

Egen Klassifikation Scale II Manual

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RehabiliteringsCenter for Muskelsvind

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Practical implementation

The examination is conducted as a conversation in which the test person and helper, if any, are interviewed by the evaluator about how the individual functions (items EK 1-17) are normally performed followed, if possible, by a demonstration of how they are performed; the items “ability to turn in bed” (categories 2 and 3), and “physical well-being” are, however, *purely interviews*.

- The items on the scale are scored according to the best an individual has done in the last two weeks especially if there is variation between good and bad days.
- This also applies even though most items on the scale say “ability to” perform the activity
- **Exceptions** to this are the items “ability to balance in the wheelchair” and “ability to move the arms;” here, the test person is examined in order to evaluate ***what he actually is capable of***, not the best he has done in the last two weeks.

The aim is to gather as much correct information as possible, so if the test person does not know the answer to a question, it is important to obtain information from those who are with him daily.

During the examination, the test person sits in his normal wheelchair, with all its special equipment, with the seat adjusted as horizontally as possible. If the individual uses a back- or neck brace, he keeps it on. If the normal position of the seat is permanently adjusted to tilt backwards, the individual is tested in this position.

When the aim is to describe natural history or changes in muscle strength, electrical functions such as a “tilter” (either to adjust seat angle or backrest angle) or electric belt must not be activated for the purpose of improving functional ability. If the aim is to evaluate the remedial aids’ effect on functional ability, this must be registered specifically. It is also true that an individual can adjust his position for comfort at the start of the test and potentially during it if circumstances arise that demand this.

A suitable sitting position – seat as horizontal as possible



Scoring the individual items (EK 1-17)

Uncertainties in scoring

If a score falls between two categories, the one that represents the **highest functional ability** (lowest score) should be chosen.

EK 1: ABILITY TO USE WHEELCHAIR

| | | |
|--------------------------------|---|--|
| Questions to individual | <p style="text-align: center;">How do you get around indoors and outdoors?</p> <p style="text-align: center;">↓</p> <p style="text-align: center;">Show me or explain to me how you do this</p> <p style="text-align: center;">↓</p> <p style="text-align: center;">To clarify between a score of 2 or 3 ask: Are there situations where it can be difficult for you to steer the wheelchair, for example, when it's cold?</p> <p style="text-align: center;">If you or the individual are unclear re a score of 0 or 1 you could ask the individual to show you how they do this</p> | |
| Score | Scoring Options | Additional Information |
| 0 | Able to use a manual wheelchair on flat ground, 10m < 1 minute | Can ask to perform and can time |
| 1 | Able to use a manual wheelchair on flat ground, 10m > 1 minute | |
| 2 | Unable to use manual wheelchair, requires power wheelchair | The individual steers the power wheelchair without difficulty |
| 3 | Uses power wheelchair, but occasionally has difficulty steering | The individual reports that he cannot steer the chair if, for example, his fingers are cold, he is driving uphill, is wearing a lot of clothes, etc. |



Score 2 demonstrated – additional questions ascertain whether he should be scored as 3

EK 2: ABILITY TO TRANSFER FROM WHEELCHAIR

| | | |
|--------------------------------|---|---|
| Questions to individual | <p style="text-align: center;">How do you transfer from the wheelchair to a bed?</p> <p style="text-align: center;">↓</p> <p style="text-align: center;">Show me or explain to me how you do this</p> <p style="text-align: center;">↓</p> <p style="text-align: center;">Category 2 or 3 can be explained or demonstrated by the test person and helper, if any.</p> | |
| Score | Scoring Options | Additional Information |
| 0 | Able to transfer from wheelchair without help | |
| 1 | Able to transfer independently from wheelchair, with use of aid | |
| 2 | Needs assistance to transfer with or without additional aids (hoist, easy glide) | Hoist without head support or may also be a standing transfer, the person's knee against the helper's knee. |
| 3 | Needs to be lifted with support of head when transferring from wheelchair | Uses a lift sling that reaches all the way up around the neck in order to support the head or as described when undertaking a sitting to sitting transfer |

EK 3: ABILITY TO STAND

| | | |
|--------------------------------|--|--|
| Questions to individual | <p style="text-align: center;">Do you sometimes stand? How do you do this?</p> <p style="text-align: center;">↓</p> <p style="text-align: center;">Show me or explain to me how you do this</p> <p style="text-align: center;">↓</p> <p style="text-align: center;">Category 3 may or may not include contractures</p> | |
| Score | Scoring Options | Additional Information |
| 0 | Able to stand briefly either independently or using arms for support or with support of a person | <p>A score of 0 will include those able to stand independently even briefly with or without support – the two boxes here allow us to capture those who can stand for short periods without altering the original scoring procedure</p> |
| 0 | Able to stand with knees supported, as when using braces | |
| 1 | Able to stand with knees and hips supported, as when using standing aids | <p>This would include such things a tilt table or standing frame with trunk support</p> |
| 2 | Able to stand with full body support | |
| 3 | Unable to be stood | |



Score 0 – Able to stand when holding onto chair – no braces or additional support needed

EK 4: ABILITY TO BALANCE IN THE WHEELCHAIR

| | | |
|---------------------------------------|--|---|
| <p>Questions to individual</p> | <p>Can you bend forward and to the sides and return to upright position?</p> <p style="text-align: center;">↓</p> <p>Show me how you do this</p> <p>NOTES The wheelchair seat must be as horizontal as possible and must not be tilted during the examination of this item. Any side supports must be removed if possible. An electric harness, if any, must only be used as a stationary harness, not to change position. A brace, if any, is kept on.</p> | |
| <p>Score</p> | <p>Scoring Options</p> | <p>Additional Information</p> |
| <p>0</p> | <p>Able to push himself upright from complete forward flexion by pushing up with hands</p> | <p>The upper body must reach all the way down and rest on the thighs, both hands must touch the foot support / foot and the person must rise unaided by another person or additional furniture from this position. Using the hands to support and propel the upper body is allowed.</p> |
| <p>1</p> | <p>Able to move the upper part of the body > 30° in all directions from the upright position, but cannot push himself upright as above</p> | <p>Can bend the upper body > 30 degrees in at least one direction: either forward or to one side and return to upright position.</p> |
| <p>2</p> | <p>Able to move the upper part of the body < 30° from one side to the other</p> | <p>Can bend the upper body to < 30 degrees in at least one direction: either forward or to one side and return to upright position.</p> |
| <p>3</p> | <p>Unable to change position of the upper part of the body, cannot sit without total support of the trunk and head</p> | <p>Is unable to change the position of the upper body or move away from the back of the chair. Individuals who sit in a permanent forward leaning position with support to the front of the body also score 3.</p> |



Score 2 - As he is able to lean to one side by more than 30°

EK 5: ABILITY TO MOVE THE ARMS

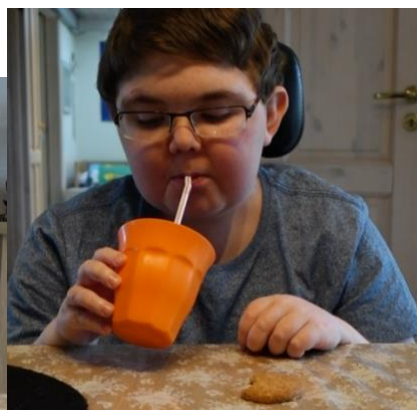
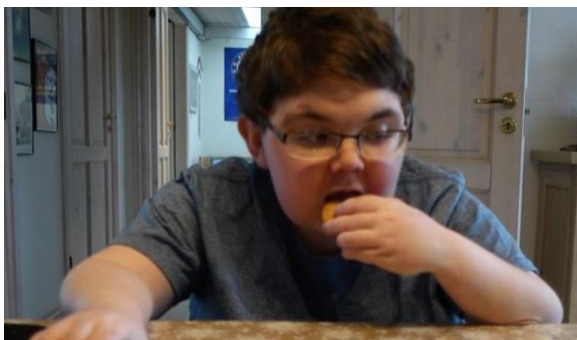
| | | |
|---------------------------------------|--|---|
| <p>Questions to individual</p> | <p>How high can you lift your arms and hands? Can you move your fingers, hands or arms? Can you raise one or both hands to your mouth? How much can you move them?</p> <p style="text-align: center;">↓</p> <p style="text-align: center;">Show me how you do this</p> | |
| <p>Score</p> | <p>Scoring Options</p> | <p>Additional Information</p> |
| <p>0</p> | <p>Able to raise the arms above the head with or without compensatory movements</p> | <p>Can raise at least one arm above the head, compensatory movements are allowed.</p> |
| <p>1</p> | <p>Unable to lift the arms above the head, but able to raise the forearms against gravity, ie. hand to mouth with / without elbow support</p> | <p>Can raise at least one forearm up to the mouth. Compensatory movements and elbow support are allowed</p> |
| <p>2</p> | <p>Unable to lift the forearms against gravity, but able to use the hands against gravity when the forearm is supported</p> | <p>Can raise at least one hand against gravity. Forearm support is allowed</p> |
| <p>3</p> | <p>Unable to move the hands against gravity but able to use the fingers</p> | <p>For example, drive a powered wheelchair if hand is placed or use a touch screen</p> |



Score 1 – Able to raise one hand to mouth with elbow supported


EK 6: ABILITY TO USE THE HANDS AND ARMS FOR EATING

| | | |
|---------------------------------------|--|--|
| <p>Questions to individual</p> | <p>Can you describe how you eat? Do you need your elbow on the table when eating? If so, do you use your other hand to help?</p> <p style="font-size: 2em; color: blue;">↓</p> <p>Show me or explain to me how you do this</p> | |
| <p>Score</p> | <p>Scoring Options</p> | <p>Additional Information</p> |
| <p>0</p> | <p>Able to eat and drink without elbow support</p> | <p>Can raise cup or glass to mouth and eat using knife, fork or spoon if relevant without needing elbow support</p> |
| <p>1</p> | <p>Eats or drinks with support at elbow</p> | <p>Needs elbow support (from armrest or table) to eat and/or drink</p> |
| <p>2</p> | <p>Eats and drinks with elbow support; with reinforcement of the opposite hand +or – aids</p> | <p>As described and/or with compensatory movements to bend the arm (for example, by bending the forearm over the edge of the table and using hand- and wrist muscles).</p> <p>Or uses an alternative option such as a raised desktop or unit</p> |
| <p>3</p> | <p>Has to be fed</p> | <p>This would include the use of an aid to arm function such as a “neatereater” or mobile arm support</p> |




Score 2 – As he uses a high table to eat and drink and a straw in the cup. More than just elbow support.


EK 7: ABILITY TO TURN IN BED

| | | |
|---------------------------------------|---|--|
| <p>Questions to individual</p> | <p>How do you turn in bed during the night?</p>  <p>Explain to me how you do this</p> <p>NOTE: If the individual is able to turn himself partially or totally the number of turns is not important</p> | |
| <p>Score</p> | <p>Scoring Options</p> | <p>Additional Information</p> |
| <p>0</p> | <p>Able to turn himself in bed with bedclothes</p> | <p>Turns himself from back to side to both sides; number of turns is subordinate</p> |
| <p>1</p> | <p>Needs some help to turn in bed or can turn in some directions</p> | <p>Able to turn partially in bed or can turn in one direction but not back again. May need help</p> <p>Help is defined as: Needs rail to pull on, someone else needs to position legs or adjust covers</p> |
| <p>2</p> | <p>Unable to turn himself in bed. Has to be turned 0 - 3 times during the night</p> | <p>The most common number of turns is 0-3 times. This category includes those that can't turn and don't need to be turned during the night. Remember it is during the prior two weeks that you are assessing.</p> |
| <p>3</p> | <p>Unable to turn himself in bed. Has to be turned ≥ 4 times during the night</p> | <p>The most common number of turns is 4 or more times. Sometimes the aide's report is preferable. If there is a large deviance, the question is narrowed down to an approximate average during the previous 14 days.</p> |

EK 8: ABILITY TO COUGH

| | | |
|--------------------------------|---|--|
| Questions to individual | <p>How do you cough when you have to?</p>  <p>May I hear how it sounds?</p> <p>NOTE: If the individual reports that he never coughs, evaluate according to cough sound and throat clearing</p> | |
| Score | Scoring Options | Additional Information |
| 0 | Able to cough effectively | Always coughs without help, powerful coughing sound. |
| 1 | Has difficulty to cough and sometimes needs manual reinforcement. Able to clear throat | Has difficulty to cough but able to clear throat. Usually manages without help. |
| 2 | Always needs help with coughing. Only possible to cough in certain positions | Always needs help with coughing. Help could be: needs to adopt certain position, manual reinforcement or air-stacking (breath-stacking) |
| 3 | Unable to cough, Needs suction and/or hyperventilation techniques or IPPB in order to keep airways clear | Unable to cough or so weak that mechanical assistance is required. Needs suction and/or hyperventilation techniques or IPPB in order to keep airways clear (Includes cough assist machine) |

EK 9: ABILITY TO SPEAK

| | | |
|--------------------------------|---|--|
| Questions to individual | <p>Can you speak so powerfully that what you say can be understood if you sit at the back of a large room?</p> <p style="text-align: center;"></p> <p>Would you be willing to show me?</p> <p>NOTE: The voice is evaluated regardless of whether the individual uses assisted ventilation.</p> <p>Sometimes they are not aware of their quiet voice so will say it is loud but cannot raise the volume – In this instance score what you hear not what they say.</p> | |
| Score | Scoring Options | Additional Information |
| 0 | Powerful speech. Able to sing and speak loudly | Is able to maintain powerful speech for a long period of time |
| 1 | Speaks normally, but cannot raise his voice | Speaks with a soft voice (may be able to raise his voice, but not for long periods of time). |
| 2 | Speaks with quiet voice and needs a breath after 3 to 5 words | Speaks with a quiet voice and/or needs a breath after just a few words. |
| 3 | Speech is difficult to understand except to close relatives | |

EK 10: PHYSICAL WELL-BEING (RESPIRATORY INSUFFICIENCY)

| | | |
|--------------------------------|--|--|
| Questions to individual | <p style="text-align: center;">How is your physical well-being? How is your appetite</p> <p style="text-align: center;">↓</p> <p style="text-align: center;">Do you sleep well at night? Do you have a headache in the morning?</p> <p style="text-align: center;">↓</p> <p style="text-align: center;">Trouble waking up in the morning? How are your moods?</p> <p style="text-align: center;">↓</p> <p style="text-align: center;">Have you lost weight? Do you need to rest during the day?</p> <p style="text-align: center;">Are you afraid to be alone at home?</p> <p>NOTE: This item is related to respiratory insufficiency, not to motor difficulties or gastrointestinal difficulties.</p> | |
| Score | Scoring Options | Additional Information |
| 0 | No complaints, feels good | |
| 1 | Easily tires. Has difficulty resting in a chair or in bed | Needs to change position in his wheelchair quite often (uses the electrical functions - tilt and backrest back and forth) due to respiratory insufficiency |
| 2 | Has loss of weight, loss of appetite, Scared of falling asleep at night, sleeps badly | Has loss of weight, loss of appetite and associated poor sleep. Can include symptoms of headache in the morning and difficulties waking up. |
| 3 | Experience additional symptoms: change of mood, stomach ache, palpitations, perspiring, | Symptoms from category 2 and experience additional symptoms to score 2: Palpitations and perspiring. These symptoms are rarely seen now as individuals are usually started on ventilation to ameliorate them. However you should be aware of them. |

EK 11: DAYTIME FATIGUE

| | | |
|---------------------------------------|---|--|
| <p>Questions to individual</p> | <p>Do you have to organise your day or take a rest to avoid getting too tired?</p> | |
| <p>Score</p> | <p>Scoring Options</p> | <p>Additional Information</p> |
| <p>0</p> | <p>Doesn't get tired during day</p> | <p>Doesn't get tired or need to adapt structure of day. Does not take nap / rest</p> |
| <p>1</p> | <p>Need to limit activity to avoid getting too tired</p> | <p>Limits activity to avoid tiredness. E.g. avoids day time activity if going out at night or vice versa.</p> |
| <p>2</p> | <p>Need to limit my activity and have a rest period to avoid getting too tired</p> | <p>If needs rest during the day scores 2. Can include using backrest as flat as possible to rest not just lying down on a bed.</p> |
| <p>3</p> | <p>Get tired during day even if I rest and limit activity</p> | |

EK 12: HEAD CONTROL

| | | |
|---------------------------------------|---|--|
| <p>Questions to individual</p> | <p>How much head support do you need in your wheelchair? The wheelchair's seat should be as horizontal as possible.</p> | |
| <p>Score</p> | <p>Scoring Options</p> | <p>Additional Information</p> |
| <p>0</p> | <p>Does not need head support</p> | <p>Does not need head support. Full control of head even going up or down slopes (standard access ramp), does not need support of neck/head to prevent head falling backwards or forwards. (May have a head support on chair as supplied but never needs it)</p> |
| <p>1</p> | <p>Needs head support when going up and down slope (15° standard ramp)</p> | <p>Needs head support of some nature (head rest, hand of carer) when going up and down slopes (standard access ramp)</p> |
| <p>2</p> | <p>Needs head support when driving wheelchair</p> | <p>Needs head support when driving wheelchair indoors or outdoors</p> |
| <p>3</p> | <p>When sitting still in a wheelchair needs head support</p> | <p>If the wheelchair is permanently tilted backwards the item is scored 3.</p> |

EK 13: ABILITY TO CONTROL JOYSTICK

| | | |
|---------------------------------------|---|---|
| <p>Questions to individual</p> | <p>What kind of joystick do you use to control your chair?</p> <p style="font-size: 2em; color: blue;">↓</p> <p>Show me how you control your wheelchair</p> <p>Has it been adapted in any way to suit your needs?</p> | |
| <p>Score</p> | <p>Scoring Options</p> | <p>Additional Information</p> |
| <p>0</p> | <p>Uses a standard joystick without special adaptation</p> | <p>Standard joystick means as issued by wheelchair suppliers positioned on either the right or the left of the chair.</p> |
| <p>1</p> | <p>Uses an adapted joystick or has adjusted wheelchair in order to use joystick</p> | <p>Scores 1 if any adaptation has been made to either the joystick or to its position on the chair. Adaptation means increasing length, altering range of motion, moving its position on the chair</p> |
| <p>2</p> | <p>Uses other techniques for steering than joystick such as blowing sucking systems or scanned driving</p> | <p>Scanned driving needs minimal of strength and can be placed anywhere. Blowing/sucking systems are seldom useful in NMD. This category is also meant for new techniques and for persons who can partly operate their w/c but need assistance for special manoeuvres such as turning the chair or driving on uneven surfaces or in cold weather.</p> |
| <p>3</p> | <p>Unable to operate wheelchair. Needs another person to operate it</p> | <p>If there are carer controls in situ due to cognitive issues rather than physical abilities please make a note of this</p> |



Score 1 – standard joy stick with no modifications

EK 14: FOOD TEXTURES

| | | |
|--------------------------------|--|--|
| Questions to individual | Do you have to modify your food in any way in order to eat it? | |
| Score | Scoring Options | Additional Information |
| 0 | Eats all textures of food | Eats all textures of food without any modification |
| 1 | Eats cut up / chunky food or avoids hard/chewy foods | Eats cut up or small pieces of food or avoids hard/chewy foods, e.g. pizza crusts, roast potatoes, chewy meat |
| 2 | Eats minced/ pureed food with supplementation as required | Eats minced/ pureed food |
| 3 | Main intake consists of being tube fed | Minimal oral intake. They may or may not be tube fed to supplement nutrition but this question is just about textures. |

EK 15: EATING A MEAL

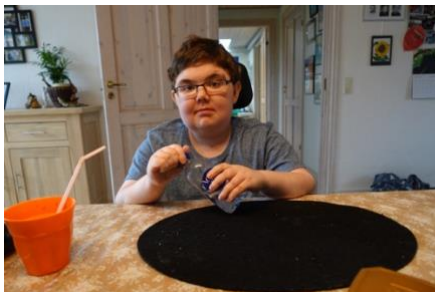
| | | |
|--------------------------------|--|---|
| Questions to individual | <p style="text-align: center;">How long does it take to complete a whole meal?</p> <p>NOTE: This will vary from culture to culture. Take the countries / families normal meal as a measure of time</p> | |
| Score | Scoring Options | Additional Information |
| 0 | Able to consume a whole meal in the same time as others sharing the meal | Able to consume a whole meal in the same time as others sharing the meal |
| 1 | Able to consume a whole meal in the same time as others only with encouragement or needs some additional time (approx 10 min) | Able to consume a whole meal in the same time as others only with encouragement or needs some additional time (<10 min). |
| 2 | Able to consume a whole meal but requires substantially more time compared to others eating the same meal (15 m or more extra) | Able to consume a whole meal but requires more than 15 minutes extra compared to others eating the same meal or reduces portion size. |
| 3 | Unable to consume a whole meal | Unable to consume a whole meal even with additional time, reduced portion size or assistance |

EK 16: SWALLOWING

| | | |
|---------------------------------------|---|---|
| <p>Questions to individual</p> | <p style="text-align: center;">Do you ever have any problems swallowing?</p> <p>NOTE: This includes evaluating if the food is stuck in the throat / pharynx, not just if it has entered the airways</p> | |
| <p>Score</p> | <p>Scoring Options</p> | <p>Additional Information</p> |
| <p>0</p> | <p>Never has problems when swallowing and never chokes on food/drink,</p> | <p>Doesn't choke or have problems swallowing when eating and drinking</p> |
| <p>1</p> | <p>May experience occasional (less than once a month) problems swallowing certain types of food or occasionally chokes</p> | <p>Occasionally has a problem swallowing or choking (less than once per a month)</p> |
| <p>2</p> | <p>Has regular trouble swallowing food/drink or chokes on food/drink (more than once a month)</p> | <p>Has regular trouble swallowing or choking (more than once a month) or needs to sit/lie in a special position, or to turn head (rotate the cervical column) to control swallowing.</p> |
| <p>3</p> | <p>Has trouble swallowing saliva or secretions</p> | <p>Has trouble swallowing saliva or secretions. Comment on how frequently this is a problem and perhaps why. Is it associated with coming off night time ventilation, having a tracheostomy or a chest infection?</p> |

EK 17: HAND FUNCTION

| | | |
|--------------------------------|--|--|
| Questions to individual | <p style="text-align: center;">Can you do the following items using your hands?</p> <p style="text-align: center;">↓</p> <p style="text-align: center;">Open an unopened bottle of water or fizzy water?</p> <p style="text-align: center;">↓</p> <p style="text-align: center;">Can you write two lines of text / words?</p> <p style="text-align: center;">↓</p> <p style="text-align: center;">Can you sign your name or use a remote device or mobile phone?</p> | |
| Score | Scoring Options | Additional Information |
| 0 | Can unscrew the lid of a water or fizzy drink bottle and break the seal | If the seal is already broken they cannot score 0. |
| 1 | Can write two lines or use computer keyboard | Can write two lines of text without assistance from another person. They can use the other hand to move paper. Or can use a keyboard with one or two hands but more than just one or two keys. |
| 2 | Can write signature or send text or use remote control | Can write signature or name or can send a text message on a mobile phone or use a remote-control device |
| 3 | Cannot use hands | |



Score 0 – If he can unscrew an unopened bottle



Score 1 – If he can write two lines or more on a piece of paper

Acknowledgements

We would like to thank the contribution of Dr Anna Mayhew and Meredith James from the John Walton Muscular Dystrophy Research Centre for their contribution to this updated manual.