

WORK SMARTER, NOT HARDER

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body mechanics for massage therapists

COURSE DESCRIPTION:

The efficiency with which massage therapists use body mechanics in the delivery of massage therapy is crucial both to the quality of the therapeutic care and the longevity of our massage therapy careers. Unfortunately, the study of body mechanics is often given insufficient attention and therapists work harder rather than smarter, sometimes resulting in career-ending injuries.

This course offers a set of 10 guidelines designed to create healthy body mechanics when delivering massage and bodywork. These guidelines show how to maximize the efficiency with which we work by showing how to harness the laws of physics, rather than working against them.

COURSE OBJECTIVE:

This course is divided into three categories and offers 10 guidelines on how to use equipment and supplies, how to position your body and how to perform massage therapy strokes in a manner that maximizes efficient delivery and minimizes stress on your body. While useful for all massage therapists, these techniques are essential when performing deep tissue work. When you finish this course you will be able to:

- Define the role of body mechanics in massage therapy.

- Describe how the delivery of force in massage therapy is affected by gravity, table height and lubricant.

- Compare the advantages and disadvantages of the stoop bend and the squat bend in massage therapy.

- Describe how foot positions and trunk orientation of the massage therapist affect the strength of delivery in massage therapy.

- Describe how delivery in massage therapy is affected by both head-and-neck and upper extremity joint alignment.

- Describe how the therapist's use of larger muscles and a larger contact area improves the delivery of massage therapy.

CONTACT HOURS: 2.0

NOTE: Massage therapists are advised to practice these techniques prior to utilizing them in a clinical setting.

7.8

THE AVERAGE NUMBER OF YEARS MASSAGE THERAPISTS STAY IN THE PROFESSION.¹

bodywork, body mechanics & physics

BODY MECHANICS AND PHYSICS

Regardless of the technique employed, the essence of all forms of physical bodywork is the delivery of pressure—in other words force—into the tissues of our clients. The efficiency with which we achieve this is crucial, not only to the quality of therapeutic care that we give our clients, but also to our own health and longevity in the field. To examine the efficiency with which our body works, we must study the mechanics of our body; therefore this field is called *body mechanics*.

Understanding and applying the fundamentals of good body mechanics is simple. We need to apply the laws of physics to our body. The same laws of physics that rule all physical matter including the moon and stars governs the forces that our body generates and to which our body is subjected. If we work with these laws of physics, we can generate greater forces with less fatigue, effortlessly working on our clients, and have our body subjected to less force. But if we work against them, it will be more fatiguing to generate the power necessary to do our work and our body will be subjected to greater forces that may injure us.

WHEN WORKING HARD = INJURIES

Unfortunately, the study of body mechanics is often given insufficient attention in the world of massage and bodywork. As a result, many new graduates and established therapists

alike are often ill-equipped to do deep tissue work without *muscling* the massage via excessive effort. Instead of working smarter, they work harder, resulting in a high number of injuries. Many of these injuries force otherwise able and successful therapists to prematurely leave the field.

On average, a massage therapist stays in the field for only 7.8 years.¹ While not all individuals leave as a result of injury, certainly a good number of them leave because of injury, or due to the burnout that occurs from the physicality of doing massage. Giving massage and engaging tissue can be hard work, especially when done with poor technique!

GUIDELINES TO HARNESSING PHYSICS AND BODY MECHANICS

The goal of this course is to offer a set of 10 guidelines designed to create healthy body mechanics when delivering massage and bodywork. These guidelines do not constitute a new technique or method; rather they simply show how to maximize the efficiency with which we work by showing how to have the laws of physics work with us instead of against us.

These guidelines are divided into three categories:

- Equipment and supplies—the massage table and lubricants;
- Positioning of our bodies—how we bend, the alignment of our trunk, head, feet and joints;
- Performing the massage stroke—

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the origin of our strength, the direction in which we apply the stroke, and how we support our contact with the client.

Using good body mechanics is important all the time; however, it is crucial when performing deep tissue work, which requires a greater production and delivery of pressure. For this reason, these guidelines are especially recommended to bodyworkers who do deep tissue work on a regular basis. While this course is not meant to be comprehensive of all aspects and facets of body mechanics for bodyworkers, it does provide a number of essential basics.

As much as following rules and guidelines is important, it should be kept in mind that bodywork is not only a science, it is also an art. Therefore, the following guidelines need to be incorporated into your own unique style.²

equipment & body mechanics

GUIDELINE NO. 1: TABLE HEIGHT

Table height is probably the number one factor determining the efficiency of the therapist's force delivery. The exact proper height of the table is determined by a combination of a number of factors, including:

- Height of the therapist;
- Size of the client;
- Positioning of the client on the table (supine, prone, or side lying);
- Technique being employed.

When it comes to the production and delivery of force with less effort, the table needs to be low.³

BODY WEIGHT AND GRAVITY

Setting the table low allows the therapist to take advantage of body weight to create force.² Weight is

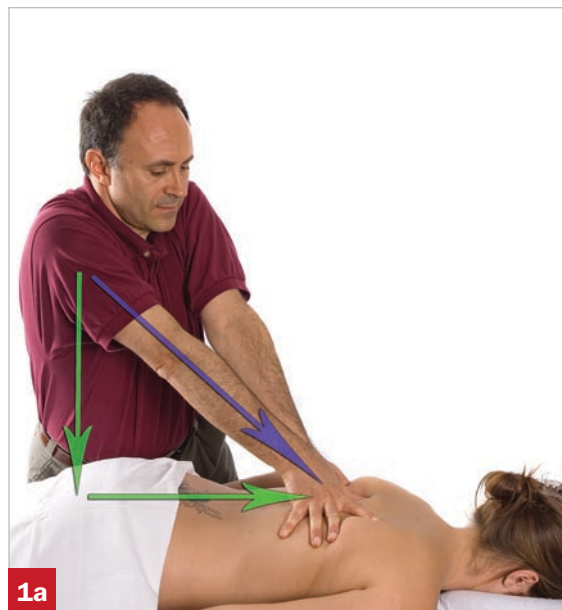


Figure 1 illustrates a therapist working on a client with the table set at three different heights. In each photo, the blue arrow represents the force through the therapist's upper extremity into the client, and the green vertical arrow represents the component of force that is due to gravity. Note that the vertical component vector is least when the table is set high (1a), and is greatest when the table is set low (1c). Ideally, if the line of force of the therapist is almost purely vertical as in 1c, nearly all the force can be delivered via gravity and little effort needs to be expended by the musculature of the therapist. A good guideline to determine proper table height for deep tissue work is to have the top of your table be no higher than the top of the patella (knee joint).



Figure 2 demonstrates an easy method using an ordinary bathroom weight scale to determine how much effort is necessary at different heights to generate force into a client's body. By placing the scale lower and simply leaning into it, the greatest pressure with least effort is obtained.



merely a measure of the force that gravity exerts upon mass;⁴ and because gravity is an external force that never tires, why not take advantage of it?²

When a therapist generates force to work on a client, that force can be created in two ways—internally within the body by muscles, or externally from gravity. The internal creation of force by musculature requires effort on our part, and can be fatiguing. However, the creation of force by gravity requires no effort. If the goal is to create force with the minimum effort possible, it is desirable to utilize gravity as much as possible.²

However, gravity does not work horizontally or diagonally; it only works vertically downward. Therefore, it only works if the therapist's body weight is literally above the client. This requires the client to be placed below the therapist; hence the necessity of low table height.⁵

With the client located below the therapist, the therapist does not need to expend much effort; rather it is only necessary to *lean into* the client letting the therapist's body weight generate forceful deep pressure (Figure 1).^{2,6} Given that the greatest weight of the body is located in the core (i.e., the trunk) of the body, it is the trunk that must be positioned above the client when the therapist leans in.

PROVE IT TO YOURSELF

To test the principle of table height at home, place a bathroom weight scale on a chair or massage table at various heights. At each height, simply lean into the scale and read the force that you are generating on the scale (Figure 2). If the scale is low enough so that you are directly above it, note how much pressure

you can effortlessly generate by passively leaning into the scale. Try to create the same reading on the scale through muscular effort when the scale is located on a higher surface. The difference in effort required is the difference in work that the therapist must do. Multiply this by how many minutes or hours the therapist works per week/month/year, and the cumulative effect of a table set too high can be appreciated.

THE IMPORTANCE OF SELF-SUPPORT

When generating deep pressure by leaning into the client, it is important for the therapist to maintain a position of self-support; otherwise the therapist's control and balance might be lost, decreasing the effectiveness of the session as well as the client's comfort.^{2,7} This self-support can be maintained via a strong and stable stance of the lower extremities (this will be discussed more fully in Guideline No. 5).

TABLE WIDTH

In addition to the height of the table, the table width must also be considered. The wider the table, the more difficult it is for you to position your body weight over the client; if the client is located at the center of the table, the client is farther away from you. For this reason, a narrow table is more desirable when it comes to utilizing your body weight.⁷

ELECTRIC LIFT TABLE

When working with a table set lower, there is another factor to consider. A low table height is ideal when deep pressure is desired; however, a higher table height is actually easier to work with when light pressure is being applied. It requires less effort for lighter pressure if you stand straighter and apply pressure to the

client with strokes that are more horizontally oriented. If the table is set low in this scenario, you either must bend to reach lower, or must widen the stance of the lower extremities to bring the upper body down to the height of the client.⁸

Between these two choices, widening the stance is preferable; however, it requires greater effort than simply standing upright. For this reason, ideal table height will vary during a treatment session based upon the work that is being done.

The solution to this dilemma for anyone who combines deep tissue work and lighter work on a regular basis is to use an electric lift table.^{2,7} While electric lift tables are viewed as extravagant by many in the bodywork profession, in my opinion, they are an absolute necessity.

Being able to change the height of the table during a session by merely pressing on a foot pedal enables deeper pressure to be delivered with less effort on a low table, and allows you to stand straighter when doing lighter work with the table set higher. This allows for better sessions therapeutically for the client as well as healthier and less fatiguing sessions for the therapist. In the long run, the benefits of an electric lift table far outweigh the increased cost of the initial purchase.

GUIDELINE NO. 2: LESS LUBRICANT

For beginning bodyworkers, the amount of lubricant used is often part of the problem. The point of using a lubricant is to allow the therapist to glide along the client's skin without excessive friction. However, the more lubricant that is used, the more the therapist's pressure translates into slipping and sliding along the client's skin instead of delivering pressure into the client's tissues.

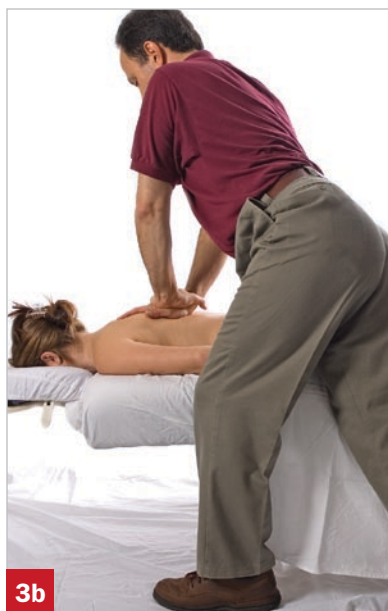
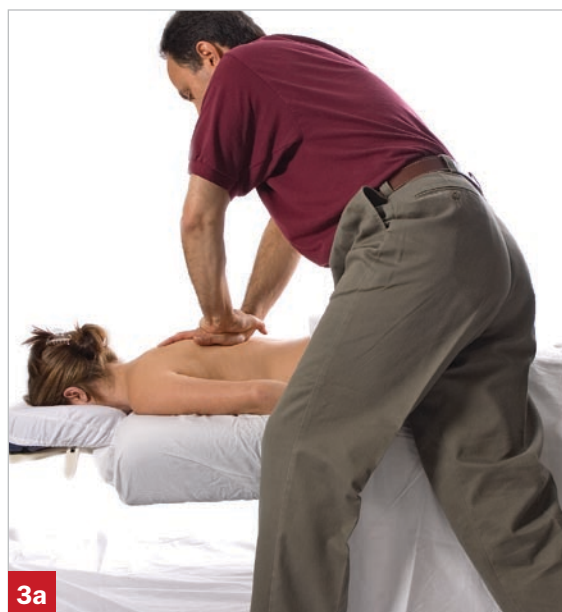


Figure 3a shows the stoop bend, in which the therapist bends by flexing the spinal joints of the trunk. Of the three methods of bending, the stoop bend is least healthy for the therapist. **3b** shows the squat bend with the trunk inclined forward. **3c** shows the squat bend with the trunk vertical. This bending method is biomechanically the least stressful on the therapist's body and should generally be strived for whenever bending over a client is necessary.

The general guideline for lubricant is to use the least amount necessary for the client's comfort. Any amount greater than this decreases the efficiency with which pressure is delivered to the client.

Besides the amount of lubricant, the type of lubricant can also make a difference. Generally, oil-based lubricants tend to create more slide and are not as efficient for deep tissue work as water-based lubricants.

bending & massage delivery

GUIDELINE NO. 3: BENDING

While the ideal body posture for delivering deep pressure with maximal efficiency is for you to be positioned directly above the client and delivering the force directly downward, this body posture is not usually possible to attain without some bending on the part of the therapist. The manner in which the therapist bends is extremely important because bending tends to create postural imbalances that require effort to maintain and places stress upon the therapist's body. Bending postures can be divided into two general categories: the stoop bend and the squat bend.

STOOP BEND

The stoop bend, which involves flexing the trunk at the spinal joints in an effort to bring the body over the client, is less healthy for the therapist. This is because it naturally

tially flexed and imbalanced trunk posture.⁹

Further, a stooped posture of spinal flexion places the spinal joints in their open-packed position. The open-packed position of a joint is its least stable position; therefore muscles must contract to play a greater role in joint stability. The result is greater effort on the part of the spinal extensor musculature to maintain the stooped posture.

SQUAT BEND

A better alternative is the squat bend, which is achieved by flexing the hip and knee joints instead of the spinal joints. In a squat bend, the spine stays erect in its closed-packed stable position, which is healthier for the spine and requires less stabilization contraction effort by the spinal extensor musculature.

There are two squat bend methods:

Squat bend with the trunk inclined forward;

Squat bend with the trunk maintaining its vertical posture.

Between these two, maintaining a vertically positioned trunk is preferable, as a squat bend with the trunk inclined forward still places the trunk in an imbalanced posture in which its center of weight is unsupported (Figure 3b). This requires spinal extensor musculature contraction to prevent the trunk from falling into flexion, which is another form of stooped posture.

tip:

A GOOD GUIDELINE FOR TABLE HEIGHT IS THAT THE TOP OF IT SHOULD BE NO HIGHER THAN THE TOP OF THE KNEE JOINT.

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