Fangotherapy Fun

Why smart girls play in the mud

by Anne Williams

Moor Mud

Girls might be made of sugar and spice and everything nice, but if they're smart and want great skin, they'll take a hint from boys and play in the mud.

Fangotherapy is the use of mud, peat, and clay for healing purposes (*fango* is the Italian word for mud). Fangotherapy first gained popularity in the early eighteen-hundreds in Europe where it was, and still is, used to treat a variety of musculoskeletal and skin conditions. Fango treatments have been used successfully on such conditions as osteoarthritis,[1] rheumatoid arthritis,[2] endocrine imbalance,[3] immune disorders,[4] fibromyalgia,[5] muscular pain,[6] pulmonary tuberculosis,[7] bronchitis,[8] acne,[9] dermatitis,[10] psoriasis,[11] chronic dry skin,[12] and scars.[13]

All types of fango have heat-retention properties and can be warmed up and applied to the skin to stimulate and improve circulation. This aids nutrient and waste exchange, opens follicles, and improves the elasticity of skin. Apart from the common effect of increased circulation, clay, mud, and peat each have different therapeutic properties and uses.

It's All About the Minerals

Clay is a general term for a variable group of fine-grained natural materials that are usually plastic when moist. When viewed under an electron microscope, clay particles are about one hundred times longer than they are wide. If water is added to dry clay, the moisture is held between the flat plates by surface tension so that the particles do not pull apart, but instead, slide easily over one another. This gives moist clay its smooth and creamy consistency.

Many types of clay are commercially available from different soils and environments around the world. Clays from marine sediments or from areas around hot springs usually have higher mineral contents than other clays, but all commercially available clay has the same basic properties. Clay is highly absorbent and is used to draw impurities and moisture from the surface of the skin. This drawing action simulates circulation and lymphatic flow and purifies the skin. While clay should not be allowed to completely dry out on skin, it can be allowed to dry slightly to aid natural exfoliation and improve skin texture. Kaolin and French green clay can also be softening, even for dry skin, so long as they are kept moist while on the skin.

Clays readily suspend to form an emulsion in water or other liquid substances. This property is useful in cosmetics as clay helps to hold other substances together and prevent separation. Clay is regularly used as an emollient and colorant in powders, liquid foundations, lotions, and skin masks. This characteristic

also makes it useful as a carrier product for other therapeutic substances. Items like seaweed, herbal infusions, essential oils, and natural food products (yogurt, honey, milk, fruit juices, and mashed fruits) can be mixed into clay to make interesting treatment products. The clays described below are often used in cosmetic products or for treatment masks.

Kaolinite or Kaolin Clay: The name kaolin comes from the Chinese word *kauling*, meaning high ridge, which refers to the hill in the Jiangxi province of southeastern China from which this clay was first obtained to make porcelain. Kaolin clay is pure white and has a fine-grained consistency, making it smooth and creamy when wet.

Illite Clay: Illite clays are mica-like in structure and often originate from recently deposited deep-sea sediments, providing a high mineral content. French green clay classically refers to illite clay mined in France and dried in the sun. Today, illite clays are found all over the world and the label *French green clay* does not always mean the product originated in France. This type of clay is extremely fine-grained, pale in color, and smooth when wet.

Semectite Clay: Semectite clays are expanding lattice clays that usually swell in water. Sedona clay has a fine to medium texture and is red. It may be smooth to slightly abrasive in consistency. Formed from ancient ocean sediment and volcanic activity, this clay is a good choice for oily or congested skin.

Wyoming bentonite is associated with freshwater sediments and has a rather lumpy consistency. Sodium bentonite is a better choice as it comes from marine sediments and has a higher mineral content. Its gel-like consistency is often used to regulate the viscosity of skin care products.

Fuller's earth gets its name from *fulling*, the process of removing grease from woolen cloth. When mixed with water, Fuller's earth crumbles into mud and has little natural plasticity, which can make it difficult to use. When used regularly, Fuller's earth has a reputation for refining the skin and evening skin tone.

Fun With Fango

The recipes below are for fun fango formulations using a clay base. Exact amounts of clay or liquid are not indicated; different materials will mix differently and the esthetician will need to find the best formulation for her needs (full body versus the face, and so forth). Aim for a creamy texture that is not too runny.

Botanical Boost: Mix kaolin or French clay with strong herbal teas like chamomile, jasmine, Earl Grey, green tea, or hibiscus flower. The properties of the mix will be based on the botanicals used in the tea.

Coffee Firmer: Add two shots of espresso and warm water to kaolin clay and apply it to areas like the thighs or neck to firm the tissue.

Juice Bar: Mix kaolin or French clay with such juices as apple, cranberry, pineapple, or orange. These mixtures support natural exfoliation and brighten and tone the skin.

Mango Madness: Mix fresh mango in a blender until it is smooth and add it with warm water to clay. This mix brightens and tones the skin. Papaya, avocado, pineapple, or pumpkin can also be used.

Images from Spa Bodywork *courtesy of Lippincott Williams & Wilkins.*

Sulfur in Mud is Key

While mud, like clay, is mainly mineral in origin, it contains 2–4 percent organic substances, which play an important role in mud's therapeutic use. Mud softens skin's texture and some minerals may be absorbed from the mud into skin, although the evidence for this is inconclusive. Therapeutic mud is matured or ripened in natural mineral water. The maturing process for each mud may be slightly different, but generally involves the oxidation and reduction of the mud over a period up to twelve months long. The process of maturing mud is characterized by changes in the chemical composition and appearance of the mud.[14]

Sulfur is perhaps the most important component of therapeutic muds and occurs naturally in proximity to volcanoes and hot springs. Sulfur baths have been researched as a means of reducing oxidative stress on the body and decreasing inflammation.[15]

Sulfur-rich mineral and mud baths are useful in the treatment of fungal infections, scabies, psoriasis, eczema, and acne.[16] According to a study published in *Dermatologic Therapy*, sulfur exerts beneficial anti-inflammatory, keratoplastic (promoting keratinization and thickening of keratin layers), and antipruriginous (itch relief) effects on skin.[17]

One of the most popular types of sulfur-containing therapeutic mud is obtained from the Dead Sea region in Israel. The extremely saline water (27 percent salt) is ten times saltier than the Mediterranean Sea and has a high concentration of calcium, magnesium, sodium, potassium, and bromine. Research on Dead Sea mud supports its use in the treatment of psoriasis and seborrheic dermatitis. This mud has the ability to stay warm and moist for up to an hour, which stimulates circulation and clears skin of dead epidermal cells.[18]

Beauty from the Bog

Sphagnum is the main genus of mosses that form a bog. As the *Sphagnum* moss decays, the bog becomes filled with a deeper and deeper layer of dead *Sphagnum*, known as peat. Lack of oxygen in the bog and acidic conditions created by *Sphagnum* slow the growth of microbes. This is why human bodies unearthed from peat bogs thousands of years after burial are perfectly preserved. As the rate of decomposition is very slow, minerals usually recycled by living things remain in the peat.[19]

Some studies suggest treatments with peat help normalize the pH of skin, strengthen the barrier function of the stratum corneum, decrease transdermal water loss, and normalize sebum flow. This makes peat useful for both dry and oily skin.[20]

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After an application of fango, clients will often notice the improved texture of their skin and its softness, brightness, and clarity. Like their skin care professionals, they will soon be touting the benefits of playing in the mud. Skin Deep

Anne Williams is a licensed massage therapist, licensed esthetician, aromatherapist, certified reflexologist, registered counselor, educator, and author. The work outlined in this article and the images are adapted from portions of her textbook, Spa Bodywork: A Guide for Massage Therapists *(Lippincott Williams & Wilkins, 2007). Williams also is education program director for Associated Skin Care Professionals. She can be reached at awilliams@ascpskincare.com or anne@spabodywork.com.*

Fango Sources

Albano Terme Bath and Beauty—www.abanousa.com
Argiletz Clays—www.argiletz.com
Australia's Earth Beauty Clays and Minerals—www.australiasearth.com.au
Dead Sea Cosmetics Company—www.deadsea-cosmetics.com
Golden Moor, Moor Mud Products—www.goldenmoor.com
Moor Spa Moor Mud Products—www.moorspa.co.uk
Nature's Body Beautiful Clay—www.naturesbodybeautiful.com
New Life Systems—www.newlifesystems.com
Premier Dead Sea Company—www.premierdeadsea.com
Torf Spa Organic Moor Mud—www.torfspa.com
Universal Companies, Inc.—www.universalcompanies.com

Notes

1. C Ekmekcioglu et al. "Effect of Sulfur Baths on Antioxidative Defense Systems, Peroxide Concentrations and Lipid Levels in Patients with Degenerative Osteoarthritis," *Complementary and Classical Natural Medicine* 9 (2002): 216–220.
2. S Sukenik et al. "Mud pack therapy in rheumatoid arthritis." *Clin Rheumatol* 11 (2000): 243–7.
3. AM Beer et al. "The effect of peat components on endocrine and immunological parameters and on trace elements," Department of Natural Cure, Blankenstein Hospital, Hattingen, Germany, *Clin Lab* 47 (2001):161–7.
4. EB Vvgodner, SN Serebriakov, AS Bobkova, "Non-medicinal methods of correction of immune disorders in peptic ulcer patients," *Ter Arkh* 63 (1991): 78–81.
5. S Bellometti, L Galzigna, "Function of the hypothalamic adrenal axis in patients with fibromyalgia syndrome undergoing mud-pack treatment," *Int J Clin Pharmacol Res* 19 (1999): 27–33.
6. O Kristof et al. "Analgesic efficacy of the serial application of a sulfurated mud bath at home," *Forsch Komplementarmed Klass Naturheilkd* 7 (2000): 233–6.
7. AK Strelis, NA Zhivotiagina, MA Kuz'michev, "Changes in the bronchial tree under the influence of pelotherapy in patients with pulmonary tuberculosis," *Probl Tuberk* 9 (1989): 16–8.
8. EM Ivanov, OV Shakirova, NS Zhuravskaia, "Ultraviolet irradiation of blood and peloid therapy of patients with chronic bronchitis," *Vopr Kurortol Fizigter Lech Fiz Kult* 4, (2001): 13–7.
9. FG Israfilova, "Experience in the multi-modal therapy of acne, including volcano mud applications and cosmetic procedures," *Vestn Dermatol Venerol* 2 (1989): 56–7.
10. C Comacchi, J Hercogova, "A single mud treatment induces normalization of stratum corneum hydration, transepidermal water loss, skin surface pH, and sebum content in patients with seborrhoeic dermatitis," *Journal of European Academic Dermatology* 18 (2004): 372–4.
11. M Delfino et al. "Experimental study on the efficacy of thermal muds of Ischia Island combined with balneotherapy in the treatment of psoriasis vulgaris with plaques," *Clin Ter* 154 (2003): 167–71.
12. E Proksch et al. "Bathing in a magnesium-rich Dead Sea salt solution improves skin barrier function, enhances skin hydration, and reduces inflammation in atopic dry skin," *Int J Dermatol* 44 (2005): 151–7.
13. M Mesrogli et al. "Successful prevention of adhesions using peat and humic acids," *Zentralbl Gynakol* 113, (1991): 583–90.
14. RR Bergel, "The Biology and Physics of Peloids," *Dermascope* November (2000).
15. C Ekmekcioglu et al. "Effect of Sulfur Baths on Antioxidative Defense Systems, Peroxide Concentrations and Lipid Levels in Patients with Degenerative Osteoarthritis," *Complementary and Classical Natural Medicine* 9 (2002): 216–220.
16. KS Leslie, GWM Millington, NJ Levell, "Sulphur and skin: from Satan to Saddam!" *Journal of Cosmetic Dermatology* 3 (2004): 94–98.
17. H Matz, E Orion, R Wolf, "Balneotherapy in dermatology," *Dermatologic Therapy* 16 (2003): 132–140.
18. C Comacchi, J Hercogova, "A single mud treatment induces normalization of stratum corneum hydration, transepidermal water loss, skin surface pH and sebum content in patients with seborrhoeic dermatitis," *Journal of European Academic Dermatology* 18 (2004): 372–4.
19. RW Kimmerer, *Gathering Moss, A Natural and Cultural History of Mosses*. (Corvallis, OR: Oregon State University Press, 2003), 113.
20. A Carabelli et al. "Effect of thermal mud baths on normal, dry and seborrheic skin," Clinical trial at the Universita di Pavia, Italy-www.pubmed.com (accessed May 2005).

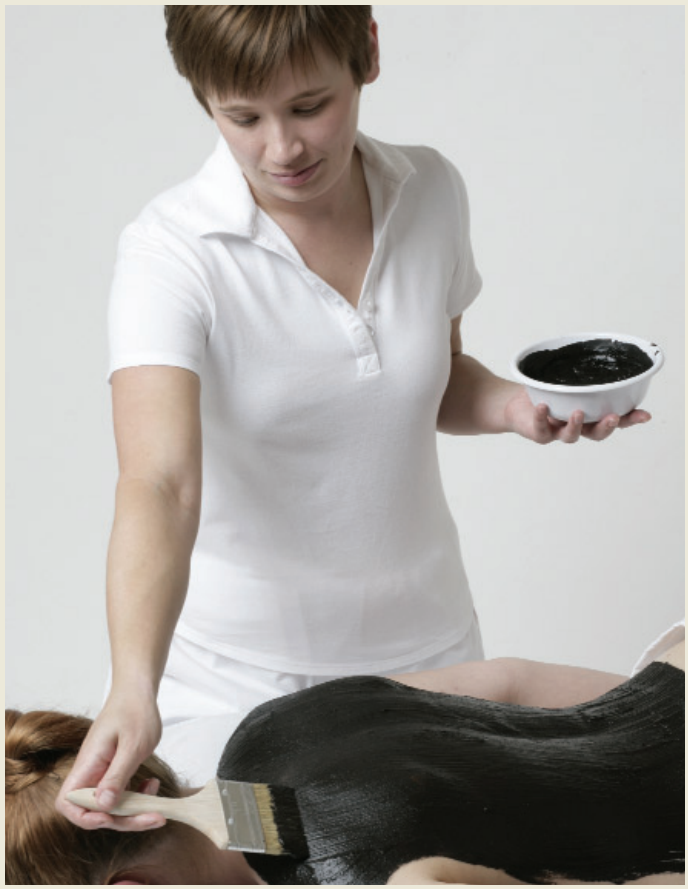
Associated Skin Care Professionals acknowledges that there are environmental concerns associated with harvesting mud from the Dead Sea.

General Treatment Considerations

Severely Broken or Inflamed Skin. The use of peat and mud is not advised for severely broken or inflamed skin unless the esthetician can verify the origin of the product and its quality. Broken skin is prone to infection, and peat or mud can not be checked for harmful pathogens at their source, or held to any standardized quality requirements. For this reason, caution and research on the individual product is recommended.

Fango Temperature and Length of Application: Fango can be applied chilled or up to 115°F. Pure fango products (containing pure mud, peat, or clay and not fragrances, dyes, or other ingredients) can be left in place for up to twenty minutes but are not commonly allowed to dry on the skin. They are covered in plastic, steamed, or covered with warm damp towels during the treatment to keep them moist.

Mixing and Storing Fango Products: When using mud, clay, or peat, they should not be mixed or stored in metal containers as they may react chemically with the metal. Clays can lose some of their permeability if they are over-processed or over-mixed. Fango products should be heated once only in a double boiler, used shortly afterward, and the leftovers discarded.



Moor mud, a high moor peat from Austria, is used in Europe for skin conditions because of its proven anti-inflammatory action.