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### Thalathotherapy Using Deep Sea Water and Trace Elements

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#### 1) Thalathotherapy Using Deep Sea Water and Trace Elements

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#### Abstract:

Deep sea water experience facility "THALASSOPIA" was opened in 1998 in Namerikawa City, Toyama Prefecture. There were no scientific reports on thalathotherapy using deep sea water which is rich in elemental contents and clean. In order to clarify effects of deep sea water bathing on relaxation and sleep, comparison examinations were carried out with empty bath, tap water bath and bath of surface sea water, in subjects of daytime duty persons and night duty persons using physiological and psychological index. It was indicated that there was hyperemia effect in deep sea water bathing which is easy to warm and is difficult to cool. Deep sea water bathing showed better subjective sleep latency for sleep questionnaire and significantly better vigor status for mood questionnaire among 4 kinds of bathing. Equipments which concentrated deep sea water of about 3.4% salinity using reverse osmosis membrane to about 15% salinity and to about 30% salinity by evaporation were developed. It was reported that floating bath was possible using the concentrated water as well as "Dead Sea". To study relaxation effects by floating bath during 15 minutes in the concentrated water of about 30% salinity, participated persons in "Namerikawa deep sea water fair 2003" were examined. By floating bath using the concentrated water, it was indicated that mental refresh effect and relaxation effect of muscles were obtained. Penetration through skin of elements of concentrated deep sea water was examined using skins of infantile pigs similar to human skin. It was found that infantile pig skin induced experimental inflammation contained much sodium, potassium and magnesium after concentrated deep sea bathing by measuring secondary ion mass spectrogram. It is wanted to study on the relation between skin penetration of elements and anti-allergy, anti-inflammatory effects.

**Key words:** deep sea water, concentrated deep sea water, bathing and floating, health

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