The Wellsystem Medical Hydro-Jet Massage

A User’s Guide

Prof. Dr. med. Heinz Liesen
Leader of sports medical institute
of the university, Paderborn – Germany

Hans Jürgen Montag
Sports physiotherapist and medical consultant
of the german national soccer team
The aims of massage

Massage is a passive measure. It does, however, activate and/or stabilise a number of body functions:

- It can help to counteract a deterioration in muscle tone and thus in general posture, by an activating or dampening action, primarily on the vegetative nervous system. This is the system which is controlled subconsciously and which regulates the tension (tone) of the blood vessels – and with it the circulation and the body’s support muscles.
- It promotes recovery (regeneration) from excess stress arising essentially from the pressures of everyday routine and work.
- It strengthens the general feeling of well-being, above all through the relief of nervous tension.

The effects of massage

These aims can be achieved by the following effects:

- Improved circulation in the skin and through the activation of receptors in the skin and/or through deeper penetrating massage also the muscles (down to the joint regions) and the internal organs.
- Activation of the lymph and venous circulatory systems to improve the flow of tissue fluids and partially deoxygenated blood carrying metabolic waste products away to be disposed of.
- By improving circulation, through the release for example of tissue activators (hormones), and by activating “resting” zones, massage accelerates the metabolic processes, the function and energetic performance potential of the skin, the muscles and also of the related internal organs.
- Above all, a normalisation of the muscle tone is reached through the restriction or activation of muscle or tendon spindle fibre function. Increased activity leads to a reduction of muscular tension, hardening or spasm; tiring or relaxing the muscular structure results in an increase in tone and thus again the relief of symptoms and improved performance potential.
- The controlled mechanical stimulation of the skin, tissue and muscle receptors via the nervous system.
  - in the spinal cord to the activation of autoreflexes for the muscle tone and the supporting action of the skeletal muscles,
  - in the brain to the changeover from “performance” to recovery and relaxation, with deeper breathing and “easy action mode” for the heart and circulatory system, by dampening the sympathetic centres of the vegetative nervous systems, or alternatively to invigoration and increased performance potential, by rapid, intensive massage stimuli,
  - in hormonal regulation, to a reduction of the increased release of stress hormones (adrenaline/noradrenaline, cortisol etc.) and a changeover from a catabolic (loss, wear) to an anabolic (build-up, regeneration) state,
in the nerve cells of the brain, to the release of immune system hormones and/or endorphines which contribute towards the stabilisation of the body’s defence against disease or evidence a pain-relieving effect,

- in the centres of the brain responsible for mood, both to a positive attitude and increased motivation and ability to concentrate, as well as to an inner state of calm and composure.

**Wellsystem Medical Hydro-Jet Massage – Classic Massage?**

A precondition for achieving the best possible effect from classic massage is a relaxed position, free of pain. The water bed of the Wellsystem Medical Hydro-Jet massage table transports the user into an almost weightless condition. The body shape is supported perfectly by the displacement of the water, whether lying on one’s back or front. Depending upon the force and the manner in which they are applied, the water jets simulate the essential basic movements of the classic massage.

Just as in the manual massage, the water jet massage should start with a stroking action, i.e. with gentle pressure only. This induces relaxation and prepares the muscles for the more intensive form of treatment. The ensuing more powerful jet massage, applied by the cone shaped jets of water, leads to an expressing effect in the taut muscles or in the deeper muscle layers such as is achieved in the manual massage for example by strong penetrating strokes with the fingers or the back of the hand. The sickle shaped rotary movements of the conical jets of water match in pressure and duration the circulating kneading and flexing of a manual massage.

Through both stationary and sectional application, tense muscle regions in particular can be massaged and treated. Carried out with the appropriate intensity, this equates to friction treatment. The continuous oscillations produced by the movement of the water in water-jet massage can be compared to the vibrations of the classic massage.

**Wellsystem Medical Hydro-Jet Massage – An Underwater Massage?**

The healing effect of water has been undisputed for thousands of years. The Wellsystem Medical Hydro-Jet massage can, with a degree of qualification, be considered as a form of “dry” underwater massage. It does not however replace any underwater massage treatment prescribed on therapeutic grounds. But it can claim to share the majority of the beneficial effects of an underwater massage whilst largely excluding its negative side-effects.

As this Hydro-Jet massage does not require submersion in water and therefore the hydrostatic pressure of water is not exerted on the body’s vascular system, it neither causes a dangerous rise in pressure in persons suffering from or having a tendency to high blood pressure, nor does standing up after a massage treatment lead to significant pressure drop with associated collapse tendency. This is observed very frequently with the classic underwater massage thus necessitating a 20 to 30 minute rest following treatment. This is not necessary with this Hydro-Jet dry “underwater” massage. The skin is also not unusually stressed by the jets of water as is the case with the wet underwater massage which not infrequently ends in maceration. The irritating post-treatment sweating, accompanied by the risk of catching cold,
is also not experienced with the “underwater massage” on the Wellsystem Medical Hydro-Jet. On the other hand, it does make full use of the power of the water as with the classic underwater massage.

**The Wellsystem Medical Hydro-Jet Massage – Warmth Therapy?**

Applied in a dry or humid way warmth is comfortable, relaxing and calming. Best performance can be achieved by constantly stored warmth as provided by the Wellsystem Medical Hydro-Jet massage bed. Due to the “dipping in” of the body into the water (just separated by the flexible rubber cover) a major part of the body is surrounded by warm water which can thus convey its beneficial effects. Lying undressed on the hygenically easily cleanable rubber cover a humid chamber increasing the warmth transfer is created between the user’s skin and the rubber surface of the massage bed due to transpiration. During the treatment it remains stable. Its performance can last up to one or two hours.

**Effects and Significance of the Application of the Wellsystem Medical Hydro-Jet Massage**

This Hydro-Jet massage produces almost all of the beneficial effects of heat treatment, and of both the classic and the underwater massage. It is the almost perfect vehicle for making certain findings accessible to the man in the street. The raised temperature of the water generates well-being and bodily warmth, engendering general relaxation.

The Wellsystem Medical Hydro-Jet can be adjusted to accommodate indivudual reactions to the treatment. On the one hand the continuously variable intensity of the jets of water on the body and the duration of the treatment applied to specific parts of the body mean that the application can be calming and relaxing. Painful muscular hardening and spasms (e.g. caused by lengthy bending, incorrect driving position or when working at the desk) can also be corrected. And on the other hand, this Hydro-Jet massage can, through relief, build up muscle tone restoring functional stability to the skeletal structure.

The light, stroking massage, applied with gentle pressure, has a calming effect reducing muscle tone (muscular tension). In contrast, stroking with increased pressure can raise muscle tone. Its effect depends therefore upon the intensity and upon the duration of the treatment. The jet slot applying this Hydro-Jet massage moves from the foot end, stroking tissue and veins towards the heart. The variable pressure makes it possible to apply an individual massage which corresponds in length and intensity to the application of a manual underwater massage.

The jet massage of the Wellsystem Medical Hydro-Jet is comparable to a forceful massage of individual muscles and body regions. Depending upon the intensity of the treatment tension is pressed out, down to the deeper layers. Its effect corresponds to that of deep powerful strokes applied with the finger or with the back of the hands in the classic massage.

The intensity can be adjusted to individual requirements and body build. The delicate spinal column is only massaged peripherally in order to avoid excessive excitation. The sickle shaped jet massage of the Wellsystem Medical Hydro-Jet massage bed is comparable in its effect to that of the underwater rotary massage.
It reaches all the important muscle groups whilst avoiding the sensitive parts of the body. Depending upon the pressure and the duration of the massage, all the soft body layers including the deep muscles are reached. This form of massage is particularly suitable for loosening muscle spasms and hardening but also for rebuilding the muscle tension required for correct muscle function.

Empirical tests have shown that the Wellsystem Medical Hydro-Jet massage can be used in practically every case where massage is prescribed as a supporting measure to physiotherapy. This type of massage is especially suitable for mental relaxation and regeneration in cases of job-orientated, psychological and sports stress. The gentle treatment over large areas of the body, accompanied by relaxing and calming heat, restricts the production of centrally controlled increased stress hormones (e.g. adrenaline, noradrenaline, and cortisol). Through the positive effect on the psycho-neuro-hormonal regulation, the body is set (by an anabolic state) to recovery, regeneration.

At the end of such a Hydro-Jet massage, one experiences the same well-being as with the underwater massage without the need for a 20 to 30 minute rest period to stabilise the circulation (essential following underwater massage treatment). Instead, vessel and muscle toning are stabilised to such an extent by the massage treatment that full mental and physical performance potential is established.

The Wellsystem Medical Hydro-Jet massage has also proved ideal as a preparation for physiotherapy or for a physical course of treatment. The effectiveness of the measures carried out by the physiotherapist, particularly in rehabilitation following injury, can be enhanced by this Hydro-Jet massage in the recovery period between two courses of treatment.