

# Development of body examinations – an overview

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## Theory and background

In order to get a global impression of a person, a great deal of interest has been paid to the development of body examinations. The theory behind these examinations is concerned with the unity of body and mind and the body as a functional entity (1-6). The Austrian psychotherapist Reich (7) claimed that the character of man is expressed in the four main body domains: Posture,

Movements, Respiration and Muscular consistency. The Norwegian psychiatrist Braatøy (2) based his theory on the same sources as Reich. Bülow-Hansen (8) and Braatøy developed the Norwegian Psychomotor Physiotherapy (NPMP), which concerns the whole body. Bülow-Hansen used a treatment trial for her examination. This is the fundament for most of the Norwegian physiotherapy examinations. The Dutch physician Mensendieck (9,10) was a teacher of physical exercises for women. Her Norwegian pupil Norman (10) was central in adapting the Mensendieck method in the treatment of patients.

The psychiatrist Waal (11-13) developed the Waal's Somato-Psycho-diagnostic system (WSP) in the Reichian tradition. Within the NPMP, body examinations were developed by the physiotherapists: Bunkan (14), Johnsen (15), Sundsvold (16), revised by Kvåle (17) and Storaas (18). In the Mensendieck tradition Haugstad (19) developed one body examination. The above examinations are all clinically based. The Swedish body examinations were inspired by Dropsy, a French dancer and psychotherapist (20). His theory is that movement and respiration should function as an entity, and that this influences the mind. Within this tradition Roxendal (21,22)

developed two body examinations, and Skatteboe (23) one. In Sweden Hallberg (24) developed The Resource Body Examination II based on the NPMP tradition.

The purpose of this article is to present four lines of global body examinations as shown in figure 1. The main questions are: What is the main content of the body examinations, their similarities and level of development?

## Method

The material is based on Norwegian and English publications. Some of the original sources are incomplete in their presentation of the method. This primarily concerns Bülow-Hansen, and partly Waal, Johnsen and Roxendal.

## *Definitions of concepts related to the main questions:*

- Content refers to the descriptive presentation of the body examinations. The concept also contains aspects of the theory believed to guide the examination.
- Similarities refer to the purpose of the examination, the methods used for examination of the body and time consumed to perform the examination.
- Level of development refers, first and foremost, to the type of rating scale, the

## Abstract

Body examinations are concerned with the unity of body and mind. The purpose of this article is to present four lines of global body examinations in Scandinavia, based on Scandinavian and English publications.

The Norwegian psychiatrist Waal developed a body examination based on Reichian theories. In the Braatøy tradition, six Norwegian psychomotor physiotherapists developed separate body examinations. Within the Dutch Mensendieck tradition, a Norwegian physiotherapist systematised a body examination. A different tradition originated in Sweden. The Swedish body examinations are based on the theories and practice of the French dancer and T'ai-chi teacher Dropsy. In this tradition two physiotherapists developed examinations in order to evaluate the Body Awareness Therapies. The study questions concern the content, similarities and level of development of the ex-

aminations. Body examinations within the same traditions are based on the same body domains, however the items included vary. In the Norwegian Psychomotor tradition the examinations aim towards evaluating body features. The Body Awareness tradition aim at evaluating the effect of Body Awareness Therapy. The level of development for the examinations are dependent on the specific information offered by the sub-scales. Four of the sub-scales in the Norwegian Psychomotor tradition and two in the Body Awareness Tradition have psychometrically based sub-scales. These offer a better understanding of individuals and groups of patients. The great number of body examination in Scandinavia opens up for a synthesis of the best.

**Key Words:** Body examinations, posture, respiration, movements, muscular consistency.

Figure 1. The four lines of body examinations

Domains	Traditions	Body examinations
Psychiatry	Reich (2)	Nic Waal (11) The Waal Somato-Psycho-diagnostic system (WSP)
Physiotherapy	Braatøy (1)	Braatøy and Bulow Hansen (ca 1956) Treatment trial
		Bunkan (14) The Resource Oriented Body Examination I (ROBE I) Body Examination (CBE) → Bunkan (54) The Comprehensive
		Hallberg (24) The Resource Oriented Body Examination II (ROBE II)
		Johnsen (15) The Musculo Respiratory Diagnosis (MRD)
		Sundsvoll (16) Global Physiotherapeutic Muscle Examination (GPM) → Kvåle (17) The Global Physiotherapy Examination (GPE-52)
	Mensendieck (10)	Haugstad (19) The Standardised Mensendieck Examination (SME)
	Dropsy (20)	Roxendal (21) The Body Awareness Scale (BAS) → Roxendal (22) The Body Awareness Scale- Health (BAS-H)
		Skatteboe (23) The Body Awareness Rating Scale (BARS)

development of sub-dimensions or other presentations of what actually is being examined. With regards to a few of the examination methods, it has not been possible to obtain exact information concerning statistics, reliability and time consumed to perform the examination.

### The Norwegian tradition

#### Waal's Somato - Psycho - diagnostic system (WSP)

The psychiatrist Waal (11-13,25) initiated a separate line of body examinations within the Reichian tradition. She developed the WSP with the purpose of assessing personality (11,25). Chronic conflicts and strong frustration were supposed to influence the body according to the level of development and the psycho-biological pattern of function that characterises the child's early developmental periods. According to Waal, the identification of hypotone muscular consistency was a particularly important basis for understanding personality structure.

The WSP is based on the four main body domains, and it has 114 registrations. The examination methods are observation, passive movements and palpation, and it takes about half an hour to perform. Important items are the patient's choice of supine body position and expressions in the patient's face and eyes. The focus is on the postural patterns and the patient's ability to relax.

Respiratory movements and amplitude are palpated and measured in the thorax and the abdomen. Thus, the evaluation of respiration also includes the patient's reactions to touch. The extremities and neck are examined through passive movements. Nuances in resistance and assistance to these movements are recorded. Tension in oral- and cervical regions and back extensors are believed to supply important information of experiences in early life. Thus, palpation of muscular consistency in these areas is performed. The method includes the patient's ability to participate in interpersonal contact. To our knowledge, the WSP is the only method that examines the patient's access to bodily lust. This is performed by gentle tickling to the lateral sides of the chest.

Waal (11,25) was the first to underline the relevance of the so-called hypotone muscular consistency in psychiatric patients. The patient is assessed in specific lying positions. This does not expose the patient to the upright position, which in the NPMP is supposed to show more mature body features.

Grieg and collaborators (11) reported that the results from the WSP showed an impressive correspondence with results from psychological tests and clinical observations. The WSP has not been tested psychometrically. The method is now being revised (Einar Moe, personal communication May 2003). The scale is systematised further and the themes are grouped in qualitative

categories. The reliability of the scale has been found satisfactory. The results are not yet published.

### Norwegian Psycho Motor Physiotherapy

#### The Braatøy and Bülöw-Hansen Body Examination

The original use of the Norwegian Psycho Motor Physiotherapy (NPMP) was to reduce the bodily defences and facilitate access to emotions for patients in psychoanalysis. Later the indications for NPMP and body examinations in this tradition have been rehabilitation of patients with muscular tension, long-lasting pain and various psychosomatic and psychiatric disorders. According to Bülöw-Hansen, Braatøy used his treatment (NPMP) when the aim was relaxation and the Mensendieck method when he did not want to release emotions (personal communication with Bülöw-Hansen). This means that the Mensendieck treatment was supposed to have less effect on the «bodily defences», and could be used for quite ill patients.

The NPMP examination is based on a short treatment trial (26), which comprises of massage grips and certain specific movements. To be accepted for NPMP the patient had to have a certain adaptability of respiration. In the presentation of her findings, Bülöw-Hansen used descriptions of observable phenomena and intuitive impressions. However, there has been a need

to communicate more specific information and more systematic body examinations were needed.

### The main body examinations in NPMP

Within the Norwegian psychomotor tradition, the purpose of the various body examinations are:

1. To obtain information of the patient's potentials for improvement.
2. To decide relevant physiotherapy.
3. To define the level of intervention.
4. To objectify the outcome of physiotherapy.
5. To discriminate between groups of individuals.

### Musculo Respiratory Diagnosis (MRD)

Johnsen (15,27,28) presented, in her theory, a system of interconnected growth centres related to different developmental periods. She supposed that the so-called hypotone muscles represented the patient's potential for development. Her method was palpation in the sense of a gentle grip around the muscle and observation of what she called the respiratory answer. She claimed that there is a mutual influence between hampered respiratory movements and slack muscular consistency and that this relationship was significant for the prognosis.

According to Johnsen, the hypertone muscles represented rigid muscular defences. She claimed that the hypotone muscles had a greater potential for change (28,29). Johnsen used descriptions and seemed to rely on a considerable element of intuition. Thus, the method has not been easy to learn. The number and localisation of the muscles palpated are unknown. The same holds for the time consumed to examine the patient.

### The Global Physiotherapeutic Muscle Examination (GPM)

The GPM was developed by Sundsvold (16,29-30). In addition to the four main body domains, her method also includes the Skin domain. According to Sundsvold and collaborators (16), the GPM measures 12 categories based on items from the whole body.

Sundsvold is a pioneer in systematising body examinations. She was the first physiotherapist in Norway to publish numerical scales in physiotherapy. The tests included in the GPM have been clearly described and standardised in a manual (16). Each item is scored on a 15 points rating scale ranging from -2.3 to +2.3. The results are presented both as sub-category scores, main domain

sum-scores, and a total sum-scores.

The GPM is known in several versions. The extensive GPM version consists of 319 variables and takes about 90 minutes to perform (personal communication with Kvåle A, 2004). The main short versions are the GPM-72, GPM-78 and the GPM-95, which all takes about 45 minute to perform (16).

The GPM assess only the left side of the body as there is found no significant differences between the two sides. For each category, positive scores are added to a positive sum score, and negative scores to a negative sum score. A global deviation sum-score is calculated, where the positive and negative signs are disregarded, and the absolute scores are added. The total sum-score of the short version has been used to evaluate the degree of psychopathology in individual patients. Most aspects of the GPM have been found satisfactory in small scale studies of inter-tester reliability (30).

Sundsvold (16) discriminates between stretch palpation and pressure palpation. She has launched the theory that stretch palpation measures the elasticity of the soft muscular tissue, while pressure palpation measures the amount of fluid in the muscle. The validity of these postulates needs to be investigated further.

### The Global Physiotherapy Examination (GPM)

Kvaale, Johnsen, Ljunggren (31-32) have further developed the GPM, using the Structural Equation Modelling method, which resulted in a modified and shorter examination - The Global Physiotherapy Method (GPM-52). The GPM-52 contains 52 variables from the whole body. The four main body domains, including skin, were analysed and 13 sub-domains were found. The included items are examined and scored in the same way as described in Sundsvold's manual (16). In line with Sundsvold (29), both posture and respiration are examined in standing and supine. Movement comprises the following sub-domains: Range of movements, active and passive movements. Muscles and skin have sub-domains. Only the left side of the body is examined. The GPM-52 takes about 30 minutes to perform.

Inter-tester reliability, performed by the overall intra-class correlation coefficient (ICC model 2.1), was 0.91 for the GPE-52 sum-score, and ranged from 0.60 to 0.89 for the main domains. All sub-domains, but one within palpation of the skin, have been found to discriminate significantly between healthy persons and patients with long-las-

ting musculo-skeletal pain (32). Kvåle et al. (31-32) validated the GPE-52 to Minnesota Multiphasic Personality Inventory (MMPI-2) sub-scales. They found that all domains were significantly correlated with psychological findings on the MMPI-2.

### The Palpation Interpretation Method (PIM)

The PIM was developed by Storaas (18). Her work represents a systematic and comprehensive examination that includes her own theory concerning muscles and the interpretation of the findings. The main focus in her examination is the circumference, elastic stiffness and compactness of the muscle. All which are evaluated in relation to each other. Storaas defines compactness as adhesions of fibres in the muscles based on changes in the muscle-fascia. The elastic stiffness is palpated in the superficial layers of the muscle belly and fascia. Compactness is a phenomenon that has been difficult to separate from muscular stiffness and hardness, and the concept is not described in ordinary textbooks about muscular consistency (33-34).

Storaas examine ten muscles throughout the body, holding that she is able to deduct five qualities from the muscles, referring to anxiety, responsibility, self-esteem, reality testing and will. In a small study [18] two physicians validated her findings against the clinical examination. Correspondence between the bodily findings and psychiatric interview varied between 50 - 85 %. The relationship between psychological factors and muscular qualities has not been studied further and the method has not yet been tested for reliability.

### The Resource Oriented Body Examination I (ROBE I)

In addition to the four main body domains, the ROBE I (14,35) include reactions from the autonomic nervous system, body awareness, muscular tenderness, skin stiffness and the patient's emotional experience during the examination. The total ROBE comprises of 293 variables. Some of the rating scales have three points and others have ten. Muscular consistency can also be presented in colours on a drawing of the human figure. Examination time is about 45 minutes. The domain scores and total sum-score are visualised on a line. The interaction of the domain scores is referred to as the patient's bodily resource, which is used as a fundament for the intensity of the therapy.

Single items or groups of items from the

ROBE I have been used in research (36-40). Reliability has been tested on single items and domain scores. Eriksson, Mokharti, Pourmotamed, Holmdal reports a kappa ranging from 0.27 to 0.55 for the four body domains (39).

*Comprehensive Body Examination (CBE)*  
ROBE I was transformed into the CBE (41-47) by a psychometric evaluation. The CBE comprises two types of rating scales. Most of the items are rated on a 7-point scale where 0 represents ideal state and 6 represent grave deviations from the norm. When the findings go in two directions, as with increase or decrease of a phenomenon, the scale goes from -6 to +6 (35,47). The CBE is performed in 40 minutes.

Explorative factor analysis is based on the mean of the two sides of the body. The analysis gave 14 sub-scales based on 75 items. A study of reliability using ICC (1.1) showed highly satisfactory results (46). The reliability coefficient on sub-scale level varied between 0.81 and 0.99.

The CBE sub-scales: The posture sub-scales (41) show that the peripheral and the central parts of the body represent different dimensions. Changeability of respiration (42) gives the most important information about the patient's condition. Respiratory movements in supine position give more important information than the upright position. Signs of tension in the respiratory muscles form a separate sub-scale, and so does the position of the thorax. The movement domain (43) reveals that resistance and assistance to passive movements are different dimensions. Motor disturbances comprise motor restlessness, bizarre movements and poor balance. The muscle domain (44) showed that the slack and the hard consistencies are separate dimensions. The two sub-scales for posture and the four sub-scales for muscular consistency showed that the central and peripheral parts of the body carry different information.

#### *The Resource-oriented Body Examination II (ROBE II)*

In a recent study, Hallberg introduced (49) the ROBE II, which is an examination based on the ROBE I. Principal component analyses with varimax rotation were used, and the first two factors for each domain were extracted.

Hallberg has chosen a 7-point unipolar rating scale, where 0 represents the ideal score and 6 the largest deviation. The ROBE

II contains ten sub-scales, all with satisfactory internal consistency. The sub-scales distinguish the clinically well known bodily characteristics of patients with psychosomatic, musculo-skeletal and schizophrenic disorders.

The analyses of the posture domain resulted in sub-scales for flexed and reclined postural patterns, the respiration domain showed sub-scales for decreased or increased movements, and the movement sub-scales were decreased flexibility in neck and shoulder and decreased hip movement. The latter is reported unfinished. The muscle domain showed sub-scales for slack and for hard muscular consistency, thus confirming the importance of slack muscular consistency. Reaction to touch showed the individual's resistance and assistance to passive movements. A study of inter-rater reliability proved acceptable for two raters for the ten sub-scales. The reliability coefficient is not published.

#### *The Standardized Mensendieck Test (SMT)*

The Mensendieck system is based on simple exercises, which are easy to perform (19). The purpose is to obtain body awareness, balanced posture and controlled movements relaxation and functional respiration (19). Haugstad's examination is based on what she refers to as cognitive principles, where the students must think of the movements, and the muscles to use. The evaluation includes posture, sitting position, movements, gait and respiration. The gravity line of the body, the position of the ankles and knee joints, the position of the pelvic and spine are assessed according to general norms in physiotherapy. Evaluation of movements includes balance, drop-test of the upper extremities, co-ordination tests for upper and lower extremities and assessment of gait. Adaptability of respiration is assessed during elevation of the extremities.

The rating scale has eight points (0 to 7). Zero represents inability to perform the movements and 7 the optimal function of the same. The scale is tested for reliability by weighted kappa statistics (K), and the K-values for the five domains range from acceptable to good (0.55 – 0.80).

The SMT has shown the power to discriminate between healthy individuals and patients with low abdominal pain (19). The examinations have several elements in common with elements in the ROBE and CBE as well as GFM and GPE, particularly concerning posture. Time consumed to learn to perform the examination is not reported.

### **The Swedish Tradition**

#### *Body Awareness Scale (BAS)*

Roxendal (21-22, 50) developed the Body Awareness Scale (BAS), and the Body Awareness Scale-Health (BAS-H) (51-53). The BAS is a symptom rating scale designated to measure the effect of Body Awareness Therapy (21) of hospitalised patients with schizophrenia. It is also used to trace resources, particularly in terms of «body-ego» (54).

The BAS consists of 54 items which are scored on a 3-point scale. Zero represents no symptoms or restrictions and 3 imply maximal deviations. The methods are observation of movement patterns and behaviour.

The BAS consists of 13 factors. According to Gyllensten (51) the primary factor concerns the body's relation to supporting surface in upright and supine positions, movement control and observed muscle tension. The second factor is concerned with everyday movements like jumping, running, sitting, and a third factor informs about various postural patterns and reduced motor activity. The reliability tested in some minor studies is reported satisfactory (50). The BAS included both observable body items and psychological items concerning the patient's own experiences. Roxendal systematised her work in a doctoral thesis (21).

#### *The Body Awareness Scale – Health (BAS-H)*

The BAS-H with additional items (21-22) includes several items from the BAS. Roxendal rearranged the observations to range from healthy vital aspects to pattern of malfunction (50). The BAS-H represents a movement center, a «grounding/center» line, flow and «centering/breathing». The inter-rater reliability has been found satisfactory in two small studies (22). The BAS-H is supposed to reflect aspects of disability and health in patients with chronic whiplash syndromes and indicate the outcome of rehabilitation (50).

#### *The Body Awareness Rating Scale (BARS)*

Skatteboe developed the BARS (23,53-54) which have twelve items rated on a 7-point scale. Ten are rated in supine, sitting and upright position, and two concern activities for couples. Special attention is paid to the patient's own experience related to actual movements. As in Roxendal's scales, Skatteboe focus on stability, free breathing and mental presence, as well as co-ordination of movement. The most central concepts are defined in a manual (53).

Skatteboe refers to awareness as «being aware of the body integrated with perception and experiences». A so-called movement harmony is a central concept, which is seen in opposition to disharmony, meaning discord and incongruity of movements. Special attention is paid to the patient's own experience related to actual movements. According to Skatteboe, (53) the items BARS-Movement-harmony, are categorised in three main groups. Postural stability concerns balance during movements, centration/free respiration concerns movements around the longitudinal body axis and mental awareness.

In a small study of reliability, Skatteboe (53) reports that the intra-class correlation (ICC (1,1)) showed a coefficient of .93 for two raters. Face validity, concept validity and content validity are reported to be satisfactory.

## Discussion

*Similarities and differences between the tests*  
The examinations in the NPMP tradition (17,30, 42-51,) and the WSP (11) include four main body domains: Posture, Movements, Respiration and Muscular consistency. In the tests, different items are included within the domains. The GPM includes contraction of quadriceps muscle and toe flexion in supine position. The CBE and the ROBE II includes balance and body flexibility in upright position. The WSP includes variables in the supine position, but not in the upright position. The WSP-therapists examine the clothed patients, while the therapists in the psychomotor tradition examine the patient in their underwear. The GPM is based on the information from the left side of the body, the ROBE I, II and the CBE on mean values from the two sides.

In spite of differences, the findings using the CBE (54) and the ROBE II (50) point in the same direction as those of the GPM and the GPE (16, 30-31). This is probably due to their ability to discriminate between non-patients and patients with pain in the musculo-skeletal system.

The ROBE II has shown various body patterns. Both the CBE and the ROBE II show sub-scales for assistance and resistance to passive movements, and both have sub-scales for slack and hard muscular consistency. The MRD (15) is a palpation method and departs from the other by integrating information both from muscles and respiration in the same palpation grip.

According to Johnsen, the impression she obtains by her grip informs her about the patient's prognosis. Since Johnsen's method relies on intuition, it has been difficult for other physiotherapists to learn. The slack muscular consistency was Johnsen's main target of examination and treatment. Research performed by Bunkan et al. (44), Sundsvold et al. (29) and Hallberg et al. (48) confirm the importance of slack muscular consistency. The greatest degree of this consistency is found in patients with psychoses.

The PIM (18) is a palpation method that evaluates muscular compactness and muscular stiffness. Muscular stiffness (hardness) is palpated in the superficial parts of the muscles. This has been debated. Bunkan (46), Sundsvold (28), Kvåle (32) and Hallberg (48) palpate into the depth of the muscle belly. Clinical experience indicate that PIM is incompatible to the ROBE I, ROBE II, CBE and the GPM.

The examinations in the NPMP tradition are concerned with body deviations as an expression of disease, while the WSP is concerned with personality features. The main purpose of the examinations within NPMP is to find an adequate level of physiotherapy treatment. In the BAS tradition the main goal is to measure change caused by the Body Awareness Therapy.

Physiotherapists have been interested in the difference between the ROBE I and the BAS scales. A study of the relationship between selected item from the ROBE I and the BAS-H was performed in two minor studies by Vassard (56) and Thörnborg (57). Both found a weak or no relationship between the scales with regards to muscular tension and posture, however an acceptable relationship was found in what is referred to as flow. The analyses of respiration showed some significant relationship between the BAS and the ROBE I. Both studies concluded that the ROBE I and BAS-H are complementary rather than alternative as test instruments. The lack of correspondence may be due to the fact that the examinations in the NPMP tradition focus on body traits, while the body awareness examinations focus on movement performance.

### *Degree of development*

Clinically based sub-scales are often concerned with variables that the clinicians finds logical to group together. Such variables might represent certain body areas or certain body functions. Psychometrically based variables might be grouped differently

from the clinically based.

The examinations based on the NPMP were presumed to form indices from the upper and lower body and for the right and the left side of the body. Neither the CBE nor the ROBE II have confirmed this assumptions. However, the CBE sub-scales showed that the peripheral and the central parts of the body carried different information.

Physiotherapists have more or less depended on intuitive findings. Scaling of findings according to numbers has not been a usual procedure. The systematised body examinations have rating scales with numbers and are standardised to obtain a better validity and reliability. Domain scores can discriminate between groups (32,55), however, the information is unspecific and unclear. The sub-scales and sub-domains systematise variables and produce information that is more precise and specific. However, a scale, numeric or not is unable to reflect all sides of a phenomenon.

Body examinations need to be validated against other instruments. To our knowledge there are no published studies concerning reliability and validity of the WSP, the MRD, and the PIM. The CBE (55), the GPM (29-30) and the GPE (31-32) are quite well developed and have discriminative validity. The GPM, CBE and ROBE II are validated against diagnostic groups. The GPM (32) has also been validated against criteria for Minnesota Multiphasic Personality Inventory (MMPI) with acceptable results.

According to Gyllensten (51) the BAS-H quality of movement scale results correlated significantly with the self-rating instrument that assessed experience of health-related quality of life, self-efficacy, general psychological well-being and sense of coherence in life, together with the Symptom Check List (SCL 90-R) and the rating of pain intensity on a visual analogue scale.

## Conclusion

Nearly all the body examinations in the NPMP tradition comprises of the domains posture, respiration, movements and muscular consistency. Some of the items chosen for the various examinations are different, other are similar. This also includes the WSP. The main difference between the WSP and the other examinations in the NPMP tradition is the focus on face expression and the psychological interpretation of personality traits. The physiotherapy examinations focus on body findings and the

information these offer according to the degree of disease in the individual and in groups of patients. The highest level of development is obtained for four examinations in the NPMP tradition and two in the BAS tradition. These body examinations have psychometrically based sub-scales, which are based on investigation of the various body domains.

The field has been hampered by many different body examinations that have been difficult to compare. It is now time to search for integration of the best documented approaches. Kvåle and Bunkan have already started a process that aims to combine the GPE and the CBE.

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*Artikkelen er vurdert av to eksterne refererer. Artikkelen ble mottatt 30. august 2004 og akseptert 28. september.*

## Britt Stuge til Australia

Doktorgradsstipendiat Britt Stuge er invitert som eneste norske foredragsholder til en tverrfaglig verdenskongress i Australia med rygg- og bekkensmerter som tema. Hun skal legge fram resultatet av en klinisk kontrollert studie hvor hun har sett på stabiliserende trening av kvinner med bekkenproblemer etter fødsel.

I den randomiserte og kontrollerte studien har 81 kvinner deltatt fordelt på to grupper. Den ene fikk stabiliserende spesifikk fysioterapitrening, mens den andre fikk fysioterapi uten spesifikk trening. Etter 20 uker med trening elleve ganger hos fysioterapeut, hadde gruppen med spesifikk trening betydelig mindre smerter og fungerte bedre i hverdagen enn kontrollgruppen (signifikant). De rapporterte også en signifikant høyere livskvalitet og helse.

– Dette er den første studien som viser så tydelig effekt for denne pasientgruppen, en gruppe vi hittil ikke har visst hva vi skulle tilby. Jeg kontrollerte gruppen ett og to år etter fødsel, og resultatene viste vedvarende effekt, sier Stuge. Ingen falt fra underveis, og hun tolker det dit hen at disse kvinnene ikke er blitt tatt på alvor og prøver det meste for å kunne fungere.

– Resultatene har gitt meg en trygghet på at dette er god behandling som vi kan anbefale, sier Stuge. Doktorgradsarbeidet regner hun med å levere i begynnelsen av 2005. Kongressen finner sted i Melbourne 10.-13. november.

## Fast spalte om forskningsmetoder i det australske fysioterapitidsskriftet

Australian Journal of Physiotherapy har i anledning sitt 50 års jubileumsnummer i september, kommet med en ny fast spalte som de kaller «Research Notes». Spalten gir korte artikler som forklarer utvalgte aspekter ved forskningsmetoder i fysioterapi. Den første artikkelen, av Ostelo, deVet og van Beek, har tittelen «The architecture of scientific research» og gir et overblikk over de viktigste kvantitative metodene som brukes innenfor klinisk forskning.

«Research Notes» er tidligere publisert av en nederlandsk fysioterapiforsker i det nederlandske fysioterapitidsskriftet og senere utgitt som bok. Oversatte artikler fra denne boken publiseres i et samarbeid med Australian Journal of Physiotherapy og kommer til å bli supplementert med artikler fra australske fysioterapiforskere.

*Kilde: Ostelo RWJG, de Vet HCW, van Beek HJM. The architecture of scientific research. Australian Journal of Physiotherapy 2004; 50: 189-192*

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