

Massage & Medications

Principles for an Informed Practice

By Randal S. Persad

On the surface of things, it is easy to underestimate a massage therapist's need to know about medications. Traditionally, only members of a mainstream medical profession, like doctors, nurses and dentists, have received instruction in pharmacology. However, the reality is massage therapists treat clients on a daily basis who are taking various types of prescribed drugs. In many cases, these medications affect body physiology in ways that make modifying massage treatment necessary.

Clients who visit massage therapy clinics for relaxation, or seek out massage in settings like spas or fitness centers, are often taking drugs for heart problems, arthritis, cancer, diabetes, AIDS, depression, chronic pain and so on. The fact that the focus of the treatment may be stress reduction or routine self-care does not mean the interaction between the client's medication and the massage therapy given is a non-issue. This is also true about treatment modalities that might be considered "light," like lymphatic drainage, or more energy-focused, like craniosacral therapy. Since there is a drug in the client's body, the practitioner needs to have basic information about how it may impact the client's responses to the provided treatment about to be given.

Both pharmacy and massage therapy, although very different disciplines, attempt to create physiologic and psychological changes important to the achievement

of better health and quality of life. All medications affect the normal responses of the body in some way. While some of these effects are not relevant to massage practice, in many cases, the combined physiological results enhance or alter the impact of massage therapy modalities. At times, the outcome can be adverse. For example:

- Centrally acting skeletal muscle relaxants (e.g., cyclobenzaprine) depress various parts of the central nervous system. This can alter the normal protective stretch reflexes in skeletal muscles so that there is potential for damage from manual techniques.
- Phenothiazines (e.g., trifluoperazine) are used for their anti-psychotic properties. They often alter the temperature-regulating mechanisms of the body, creating an important hydrotherapy concern.
- Corticosteroids (e.g., dexamethasone) are a group of drugs widely used in medicine to control pain, inflammation and immune responses. These drugs are also known to weaken connective tissues, including skin, fascia, ligaments and muscle.

The general population is increasingly combining allopathic medicine (using drugs to treat a condition and/or alleviate symptoms) and non-drug therapies such as massage. This combining of therapies by the American public was first documented in a study published in 1993.¹ The data indicated that 83% of individuals interviewed saw both their medical doctor and

message & medications

providers of “unconventional” medicine² in their search for better health, even when they had serious medical conditions. The study additionally found that 72% did not inform their physician they were receiving these other therapies while under medical care. Whatever the reasons for this are, it speaks to the need for practitioners of complementary health care methods to have independent awareness of the implications of combining their treatments with common allopathic modalities.

When a client reports: “My doctor has prescribed muscle relaxants for me,” or “I have been taking a painkiller since the accident,” or “I got a steroid shot for the bursitis,” the massage therapist needs to understand the significance of these statements as they relate to massage treatment planning. The practitioner is responsible for both the effectiveness and the safety of the therapy provided.

To do so, massage therapists should have a basic understanding of the actions and effects of commonly used drugs, and the ability to research the effects of other medications encountered; the knowledge of how massage affects the body’s physiology; and the ability to apply this knowledge to varying client presentations.

Guidelines for Assessment

Most clients have a limited ability to distinguish the multitude of factors that can contribute to their symptoms when presenting a complaint. This is especially likely if the complaints are related to medication effects. If the massage therapist is unaware of the mechanisms of action of medications and the potential impact of side effects, interpretation of the client’s symptom picture and assessment findings can lead to misleading conclusions. This, in turn, can result in development and administration of ineffective or harmful treatment plans and poor client recovery. A client’s medications have the potential to alter the results of the massage therapist’s assessment of his or her case. Therefore, listening to the client characterize a problem is an especially important part of conducting an assessment. With experience, the practitioner can often form an accurate clinical impression just by listening to the client’s description of his or her complaint. This awareness can help the practitioner anticipate the involvement of medications in some cases, or to follow through appropriately if massage treatment does not have the expected result in addressing the complaint.

In addition to listening, it can be useful to incorporate a specific form to document each client’s medications, remedies and supplements. The reasons for having a medication case history form include having a clear record of which drugs and other substances are being taken and why, having a reference for sorting client complaints in light of potential relationship to medication use and having a quick reference for treatment planning.

To enhance the usefulness of the information gathered on the medication intake form, therapists need to consider the impact when more than one medication is prescribed for the treatment of a single condition, a single medication is used in the management of more than one condition, when one or more of the medications is a long-term prescription, and when the client is taking a mix of traditional and non-traditional substances.

The first step in the assessment process is observation, or the “looking phase,” which begins when the therapist greets the client. This part of the assessment is an important source of information about the client’s health and includes observing facial expression, gait and movement patterns, skin color and health, edema, physical deformity, standing and sitting posture, and limb size and shape.

For example, a client on long-term use of a calcium channel blocker medication will be predisposed to developing an altered gait pattern. This is because accumulation of edema in the feet and ankles is often associated with this group of drugs. The massage therapist who is unaware of this side effect may interpret the altered gait as caused by a hip or lower back disorder and plan a treatment to focus on these areas. The edema may be perceived as secondary rather than primary in the etiology of the problem. To resolve the altered gait, and any secondary complaints of the client such as hip and lower back pain, the edema in the feet and ankles must be treated. As well, a physician needs to be informed of the degree to which the medication is affecting the client’s musculoskeletal system.

The massage therapist must also be aware of palpation. Changes in tissue health, muscle tone (hypo- or hypertonicity), skin temperature and moisture, fascial mobility, myofascial trigger points, and tissue fluid levels are all palpable. For example, medications such as muscle relaxants and other central nervous system depressants will alter the tone of the skeletal muscles so that they feel “loose” and are too easily overstretched. And, long-term use of oral corticosteroids will lead to breakdown of connective tissues including the skin, muscle and lymphatic tissues. If edema is present, the skin will often feel fragile, and muscles tend to be soft and hypotonic.

Finally, during the testing portion of the assessment, the client is asked to perform certain movements and/or the therapist moves the client’s body through special tests that target the structures being assessed. The test findings help determine which tissue structures are involved, and to what degree, in the presenting complaint. Medications such as anti-inflammatories and narcotic analgesics alter the client’s pain perception. When asked to do active movements, the client may be able to perform normal or near-normal range of motion without showing signs of pain and discomfort that would accurately reflect the stresses being applied to the tissues. Passive movement results are likely to be skewed in a similar fashion.

Examples why a massage practitioner needs to know basic information about drug effects and interactions:

1. The massage technique of petrissage creates hyperemia, while the application of heat either locally (a hot pack) or systemically (sitting in a whirlpool or hot herbal bath) creates vasodilation. Both have the direct effect of increasing blood flow into the affected tissues. If your client is taking medications for a cardiovascular complaint, the response to such modalities may be altered due to the effects of the medication on the circulatory system. A predisposition to adverse reactions is therefore created. For example, petrissage can cause bruising in someone taking an anticoagulant, and a hot systemic treatment such as a whirlpool may promote fatigue, dizziness and even fainting in combination with a vasodilator medication.

2. A client with a sore shoulder is taking a pain-relieving drug, such as aspirin or ibuprofen, and also seeks out massage treatment. The client requests "deep work" to get to the root of the problem, which is a combination of tendinitis and old scar tissue. The therapist complies and gives a rigorous deep treatment. The next day the client is very bruised and in much worse pain. If the therapist had been aware that aspirin and ibuprofen have anticoagulant properties, as well as reducing the ability to give accurate feedback about how painful a technique is, it would have been clear that the "deep work" approach was not indicated at that time.

Guidelines for Treatment Planning

Treatment planning involves being familiar with the general health of the client, having a good understanding of the nature and progression of the presenting condition(s), and designing a safe and effective approach to achieving the massage treatment goals. However, providing safe and effective treatment compatible with a client's medications can sometimes be challenging for the practitioner.

For instance, the following excerpt contains information about the anticonvulsant drug carbamazepine (used in the treatment of epilepsy).³ Let's look at the drug profile and relate the information to massage treatment planning.

The absorption of carbamazepine in man is relatively slow. When taken in a single oral dose, the carbamazepine tablets and chewable tablets yield peak plasma concentrations of unchanged carbamazepine within 4-24 hours. Only 2%-3% of the dose, whether given singly or repeatedly, is excreted in the urine in unchanged form. The primary metabolite is the pharmacologically active 10, 11-epoxide. After repeated doses, the elimination half-life of unchanged carbamazepine is 16-24 hours, depending on the duration of the medication.

Because the onset of potentially serious blood dyscrasias (abnormal conditions of blood cells) may be rapid, patients should be made aware of early toxic signs and symptoms of a potential hematological problem, as well as symptoms of dermatological or hepatic reactions.

If reactions such as fever, sore throat, rash, ulcers in the mouth, easy bruising, petechial or purpuric hemorrhage (purplish red spots caused by the release into the skin of a very small quantity of blood from a capillary) appear, the patient should be advised to contact his or her physician immediately.

Other adverse reactions include: skin sensitivity reactions and rashes, photosensitivity, hypertension or hypotension, nausea, vomiting and aggressive behavior.

How would a massage therapist use the above information and relate it to massage treatment?

- Since carbamazepine is used in the treatment of epilepsy, the stability of the client's condition is of concern. Treatments should be scheduled when peak levels of the drug are expected – according to the drug profile, this occurs at least four hours after taking a dose.

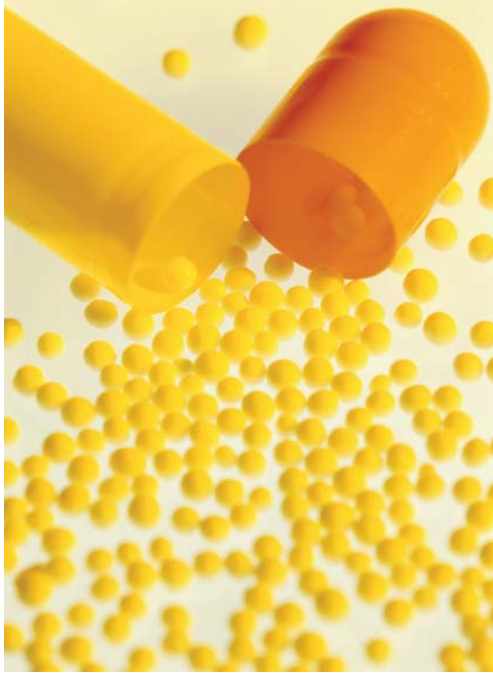
- Good clinical practice would include taking a blood pressure reading at the start of each treatment. If you observe significant changes, inform the client and suggest a follow-up visit to the physician.

- The health and function of the liver and kidneys are extremely important for maintenance of therapeutic levels of medications in the blood. The long half-life of this drug, and the fact that the primary metabolite is pharmacologically active, suggest the client can quickly develop adverse effects if normal elimination processes are compromised by poor organ health. Complaints such as fever, and reddish or purplish bruises as mentioned in the drug profile, are early indications of drug toxicity. The practitioner will want to stay alert to the symptoms and complaints of the client. When there are indicators of drug toxicity present, massage treatments are contraindicated until the client is evaluated and cleared by the attending physician.

Obviously, it is beyond the massage therapist's scope of practice to tell clients when to take their medications. However, by adjusting when massage therapy is given, the practitioner can work to best coincide treatment with the bioavailability cycles of drug use.

Another important consideration when determining treatment planning is the medical stability of the client. A client whose condition necessitates long-term drug use usually requires a certain medication level in the

massage & medications



All medications affect the normal responses of the body in some way. While some of these effects are not relevant to massage, the combined physiological results can alter, often adversely, the impact of many modalities.

blood to ensure the condition remains stable. For example, an insulin-dependent diabetic must have regular doses of insulin to maintain acceptable levels of glucose in the blood, or a client being treated for a chronic pain syndrome requires pain medication for physical and emotional stability.

Treatment planning must take into account the circulatory and neural effects of massage therapy which may tend toward destabilizing this type of client. In addition to judicious treatment modification, the practitioner should consider scheduling treatment sessions at a medication-appropriate time after the client's scheduled dosage. The purpose is to ensure maximal bioavailability of the medication, and therefore better stability of the client during and after the treatment.

Massage therapists should also consider client feedback implications. Drugs such as non-steroidal anti-inflammatories, narcotic analgesics and central nervous system depressants can alter a client's ability to give accurate feedback about the comfort of techniques and modalities used during massage treatment. These medications alter normal pain responses which warn of potential tissue injury. Techniques or modalities that would normally cause some discomfort become more tolerable than they should.

For clients taking medications short-term for minor conditions, recommended treatment scheduling is just before or soon after the medication dose. With lower bloodstream bioavailability of the drug, the client is likely to give more accurate feedback about the techniques and modalities used. However, the massage therapist should still be cautious since the drug's onset of action can mask symptoms of overtreatment. If unsure about how to judge the ideal timing of a massage treatment for tissue safety, the therapist is encouraged to discuss this concern with the client and/or the attending physician.

The Variable Effects

Drugs can require adapting/shortening the massage treatment, so it is important to consider the energy level of the client. Fatigue is a common side effect of many medications, including hypertension medications, anti-anxiety drugs and many antidepressants. In this case, massage therapy may cause even more fatigue, and a shorter, more specific treatment design is needed. The client should be asked to self-monitor during and after treatments for decreased energy or other adverse effects, so the massage therapist can evolve a treatment design most suited to the circumstance.

It's also important to consider the emotional stability of the client. Long-term use of some drugs, for example corticosteroids, is associated with mood fluctuations; depression and anxiety are side effects of many medications. It is possible with the additional physical/emotional effects of massage therapy, some clients may feel emotionally volatile or overwhelmed, and this may warrant ending the treatment early or planning for shorter sessions. Discuss this possibility with the client in advance and together develop a plan of action.

Drugs can also influence the selection of manual techniques. Let's look at some examples that give rise to general guidelines:

Some Drugs Alter Blood Clotting Mechanisms –

Clients will be predisposed to bruising when taking medications that alter the normal blood-clotting process. Examples include anticoagulants, platelet inhibitors, aspirin and other non-steroidal anti-inflammatory drugs.

Massage techniques like muscle stripping, deep kneading, ischemic compressions (for trigger point therapy) and cross-fiber frictions must be modified or avoided. These techniques, when used on normal, healthy connective tissue to promote good fiber alignment, often produce a mild inflammatory response easily resolved. However, when the client is taking a medication with anticoagulant properties, they can result in excessive bruising and inflammation.

Some Drugs Alter Protective Responses –

Several medications, including centrally acting muscle relaxants, narcotic analgesics and anti-anxiety drugs, depress nervous system reactions to sensory feedback from the stretch and tension receptors in muscle and joint tissues. Firing from these sensory organs (muscle



massage & medications

Hydrotherapy and Pain Medication Interactions

Before making treatment decisions, always inquire carefully about areas of sensory impairment, everyday hydrotherapy tolerance, and any restrictions the doctor has placed on hydrotherapy use. Small "trial" applications can be useful. In general, local treatments to specific body areas using modified temperatures are suggested. Always check with the client to see if there were any post-treatment adverse effects. Keep in mind that analgesics can modify a client's perception of when an application temperature is too hot or too cold for tissue safety.

With use of drugs that depress the central nervous system, like the skeletal muscle relaxants and narcotic analgesics, systemic hydrotherapy treatments such as saunas, whirlpool baths, herbal baths and medicated steams are not recommended. The effects of the medications in combination with generalized vasodilation from the treatment can lead to adverse effects like dizziness, fainting, disorientation, confusion and edema of the extremities.

Be observant with clients who are taking corticosteroids long term. Get a sense of their general constitutional strength and the acuity of their reactions to hot and cold.

Prolonged topical use of corticosteroids not only causes changes in skin sensitivity, but can also affect the reaction of the local blood vessels to hot and cold. Cutaneous blood vessels may spasm when exposed to even mild temperature differences.

spindle, golgi tendon organ, joint capsule and ligament receptors) may not elicit expected responses to techniques that place stress or stretch on them. Massage therapists tend to rely on such responses to determine when the pressure is deep enough or a stretch is being applied optimally. When the tissue does not tighten as a signal, manual techniques can inadvertently be applied too aggressively and tissue damage caused. Techniques such as aggressive contract-relax stretching and deep tissue work must be eliminated from the treatment plan, or used cautiously.

While the usual effect is to reduce the potency of protective reflexes, in some cases overreactions can occur, leading to muscle spasm and reflex muscle guarding.

Some Drugs Compromise Tissue Integrity – The corticosteroids in particular, especially when used long term, cause atrophy and weakening of skin, ligaments, joint capsules, bones, muscles and their tendons. When injected into joints for arthritic conditions, they can induce breakdown of articular cartilage. Any massage approaches that involve placing direct pressure or stress on tissue structures will need to be employed carefully. Techniques such as rib springing, heavy tapotement, passive forced stretching, muscle stripping, deep kneading, frictions and joint mobilization should be significantly modified or avoided. Be particularly careful with clients who are at risk for developing osteoporosis, for example postmenopausal women and the elderly.

Normal health, function and sensitivity of the skin are also compromised by prolonged topical corticosteroid use. Skin rolling, frictions and wringing

techniques can result in bruising and inflammation of the subcutaneous tissues.

The therapist should note that the conditions caused by such medication use will also impair repair processes in body tissues, resulting in healing time frames that are often longer than the "norm" and prolonged tissue fragility after injury.

Some Drugs Mask Pain Responses – Since assessment results can be compromised in the absence of normal pain sensation, the test findings of clients using anti-inflammatories or analgesics, either orally or topically, can make their tissues appear more healthy and resilient than they truly are. The unaware practitioner may plan to use more aggressive treatment techniques than is appropriate. It is important to rely less on client feedback and more on observation and palpation, as well as on medical advice as needed.

Some Drugs Can Alter a Client's Cooperativeness – Various drugs, especially those that depress the central nervous system (like the narcotic analgesics and anti-anxiety agents), can make a client less communicative and seemingly indifferent to supplying information in a complete way, either during case history taking or in the course of treatment. The therapist will often need to spend more time and take a determined approach, asking specific questions and making sure feedback is frequently solicited.

Pain and Inflammation

The most commonly consumed, over-the-counter (OTC) preparations in the United States are non-steroidal anti-inflammatory drugs. This

massage & medications

Quick Guide to Working with Clients Who Are Taking Pain/Inflammation Medications

1. **Client Position and Comfort:** Because of the nature of the condition and/or medication effects, the client may not be able to reflect accurately on the comfort and safety of delicate body tissues. The practitioner must pay particular attention to position choices and transfers. Swollen tissues need to be well-supported and elevated to encourage drainage. Use pillows and other supports to ensure any vulnerable body parts are not compromised.
2. **Tissue Health:** Pay particular attention to the health and integrity of the skin and underlying connective tissues. With longstanding or chronic conditions, tissues are generally more fragile, tend to have reduced or otherwise altered sensitivity, and can be more easily injured from normal use of manual techniques.
3. **Systemic Health:** Pain and inflammation can be a part of the symptom picture of a systemic disorder. Familiarize yourself with the condition and the specific clinical issues it presents. Evaluate the health of systems like the cardiovascular system, which is usually affected by generalized conditions. Pain and inflammation rarely present as unique or independent systems – the practitioner must consider the underlying causes and design the treatment approach accordingly.
4. **Effects of Touch:** In most cases, professional touch in an appropriately designed treatment approach will help reduce pain. However, it is important to realize this is not always true. For individuals in severe pain, sometimes being touched causes overload and results in more distress and discomfort. This can change from day to day – the practitioner has to be understanding and flexible.

group includes aspirin and acetaminophen. In Canada, 1996 sales of OTC analgesics are estimated to have been \$197.8 million. Extrapolating to the U.S. market, sales figures of approximately 10 times this amount are likely.

The estimated annual cost associated with toxicity of these drugs is about \$1.35 billion. These drugs are also frequently taken alongside of other medications. Given the widespread use and ease of availability of these drugs, massage therapists will be treating an increasing number of clients who are using these medications for pain and inflammation.

Below are some guidelines to follow when addressing massage and medications associated with pain and inflammation:

- It is important to always keep in mind that the purpose of these medications is to relieve pain. Client feedback, although important to solicit and consider, may be unreliable. The massage therapist must assume more responsibility than is ordinarily the case for determining what treatment approaches are safe and appropriate.
- Make sure you are aware of all the medications the client is taking, whether prescription or OTC. Keep in mind drugs for managing pain and inflammation are addressing symptoms. Especially when the cause is a systemic condition, various other medications may also be employed and will need to be taken into account in treatment planning. Be alert to the fact that multiple medication use can predispose to a higher incidence of adverse effects.
- Schedule treatments around medication taking to maximize the accuracy of the client's feedback and to optimize medical stability.

- Nausea and vomiting are potential side effects of these medications. Such episodes can leave the client feeling weak and fatigued. Postponing the session or giving a shorter, more specific treatment may be required.
 - Dizziness, drowsiness and postural hypotension are also common side effects. These can be heightened by massage. Ask your client about post-treatment reactions – future treatments may need to be shortened or less intense. Always instruct the client to sit up slowly and stay seated on the massage table for a minute or so before standing up.
 - Clients taking narcotic analgesics and corticosteroids often experience mood changes and may be less communicative or responsive. The therapist may notice the client is less cooperative, or seems disinterested in responding in a meaningful or thorough fashion to requests for information or feedback. It can be necessary to exercise a bit more professional assertiveness.
 - Some clients will experience skin irritations. Ensure proper positioning, and keep in mind that local massage is contraindicated until the reaction has subsided.
 - Topically administered pain and anti-inflammatory medications act in a variety of ways on the local circulation and superficial nerves to relieve pain and stiffness. They tend to compromise local sensation. If on-site work is otherwise appropriate, exercise caution and modify depth of pressure when working on tissues being influenced by such topical applications.
- Here are some specific guidelines to incorporate when working with pain and inflammation medications:



From assessment to treatment planning, massage therapists should prepare for the variable effects medications can have on the services they provide their clientele.

• **Non-Steroidal Anti-Inflammatory Drugs (NSAIDs)** –

These drugs have both analgesic and anticoagulant properties. Clients may be unable to give accurate feedback about technique pressures and will be more susceptible to bruising if treated too aggressively. Be alert to complaints of gastrointestinal pain and discomfort. The NSAIDs can cause ulcers and GI tract bleeding, both of which can become life-threatening if not addressed medically. If the client has been diagnosed and is being treated for GI side effects, abdominal massage and hydrotherapy are contraindicated until the condition has resolved.

• **Muscle Relaxants and Narcotic Analgesics** – Muscle relaxants and narcotic analgesics depress neural responses. Stretching techniques should be avoided or applied cautiously because sensory feedback from muscular stretch and tension receptors may be compromised. On palpation, the muscles – whose role it is to protect themselves and their local tissues – will feel hypotonic. Constipation is a common side effect of the narcotic analgesics. The decreased intestinal motility is not greatly influenced by massage techniques. Prolonged constipation or bowel restriction must be carefully monitored by a physician.

• **Corticosteroids** – The catabolic activity of the corticosteroids, especially with long-term use, can impair tissue strength, resilience and sensitivity. Skin integrity may be reduced. The body tissues are more easily damaged by pressure and stretch. Massage techniques that place stress on the muscles, bones and joints of the body must be avoided or modified. Examples include rib springing, heavy tapotement and passive overpressure. Remember that healing times may be longer than expected, and tissue

repair may not be of the best quality. Be particularly careful with clients who are at risk for developing osteoporosis, like postmenopausal women and the elderly.

The corticosteroids have immunosuppressant effects and can make a client more susceptible to infection or communicable “bugs.” Hygienic routines become especially important. As well, the practitioner should be alert to the need to reschedule such clients’ appointments when personally unwell.

Conclusion

The last two decades have witnessed several remarkable changes in the perceptions and practice of health care in North America. Dramatic new pharmaceutical agents have been developed, and they are being made available in a marketing environment where prescription medications to treat everything from high cholesterol to hypertension, anxiety and impotence are being promoted directly to the public via television, magazine advertisements and the Internet. At the same time, there has been an enormous groundswell of public interest in and utilization of alternative health care by all sectors of the population. Many have come to regard non-conventional or alternative therapies as complementary to medical treatment, and are receiving such treatments while they are also under the care of a medical doctor for various medical conditions.

Because of this, massage therapists are more likely than ever before to regularly treat clients who are also using prescription and non-prescription medications. Unfortunately, many therapists lack formal training in the effects of pharmaceuticals and how to adapt massage treatments in these situations. Hopefully, by exposing practitioners to the potentially harmful interactions between massage and some medications, massage therapists can feel better knowing they provided the safest service possible to their clientele. **M&B**

Notes

1 Eisenberg, D.M., et al., “Unconventional Medicine in the United States, Prevalence, Cost and Patterns of Use,” *New England Journal of Medicine*, January 28, 1993.

2 Unconventional medicine was defined as “...medical interventions not taught widely at U.S. medical schools or generally available at U.S. hospitals. Examples include acupuncture, chiropractic, and massage therapy.” “The absorption of carbamazepine in man is relatively slow. When taken in a single oral dose the carbamazepine tablets and chewable tablets yield peak plasma concentrations of unchanged carbamazepine within 4-24 hours. Only 2-3% of the dose, whether given singly or repeatedly, is excreted in the urine in unchanged form. The primary metabolite is the pharmacologically active 10, 11-epoxide. After repeated doses the elimination half-life of unchanged carbamazepine is 16-24 hours depending on the duration of the medication.

3 *Compendium of Pharmaceutical Specialties*, 28th ed., Canadian Pharmaceutical Association, Ottawa, 1993, pp. 1200-1201.

This article is reprinted with permission from *Randal Persad's Massage & Medications*, Curties-Overzet Publications, 2001.

*Randal Persad graduated as a pharmacist from the University of the West Indies, Trinidad and Tobago campus, in 1986. He worked as a pharmacist and as a medical representative for a leading pharmaceutical company. When he moved to Canada a few years later, Persad encountered jurisdictional controls in pharmacy and decided instead to pursue his life-long interest in massage. He returned to school and completed the two-year program at the Sutherland-Chan School & Teaching Clinic in Toronto. Currently, Persad maintains a private practice and teaches Orthopaedic Assessment & Treatment, Hydrotherapy, and Massage Therapy and Medications at a massage school in Vancouver. Persad's book, *Massage Therapy and Medications*, can be purchased through Curties-Overzet Publications, 888/649-5411.*