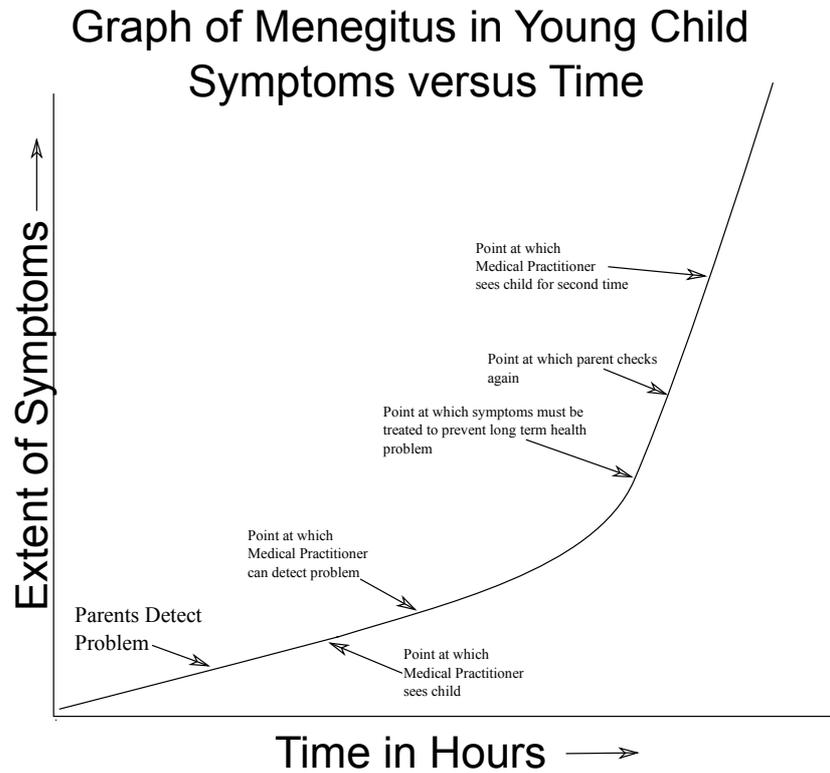
1655 An example for consideration is meningitis in young children. The concerned parent takes the child to their local hospital. The medical practitioner is unable to distinguish the child's displayed symptoms from that of flu or a common cold. At the hospital the medical practitioner tells the concerned parent there is no need to worry, the child will be okay in a few days. The medical practitioner has failed to consider that the symptoms of meningitis are no different from the symptoms of flu or a common cold in the initial stages of the disease. The parent returns home assuming that the medical practitioner has the experience of knowing that the child's symptoms will not develop into something serious. The parent does not consider that they should ask the medical practitioner how often they should check the child's symptoms. The medical consultant does not consider that it is their ethical duty to inform the parents how often to check a child's symptoms.

1665 Parents often do not know that symptoms should be checked or even that symptoms should be both checked and monitored at pre-determined intervals. This is something that is gained from experience. Quite often the parent does not have the experience to know this. This is why it is always important to ask the medical practitioner how often the symptoms should be checked before taking leave of the medical practitioner. Trusting that a medical practitioner has told the patient everything they need to know can be a serious error of judgement.

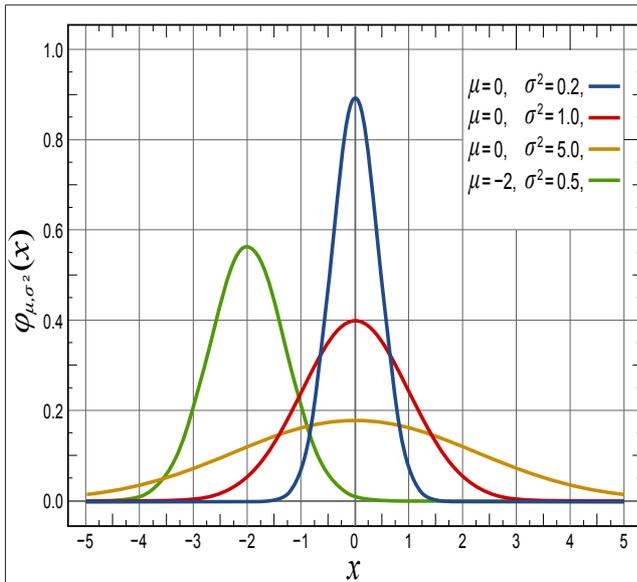
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The concerned parent having had no medical training has no or little knowledge of how often and at what time intervals the symptoms that the child exhibits should be checked. What often happens is that when the child is checked again it can be too late to take remedial action and give the correct treatment for meningitis. The child either dies or is seriously harmed as a result.

This is shown in the graph on the right.



Gaussian Distribution Function



In probability theory, the normal (or Gaussian) distribution is a continuous probability distribution,

The probability density of the normal distribution is:

$$f(x | \mu, \sigma^2) = \frac{1}{\sqrt{2\pi\sigma^2}} e^{-\frac{(x-\mu)^2}{2\sigma^2}}$$

Here σ is the standard deviation
' μ ' is the mean.

The factor in this expression ensures that the total area under the curve $f(x|\mu,\sigma^2)$ is equal to 1.

The Gaussian distribution is also commonly called the "normal distribution" and is often described as a "bell-shaped curve".

The Gaussian distribution curve above shows the ideal situation, but many trial results are far from ideal in that the curve can be skewed to having more good quality results or skewed to having more negative results

Policy Considerations

1675 A policy decision is one out of the many problems that patients of doctors have to live with. A policy is decided and the policy tends to be one size fits all. There can be a belief that this policy would be helpful to the majority of people and this belief can be misguided due to the existence of confounding factors which were not considered at the time the policy was created. The policy when it is implemented may have very little bearing on what a patient's medical treatment requirements are at a particular time. The policy decision absolves or limits the doctor of some of their responsibility to the patient. The policy decision is a group decision made among several doctors or the organisation which provides the funding.

1685 When a policy decision is being made there is often no in depth discussion of possible negative effects. These effects can impinge upon patients due to the existence of confounding factors. The medical advice developed from a policy decision often gets no feedback as to whether the policy decision advice works effectively or not. There is often no effective protocol for meeting the requirements of a single patient as policy refers to the treatment of many patients.

1690 What drives the policy makers?

In the 'ideal', the desire is to do the most good for the most number of people.

1695 In the realities of the national purse there are limitations placed upon each budgetary area – so, whereas a household might set a budget to include:

Housing 30%

Utilities 30%

Consumables 30%

Leisure 10%

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A national government might set: a 'Strategic Budget' spend from the national purse of

Health 30%

Welfare 20%

Defence 10%

1705 Technology 10%

Infrastructure 20%

Other 10%

1710 Each government department will squabble to maintain or (preferably) increase its percentage of the resources available.

Each government department will be suspicious of new processes which cost more than current processes.

Each government department will want to lower the cost per process.

1715 Each government department is being driven to get more work out of each person employed in their department.

1720 So if the government 'Health' Department is offered a new process for the treatment of 'in-growing toe nails' which will cost 50% more the Health Department will not want to introduce this treatment even though the strategic costings to the government might be more than offset by savings in (say) the government 'Welfare' Department. In other words – one government department is not really interested in spending its own budget to make savings in the budget of a different department. There is no strategic off-set.

1725 Example – Youth work in town A costs £10,000 per annum (p.a.) from the 'Infrastructure' Budget. It is cut by Local Authority to save £10,000 p.a. and removes all youth supervision

1730 The now unemployed Youth Worker costs Government 'Welfare' department at least £5,000 p.a. A young person from town A sent to Youth custody for a year costs 'Other' department £50,000 p.a. Spouse of the unemployed Youth Worker has a break down costing 'Health' department £10,000 p.a.

The Local Authority has 'saved' at least £5,000 – but it has cost the 'Strategic Budget' £60,000 to make that saving. It doesn't add up when overall costs to the community are considered.

1735 The medical budgets available at a doctor's surgery are similar to the budgets described above. The doctor has a treatment budget with funding for various kinds of treatment. The treatment budget only considers how much it costs to deliver treatment, not what it costs in terms of convenience to the patient. It also fails to consider hidden costs such as the need to find baby sitters when going to see a hospital specialist.

1740 Over the years there have been numerous scandals that have come to light where policy decisions have not been made for the purpose of benefit to patients, but have instead been made for the

purpose of financial or political reward which benefited the policy makers. These scandals resulted in a number of patients receiving treatment that did them harm. (examples need to be placed here – Seroxat The four-year investigation into the antidepressant drug Seroxat by the UK Medicines and Healthcare products Regulatory Agency (MHRA)).

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A patient is told by their GP what treatments are available, and what the recommended treatment is.

1750 A patient concerned about their well being and quality of life will often need to consider the politics and policies behind the recommended treatment and what these are. Are the politics for the recommended treatment the politics of saving money for the health delivery service or one of giving the best treatment for the patient? Is the politics for the recommended treatment one which has rewarded the policy makers financially and politically? Some doctors for political reasons will deliberately refer the patient to see a specialist about a problem the patient knows nothing about. This is often easy to do if the patient does not see the referral letter sent to the specialist. (This bad practice was quite prevalent before 1991 when NHS patients were not allowed to see their medical notes.) The patient was told that they are being referred for a totally different complaint. When the results come back from the specialist after this type of referral the patient is labelled a time waster and the unethical behaviour of the doctor is covered up. The patient would not know about the problem unless they saw their medical notes.

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GPs often work in partnerships. They are allocated funding according to the number of patients they have on their books. The less of the funding they use the more profit is available to the partnership. Does this mean that there is a temptation to reduce the treatments that patients are informed about and available to the patient at the GP's surgery.

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The availability of a possible hidden agenda when going to see a GP requires that a patient needs to keep themselves informed as to what treatments are available and what the local health authority can offer. There is always a temptation that a GP will not inform a patient of what they require because of the need to keep the finances of the health delivery service healthy. Sometimes a GP does not know all the treatments that are available for a particular condition. It is impossible for a GP to keep themselves up to date with everything that is available from the local health authority. So, the patient needs to find some way of keeping themselves informed as to the treatments that are available and the treatment that they need.

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Quite a few GPs spend 12 hour days at their surgery practice, seeing patients writing letters and reading correspondence. These long hours reduce the time available to the GP for the reading of up to date medical literature. There is always a probability that the GP has not read about the latest treatment or problems with the side effects of the drugs they prescribe. GPs also have families and family commitments. They also have a need for social activities to ensure that they maintain reasonable mental health. These social requirements for good mental health reduce the time available to read and study the available medical literature.

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A number of GPs work part time because of the time required to look after their children. These GPs can find it difficult to read the latest medical literature as they juggle family and work commitments.

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In some health delivery systems treatment is free at the point of delivery. This leads to the very real probability that there is more demand on the GP's time than what the GP is capable of meeting. Here there is a temptation to ration time spent with patients in order to see all the patients who want to see the GP. Rationing of time spent with the patient leads to poorer understanding of what treatment a patient requires. Particularly if patients have a health disability caused by many different illnesses all occurring at the same time. Rationing of time spent with the patient also

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1795 prevents a GP from determining what contributions prescribed drugs make to the symptoms a patient has.

All the issues discussed above lead to a need for a patient to investigate or develop the means to investigate the health disability that they have. There is a need to find some means of liaising with a GP to develop the means of doing an investigation that is unique to the patient presenting themselves in front of the GP. The standard method that a GP prescribes treatment for a single health diagnosis is not viable for the overall health of the patient. Sometimes what is needed is the means to reduce pressure on the patient by tacking a number of small health problems rather than the big health problem that appears to need looking at. The little health problems when added together may have distorted the symptoms to such an extent that what appears to be the problem is actually something entirely different. This presents another reason for patients to develop the means to research their own health disability and the treatment options available.

The patient, when receiving treatment for their health problem has to consider how many days off work will the treatment involve. Do I have sick pay or not? Do I have a carer to look after household maintenance (shopping for food ect.)? A single person who does not drive a car is in a very different situation than a married couple who both drive. The treatment made available for a patient who is part of a married couple, where both drive, may not be viable for the single person who does not drive a car. Yet the same treatment is offered to both, often on a take it or leave it basis. There is another complication in that people who live on their own are totally dependent on their own ability. So a treatment which interferes with mobility can cause immense problems with ability to eat and hygiene. This is in comparison to a couple where one person is available to help the partner. Treatment options often do not take the requirements of these differing social situations into account. The single person often gets a bad treatment deal.

When a patient goes for medical treatment the patient comes face to face with the health service's delivery system and how it operates. The patient's experience of the health service delivery system can modify the patient's decision regarding seeking treatment considerably. The patient weighs up the inconvenience of the health disability against the inconvenience experienced when interacting with the health service delivery system. The patient also has to consider the long term possible side effects of the medical treatment that is offered against the inconvenience of the health disability.

A hidden agenda which patients of a health delivery service face is the need to reduce the time given to a patient when offering and discussing treatment options. The health delivery service continually looks for ways to reduce the time involved in giving treatment. It is assumed time saving shows that the health delivery service is being efficient. The cost to the patient of side effects because the patient has not been asked relevant questions is not costed by the health delivery service at the time of their interaction. The side effects, if they affect the health delivery service are costed by another department. These costs often have little or no impact on the so called efficiency calculations of the original patient health service interaction that is recorded in efficiency records. The costs to the community of the treatment offered, delivered and experienced by patients is often not recorded. So it is often not known whether a treatment modification has an increased or decreased cost

A health service delivery system is often designed to benefit the health service speciality which is delivering the treatment, regardless of the various inconveniences that are experienced by the patients who need to access treatment. For example: when I had an eye complaint I was referred to the local eye specialist unit. It took me $\frac{3}{4}$ hour to get there. I was at the eye unit for 3 hours and it took me $\frac{3}{4}$ hour to get home. In all $4\frac{1}{2}$ hours of my time. To which was added the time wasted because when I got home I was too exhausted to do anything. In comparison seeing my local optician was a journey of 5 minutes followed by $\frac{1}{2}$ hour examination and 5 minutes to get home. The visit to the local optician was productive. The visit to the eye specialist unit was time wasted as

1850 the eye specialist unit was unable to give sensible advice to sort the problem out. I solved the
problem by getting a pair of cycling glasses. The local optician explained to me that as you get
older the production of eye lubricant by the eyelids diminishes. The wind when cycling was drying
out my eyes and the wind blown dust and airborne flies was giving my eyes irritation. The eye
specialist at the eye unit was not capable of examining the lifestyle together with age related issues
that placed a stress upon the eye's engineering system. The cycling glasses reduced the stress on
1855 the eyes below a certain point and things functioned better. With the better functioning I no longer
required the services of the eye specialist unit. The cycling glasses was a simple change to my
lifestyle that produced a lot of benefit.

1860 The above example shows where diagnosis process of a health delivery service breaks down,
because not enough time has been given to consider and inquire from the patient all the issues
involved.

1865 The three hours at the eye unit involved diagnostic testing and waiting for diagnostic testing as well
as waiting to see the consultant. The testing did not involve any lifestyle inquiry. The lifestyle
inquiry would have shown what things done by the patient would have stressed the eye system more
than it should. The patient is unlikely to have known about the changes that an eye system develops
as the patient ages.