

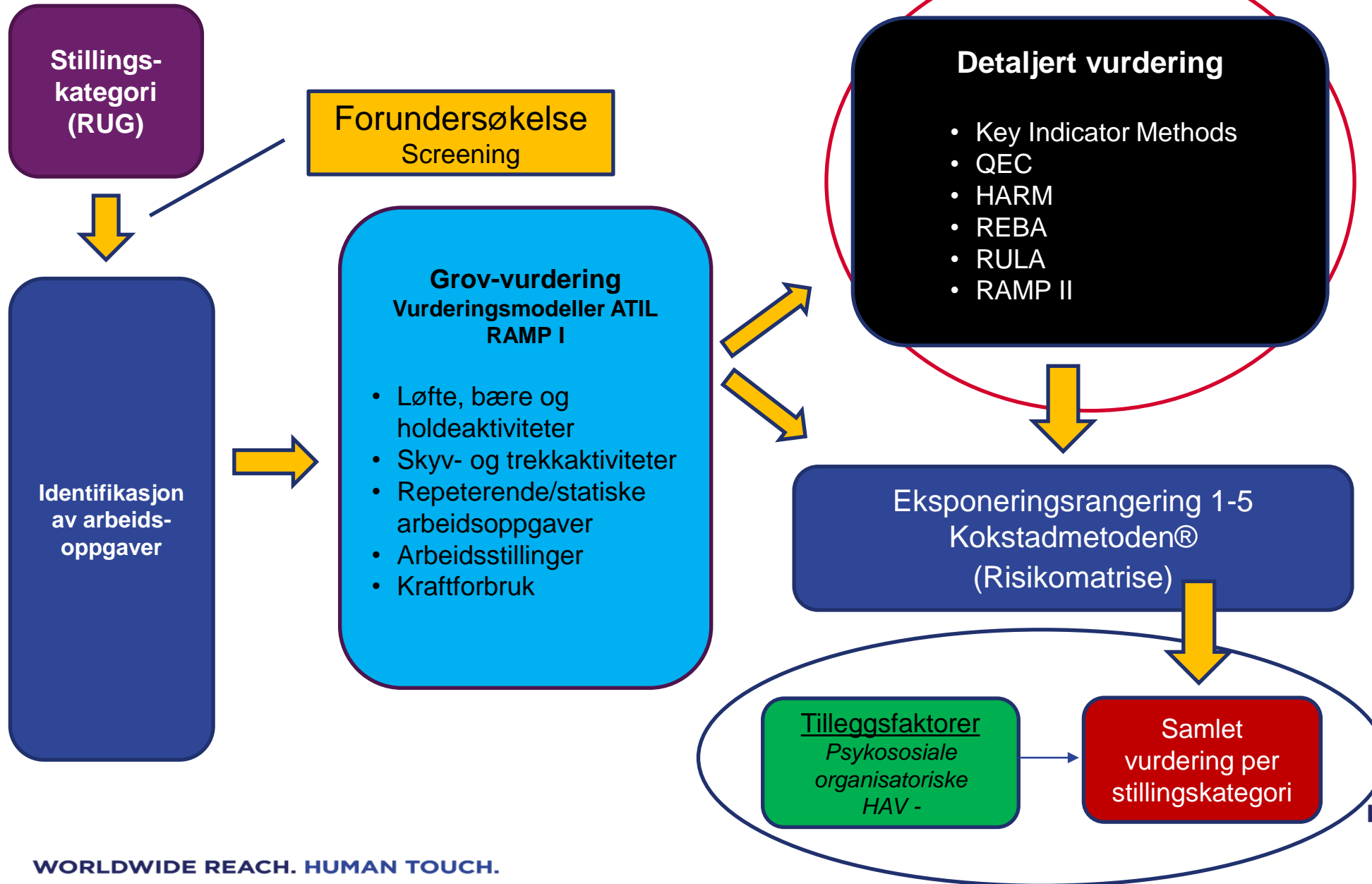


E-RISK - Ergonomisk risikovurderingsverktøy

Seminar om styring av risiko for muskel og skjelettplager - PTIL

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E-RISK



E-RISK

Ved detaljert vurdering brukes anerkjente ergonomiske verktøy – alle verktøy er vektet inn mot Kokstadmetoden®(5x5 matrise)

Key Indicator Methods – 6 modeller

- Awkward Body Postures
- Whole Body Forces
- Body Movements
- Lifting – Holding – Carrying
- Manual Handling Operations
- Pulling Pushing

Quick Exposure Check (QEC)

REBA/RULA – arbeidsstillinger

HARM

RAMP

QEC vektet inn mot Kokstadmetoden®

Risk for individual categories (Kokstadmetoden®)										
Kokstadmetoden	1		2		3		4		5	
Category	Insignificant		Low		Moderate		High		Very high	
Lower extremities										
Back (static)	8	11	12	15	16	22	23	29	30	40
Back (moving)	10	15	16	20	21	30	31	40	41	56
Shoulder/arm	10	15	16	20	21	30	31	40	41	56
Wrist/hand	10	15	16	20	21	30	31	40	41	46
Neck	4	4	5	6	7	10	11	14	15	18
Variation										
Vibration	1	3			4	8	9	9		
Work pace	1	3			4	8	9	9		
Stress	1	3			4	8	9	15	16	16
Other (Driving)	1	3			4	8	9	9		

REBA vektet inn mot Kokstadmetoden®

Weighing REBA -Kokstadmetoden®										
Kokstad	1		2		3		4		5	
Category	Insignificant		Low		Moderate		High		Very high	
REBA	1	1	2	3	4	7	8	10	11	15

E-RISK og samlet vurdering på gruppenivå

Faktorer som kan forsterke/formilde den totale risikoen

Summering av risiko		
Risiko	Kroppsstruktur	
	Samme	Ulike
5 –veldig høy	-	-
4 - høy	2	3
3 - moderat	3	-
2-lav	4	-
1 -ubetydelig	-	-

2 **oransje** oppgaver samme kroppsstruktur -> **rød** samlet vurdering
3 **oransje** oppgaver på forskjellige kroppsstrukturer -> **rød** samlet vurdering

Tilleggsfaktorer som tas med i E-RISK som kan forsterke/formilde risikoen for MSP

- Arbeidsmengde
- Tydelig arbeidsfordeling
- Innflytelse på arbeidet
- Variasjon
- Muligheten for å restituere til neste dag
- Vibrasjoner, belysning, kulde/trekk, støy

E-RISK

Resultat lagt frem i Risikokart

No.	Work operation				Risk				
	Work operation	Area	Description of risk	Duration (min)	Frequency	Possible injury	Mapping method	Existing barriers	Risk
10.0	Roughneck								
10.1	Coffee breaks, lunch, meetings			60	Daily		ATIL		5
10.2	Running risers	Drillfloor - moonpool	Physically demanding work. Usually 3 roughnecks working on drill floor and 2 on Cellar Deck when running risers. This task involves work in unfavourable postures; in forward bent position and below knee level, but usually only for short periods.	480	6 x a year - 1-2 days each time	Lower extremities Back (*) Wrist/hand Neck	ErgoRISK	2 High Torque tools attached to tigger winch 2 Cherry pickers in moon pool Work rotation	3
10.3	Manual handling of MUX cable when running risers	Moon Pool	MUX cable must be manually guided and adjusted while running risers. This work is heavy and monotonous and requires some static muscle work, often above chest/shoulder level.	240	6 x a year - 1-2 days each time	Back (*) Shoulder/arm (*) Wrist/hand (*)	QEC	2 Cherry pickers in moon pool Work rotation	4
10.4	Driving Iron Roughneck	Driller's cabin	Driller's cabin are well designed and the operator chair has satisfactory adjustment options. Joysticks are mounted on the chair and all the actuators are easily adjustable. Generally good view to drillfloor.	120	Daily during tripping		ATIL	Work rotation	1
10.5	High pressure washing	Drillfloor - shaker	The job assignment is performed in a good upright position, with joints in a mid-position. Some static workload generated by the pressure. There are few obstacles in the working area. The duration of the work is brief, in total less than 60 minutes/day. The work assignment is performed daily and is dependent on drilling program, sometimes pressed on time. Satisfactory drainage on the drillfloor. Few drainage points in shaker is quite challenging.	60	Daily	Shoulder/arm (*) Wrist/hand (*)	KIM3		2
10.6	Manual handling/rigging of chicsan parts (pipes and valves) Manual handling of black eagle hose	Drillfloor	Lifting is performed in a partially forwardly bent position. Workload is usually between 15 - 35 kg. There is partially restricted access in the area. The work assignment is performed weekly and is dependent on drilling program, sometimes pressed on time. A lot of heavy manual handling of black eagle hose during cementing.	120	Weekly	Back (*)	KIM1		3
10.7	Manual handling of slips	Drillfloor	Manual handling of slips and dogcollar done during BHA for each section. Pull approximately 10 drill pipe slips around 6 meters. These slips weight between 70 - 100 kg. Pulled by 2 pers. Because of design the rotary adaptor is approximately 20 cm above the drillfloor. Because of this slips must be lifted up to the adaptor - lifted by 2-3 pers.	30	During BHA	Back (*)	KIM1		4



Roughneck - risk chart

Sitting 10%	Work on Drill floor/moonpool area 50%	Work in Shaker area 40%
Coffee breaks, lunch, meetings Daily - 60 min	High Pressure Washing Daily - 60 min Risk Score - 2 shoulder/arm - wrist	Cleaning Screen 3-5 x a week - 60 min Risk Score 3 Lower Back - shoulder/arm
	Driving Iron Roughneck When tripping - 2 hrs Risk Score - 1 - Neck/shoulder/arm	Shaker Guard 3-5 x a week - 120 min No ergonomic issues
	Manual Handling of Chicsan/black eagle Weekly 120 min - RS 3 - Lower Back	
	Handling of Subs 3 x a week - 30 min - Risk Score 1	
	Manual handling of drilling parts in heavy tool store Daily - 30 min - RS 4 - Back	Mud Weight 3-5 x a week - 60 min No ergonomic issues Cleaning Magnets - 3-5 x a week Risk Score 2- Low Back
	Running Risers - 10 days a year - 480 min Risk Score 3 - Lower Back and knees	
	Manual handling of MUX cables in moon pool RS 4 - shoulder/arm Manual Handling of Slips/Dog collar - RS 4 - Lower back	

Organisation of work - The work is well organized and the employee can to a certain degree manage his/her work day and take breaks as needed. Do not feel that the work is stressful, but may be pressed on time during certain operations

Total Exposure - 14 tasks are assessed. 3 of the work operations have a exposure of 4 (high)
The overall exposure to the Roughneck is therefore set to 5 (very high)

Spørsmål ?

