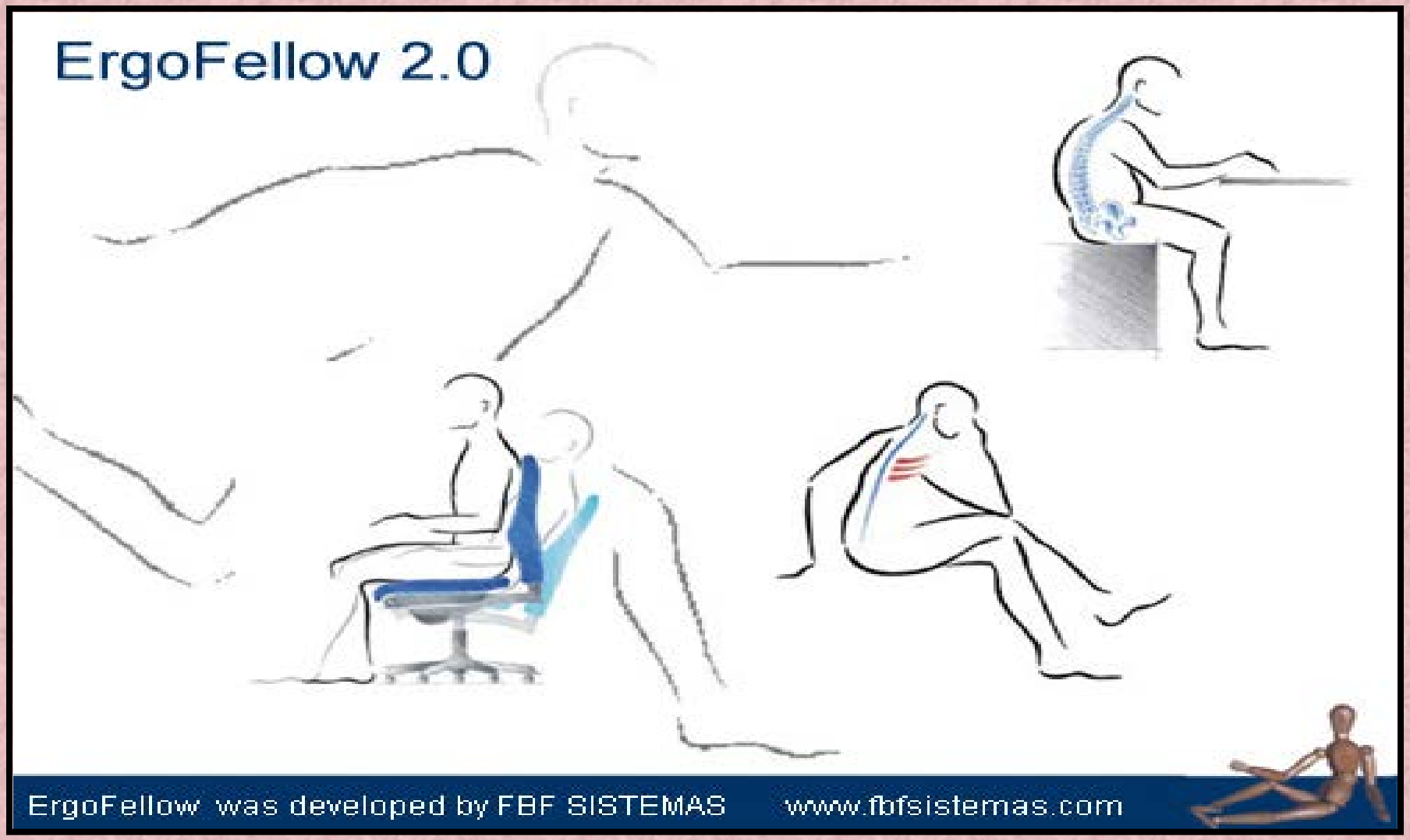
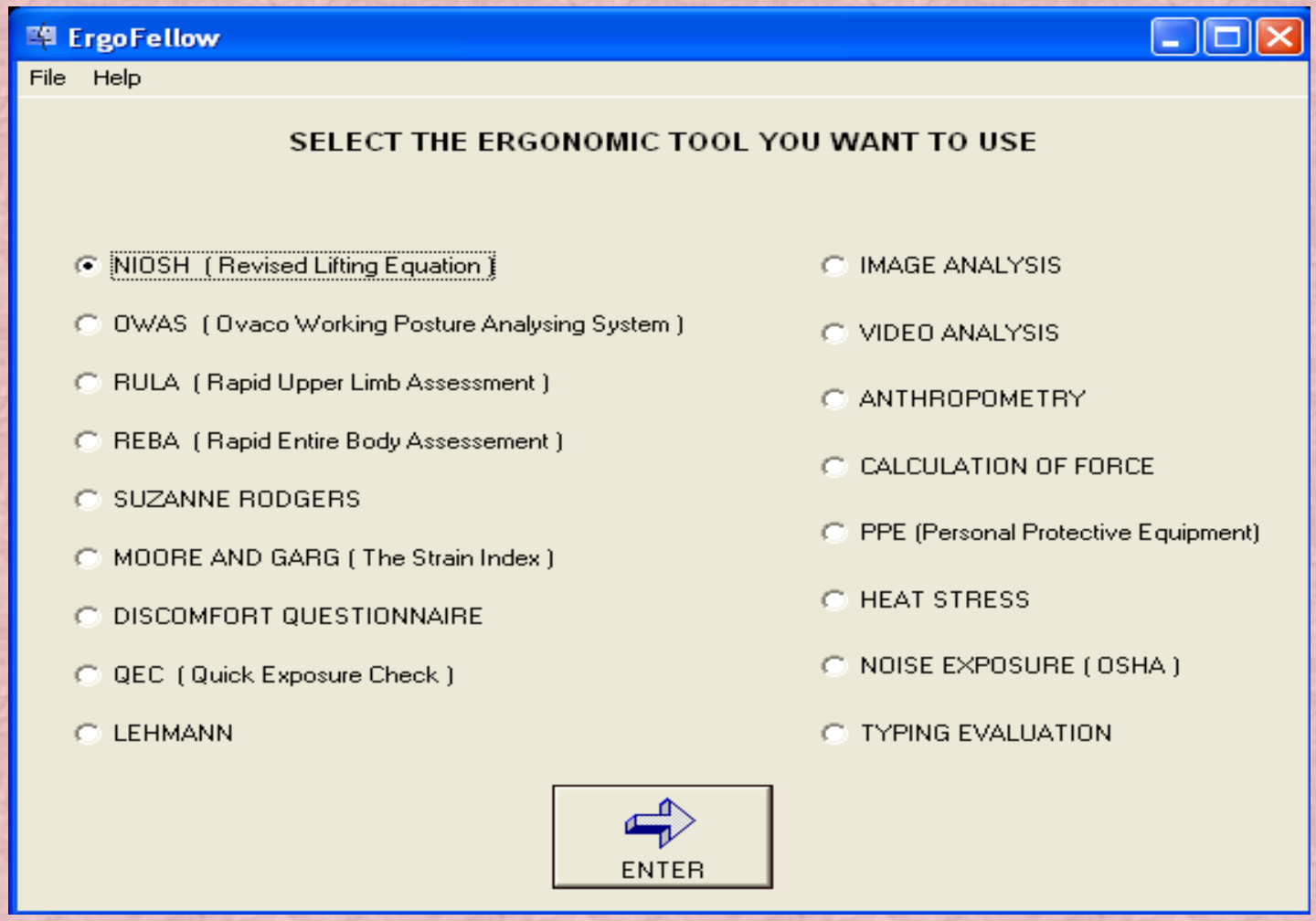


ERGOFELLOW SOFTWARE

The software ErgoFellow has 17 ergonomic tools to evaluate and improve workplaces conditions, in order to reduce occupational risks and increase productivity.

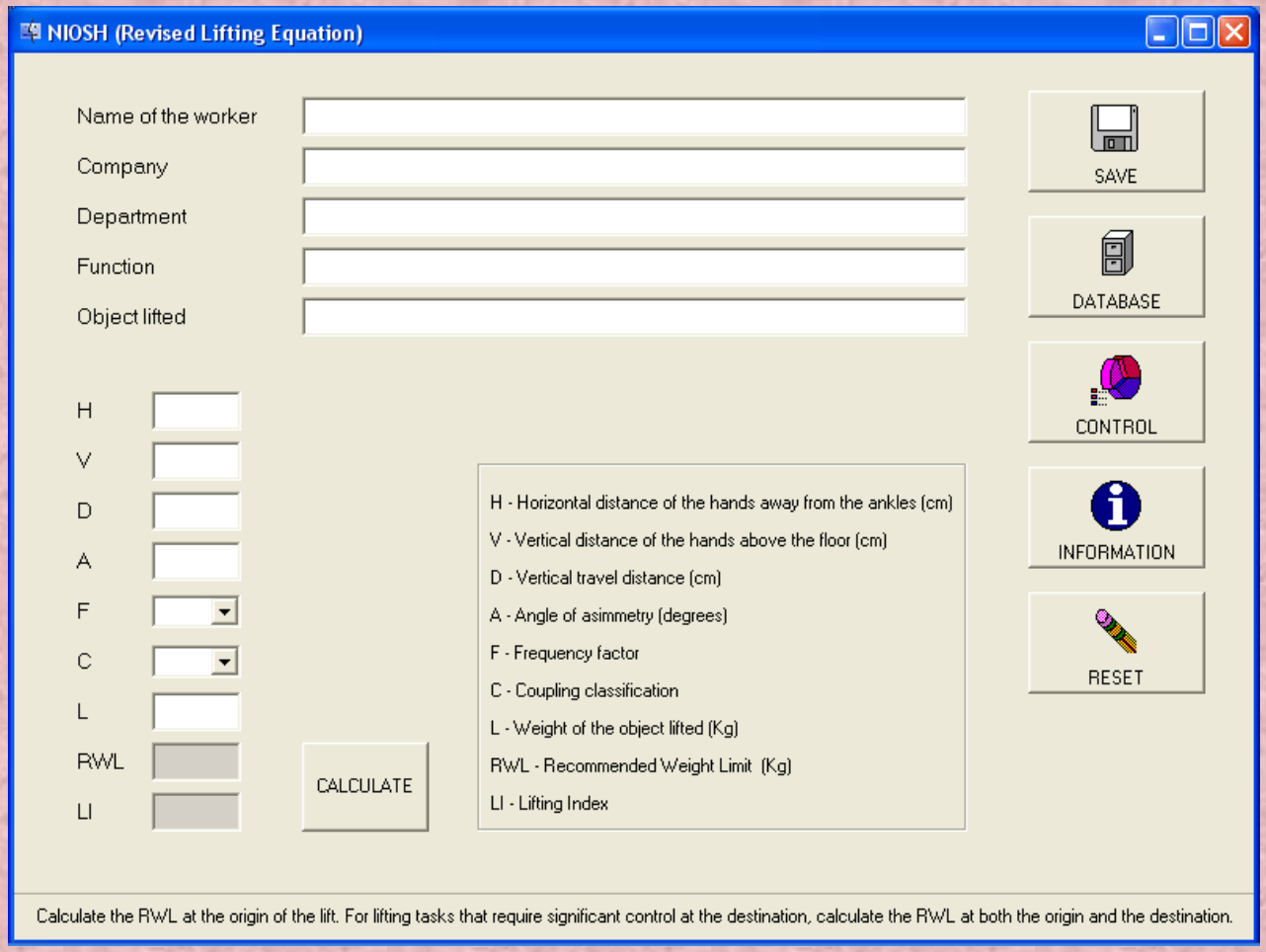


The software was developed by FBF SISTEMAS in 2009 and it is very useful for ergonomists and for all professionals in the area of occupational safety and health. It's also very good for educational purposes.

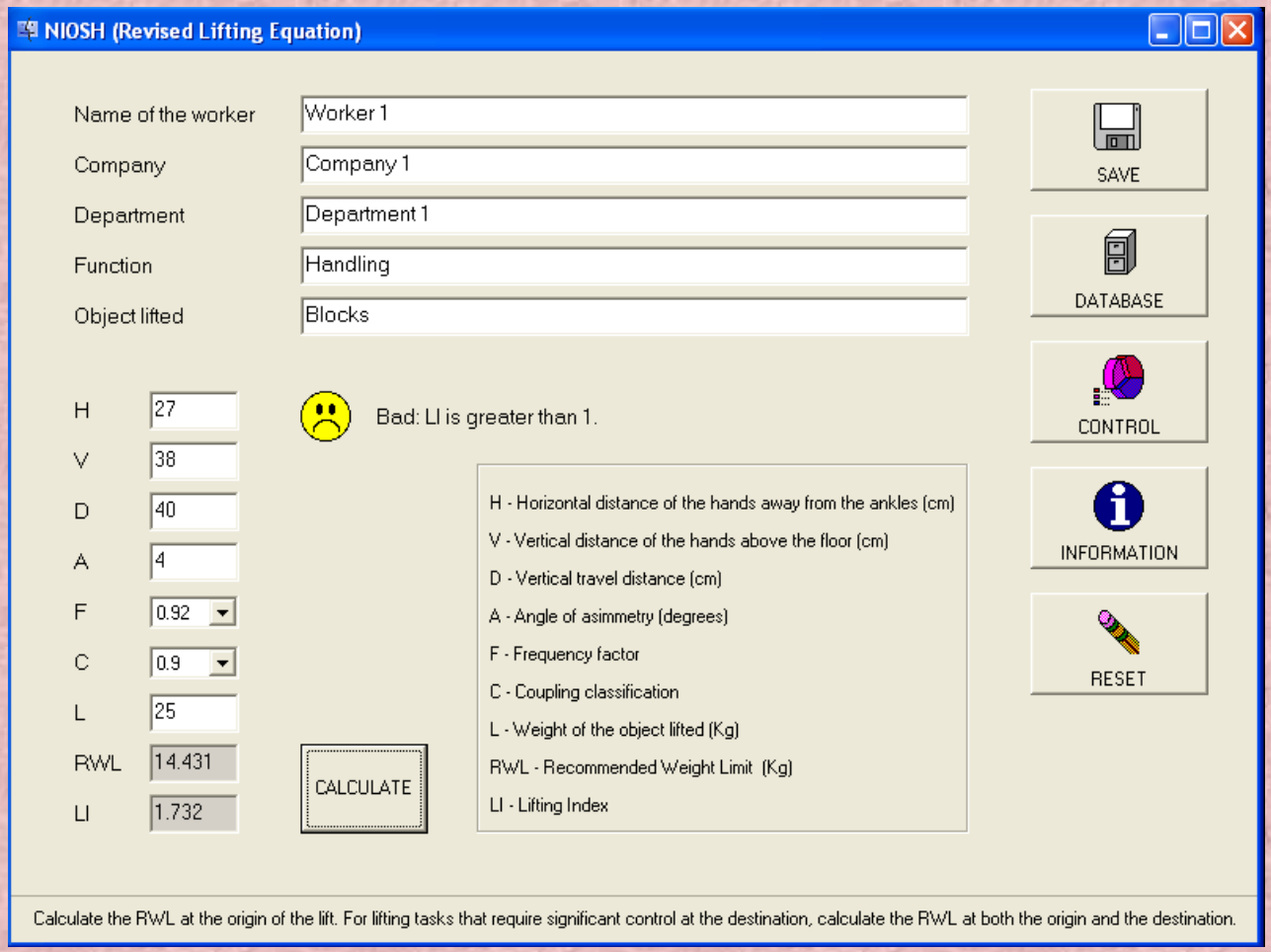
ErgoFellow has the following ergonomic tools:

- NIOSH (Revised Lifting Equation)
- OWAS (Ovaco Working Posture Analysing System)
- RULA (Rapid Upper Limb Assessment)
- REBA (Rapid Entire Body Assessment)
- SUZZANE RODGERS
- MOORE E GARG (The Strain Index)
- DISCOMFORT QUESTIONNAIRE
- QEC (Quick Exposure Check)
- LEHMANN
- IMAGE ANALYSIS
- VIDEO ANALYSIS
- ANTHROPOMETRY
- CALCULATION OF FORCE
- PPE (Personal Protective Equipment)
- HEAT STRESS
- NOISE EXPOSURE (OSHA)
- TYPING EVALUATION

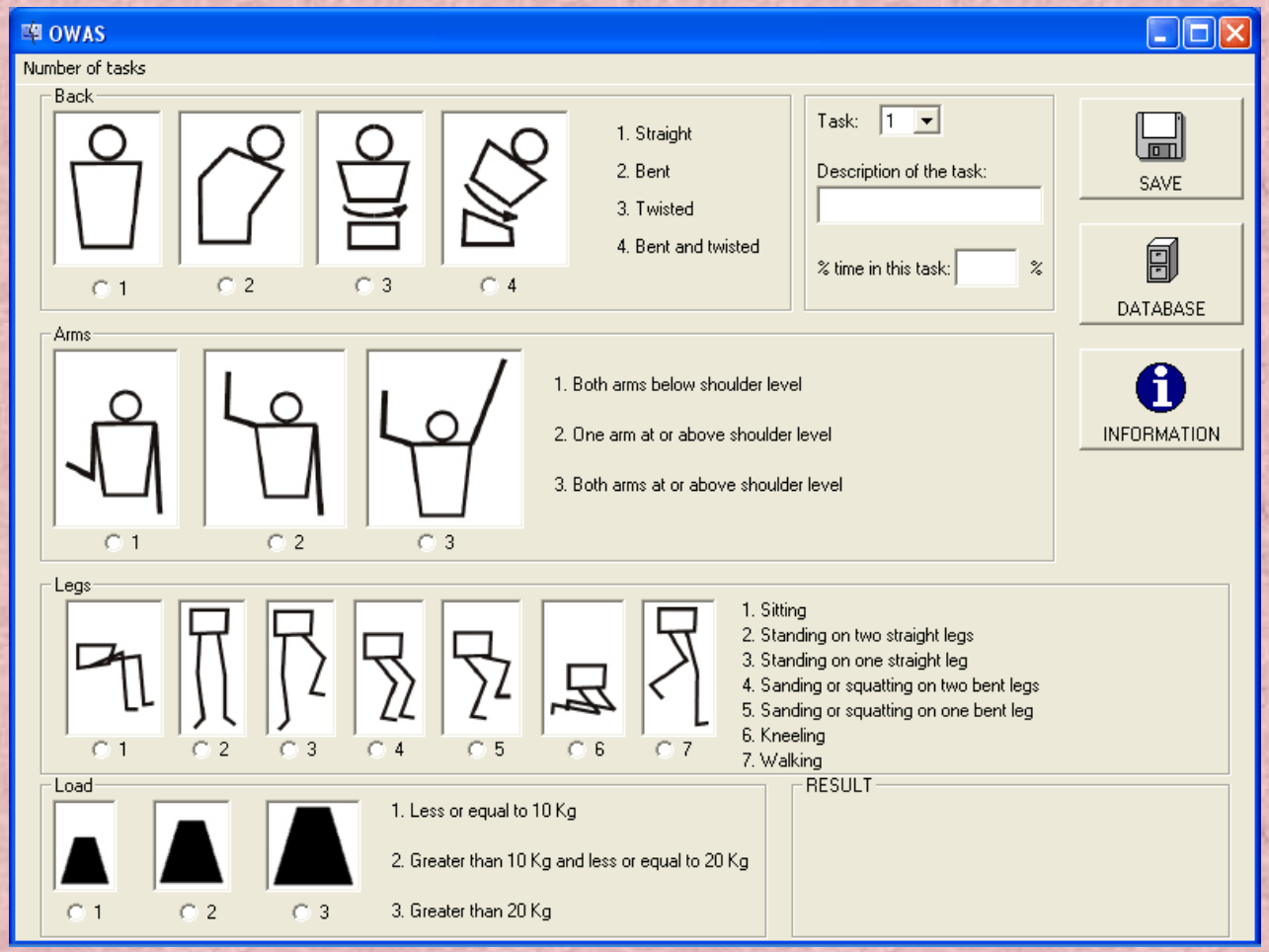
NIOSH (Revised Lifting Equation)



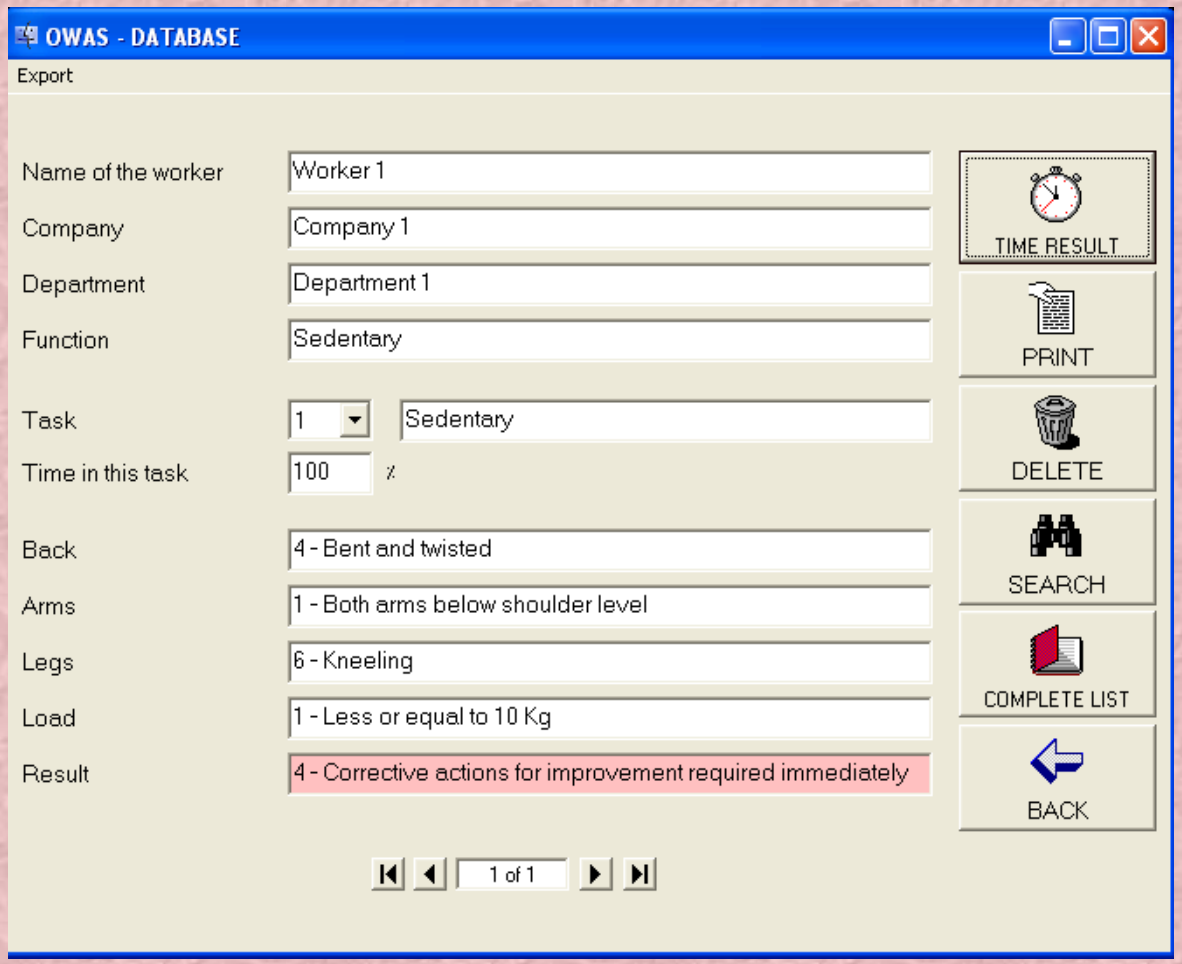
NIOSH Example:



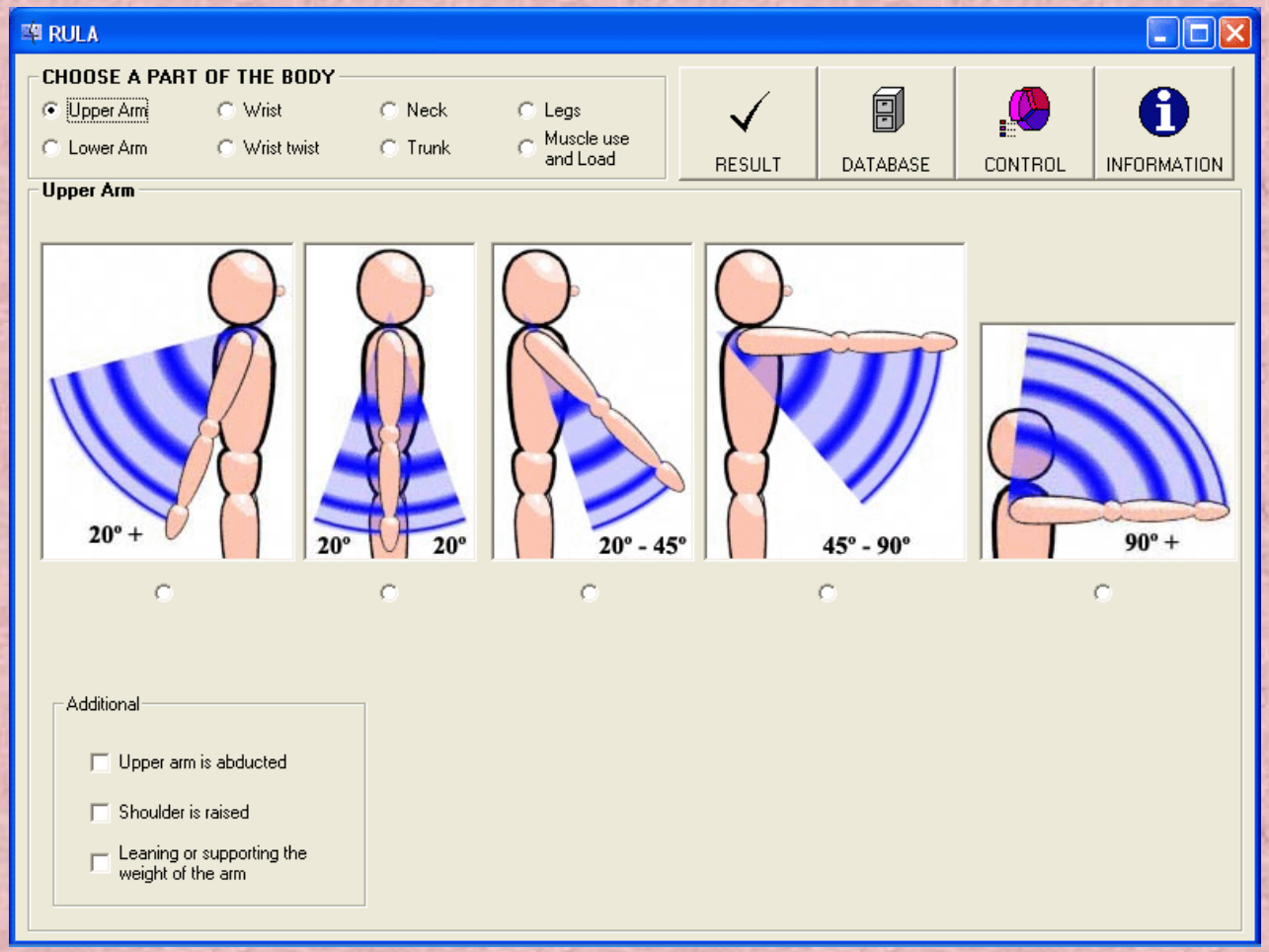
OWAS (Ovaco Working Posture Analysing System)



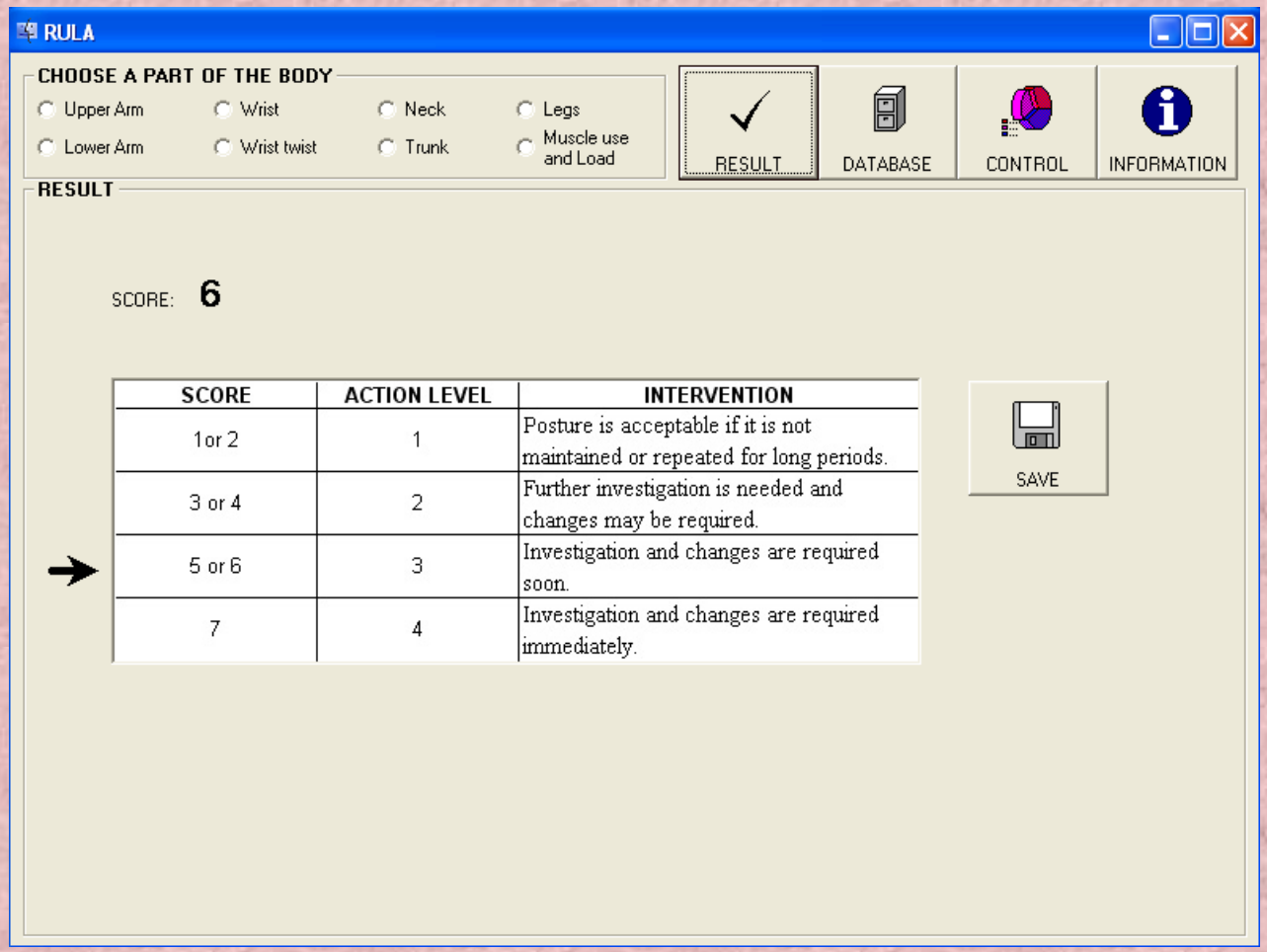
OWAS Example:



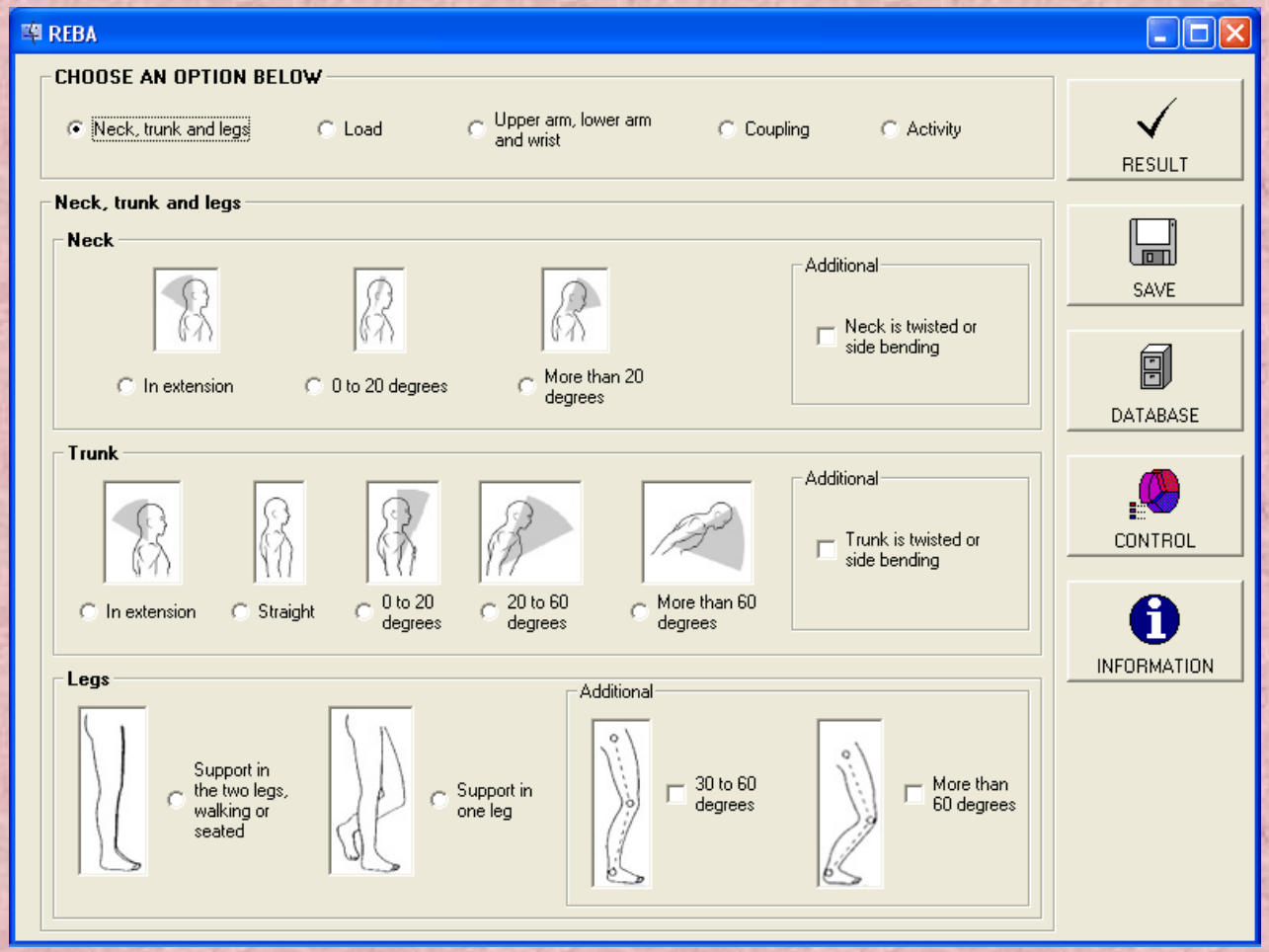
RULA (Rapid Upper Limb Assessment)



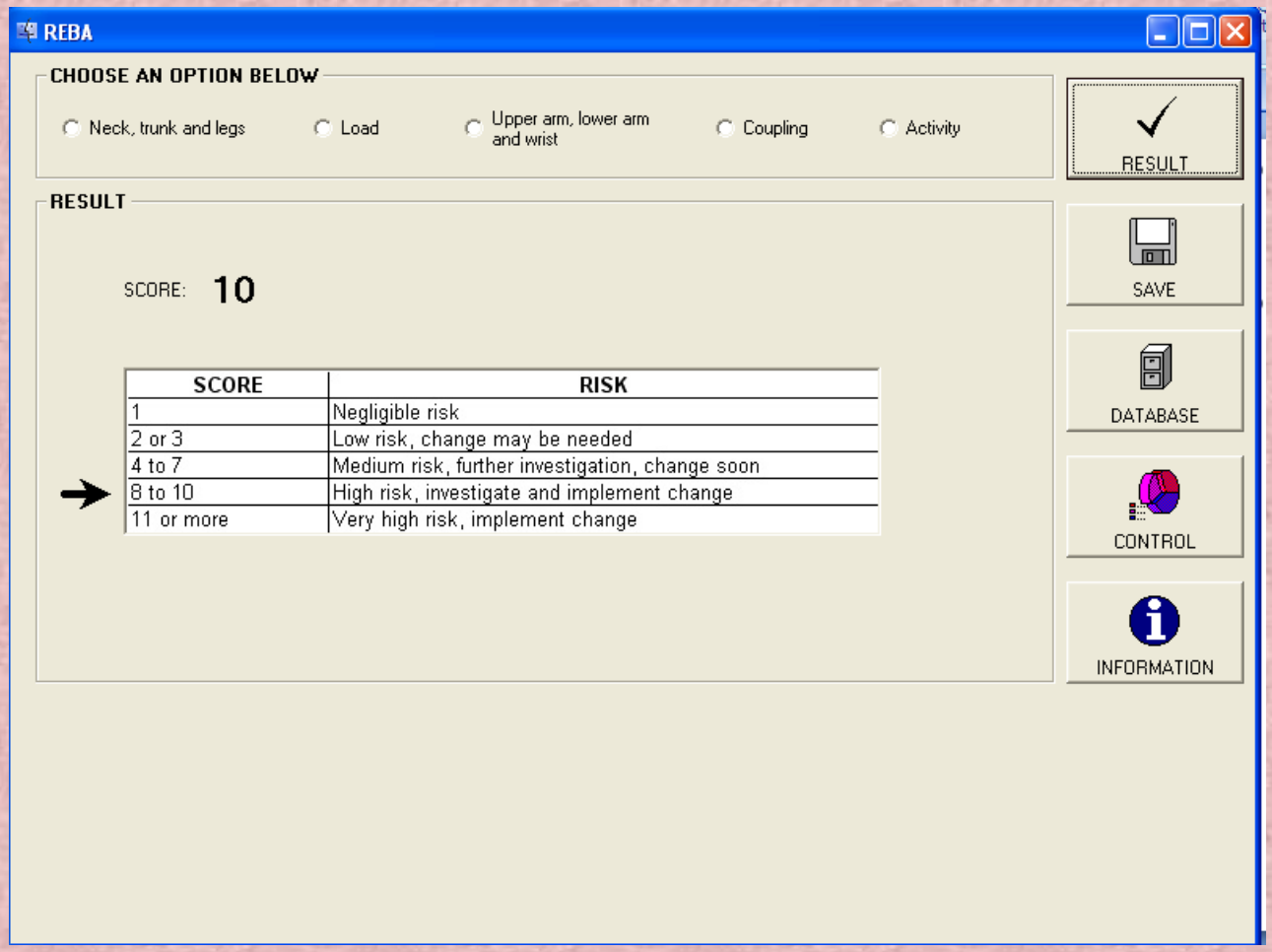
RULA Example:



REBA (Rapid Entire Body Assessment)

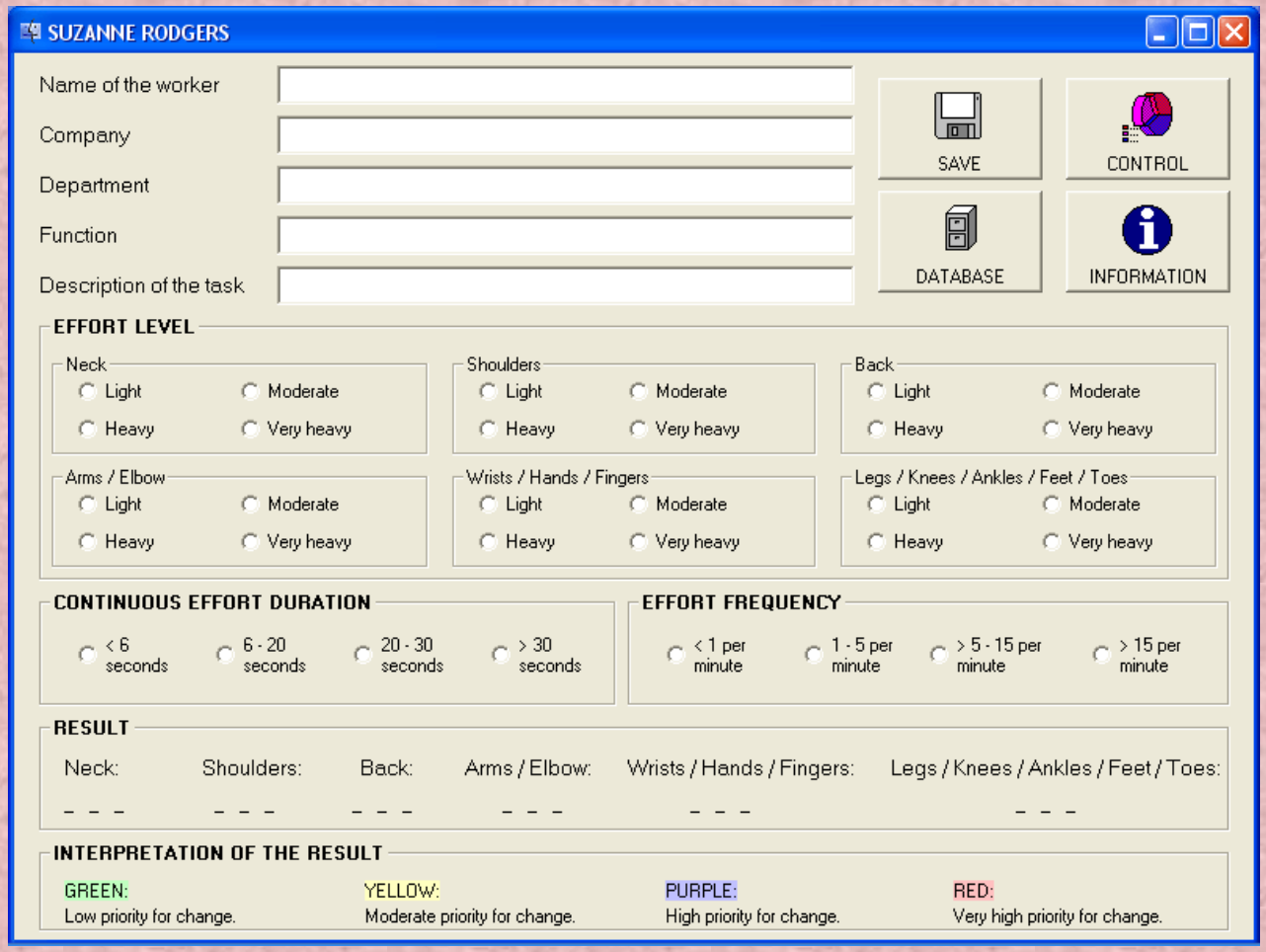


REBA Example:

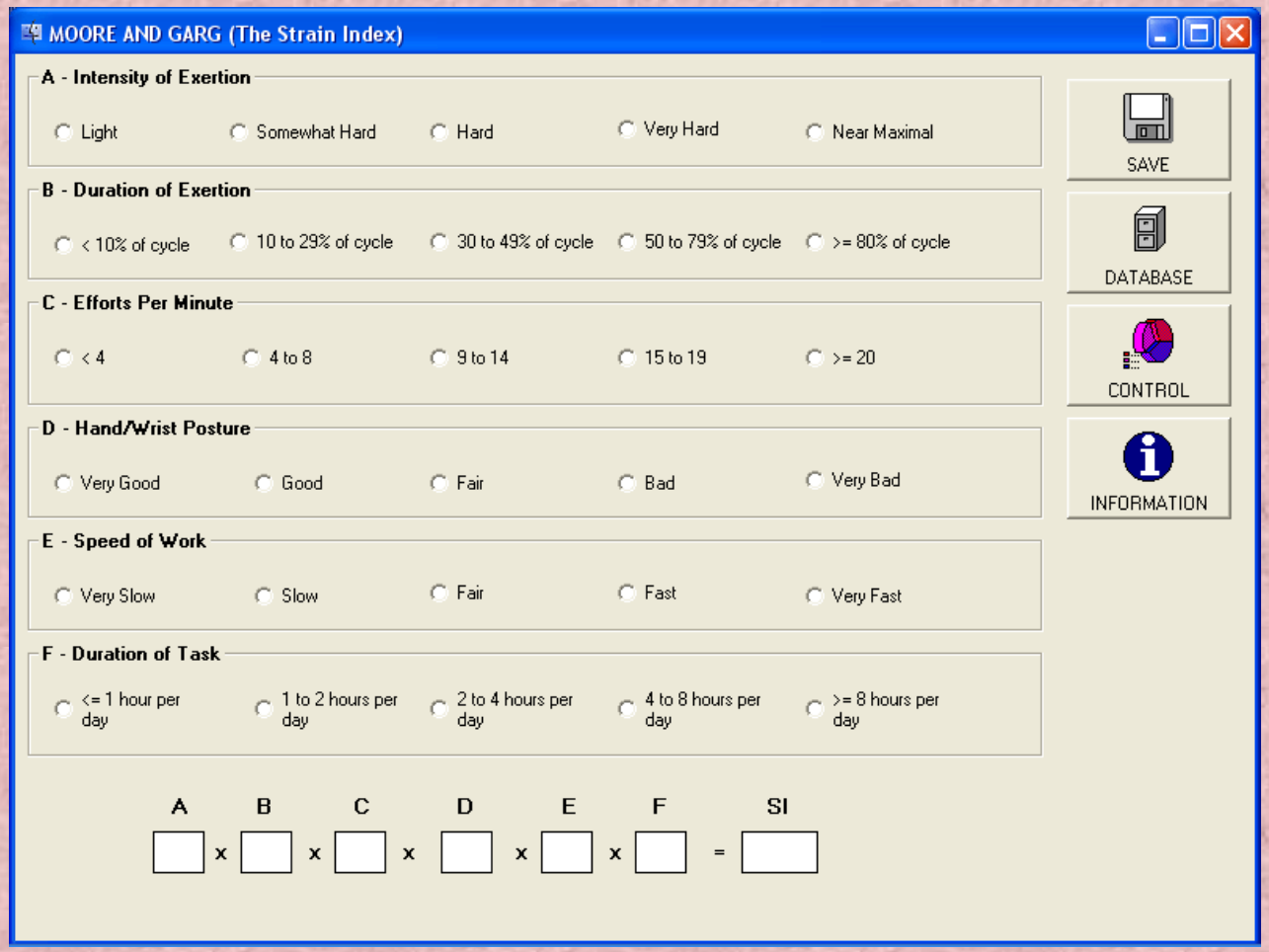


SUZZANE RODGERS

The method was developed by Suzanne Rodgers. You have to evaluate three factors: Effort, duration and frequency to have a result.



MOORE E GARG (The Strain Index)

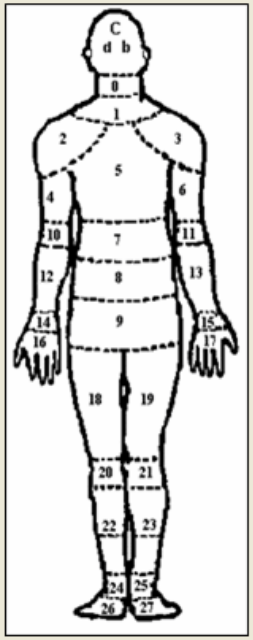


DISCOMFORT QUESTIONNAIRE

DISCOMFORT QUESTIONNAIRE

SAVE | DATABASE | CONTROL | INFORMATION

Region:	Part of the body:	Frequency:	Side: Left	Side: Right	Evolution (hour) 1st	4th	8th
d - b	Eyes						
C	Head						
0	Neck						
1	Trapeze						
5	Thorax						
7 - 8	Lumbar						
2 - 3	Shoulder						
4 - 6	Upper arm						
10 - 11	Elbow						
12 - 13	Forearm						
14 - 15	Wrist						
16 - 17	Hands / fingers						
9	Buttocks						
18 - 19	Thigh						
20 - 21	Knee						
22 - 23	Lower leg						
24 - 25	Ankle						
26 - 27	Foot / toes						



FREQUENCY:
(1) 1 - 2 times per week
(2) 3 - 4 times per week
(3) Every day (once)
(4) Every day (several times)
(5) Every day (all day long)

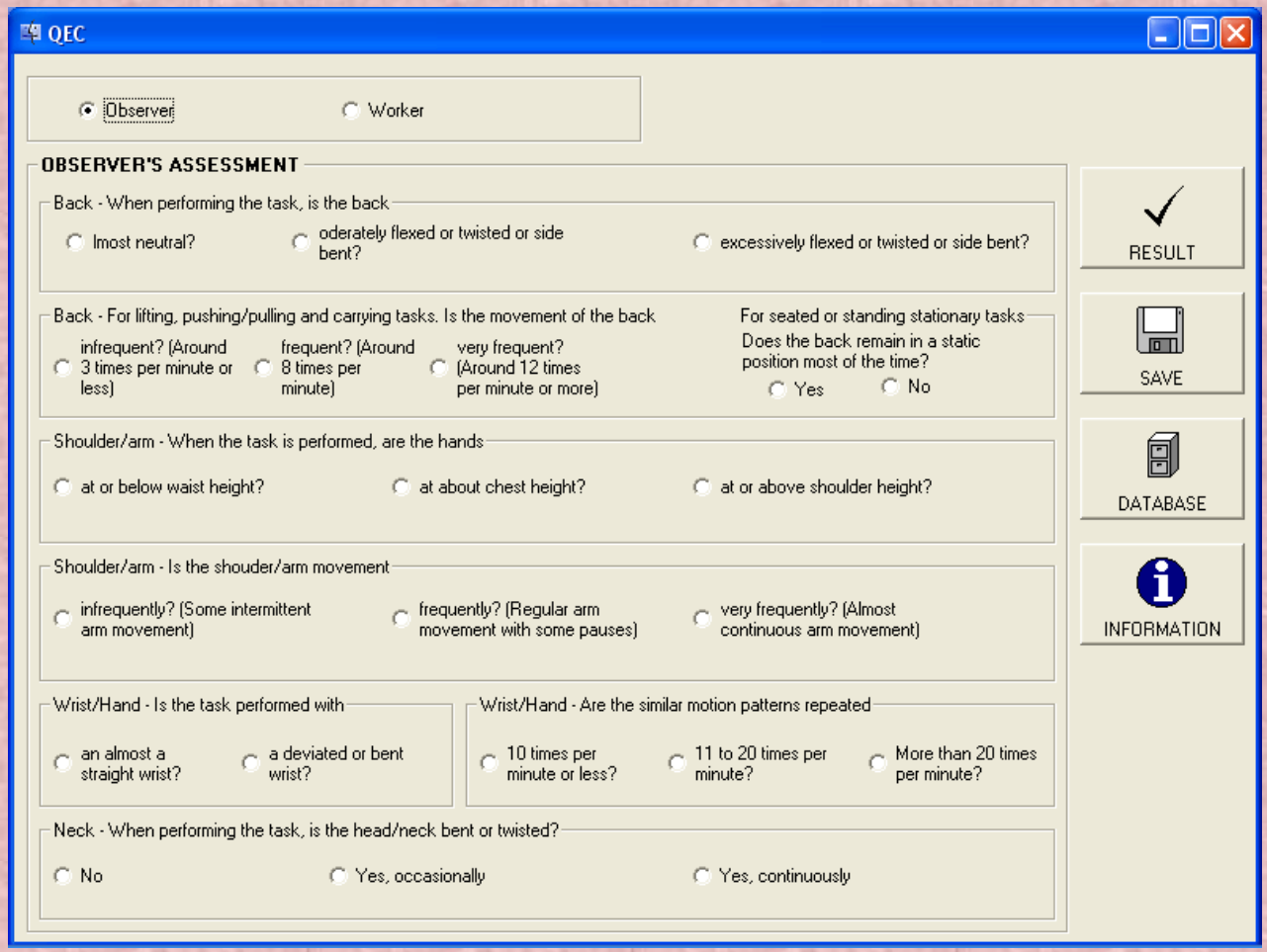
EVOLUTION:
(1) No discomfort
(2) Mild
(3) Moderate
(4) Severe
(5) Insupportable

HOUR:
1st = First hour
4th = Fourth hour
8th = Eighth hour

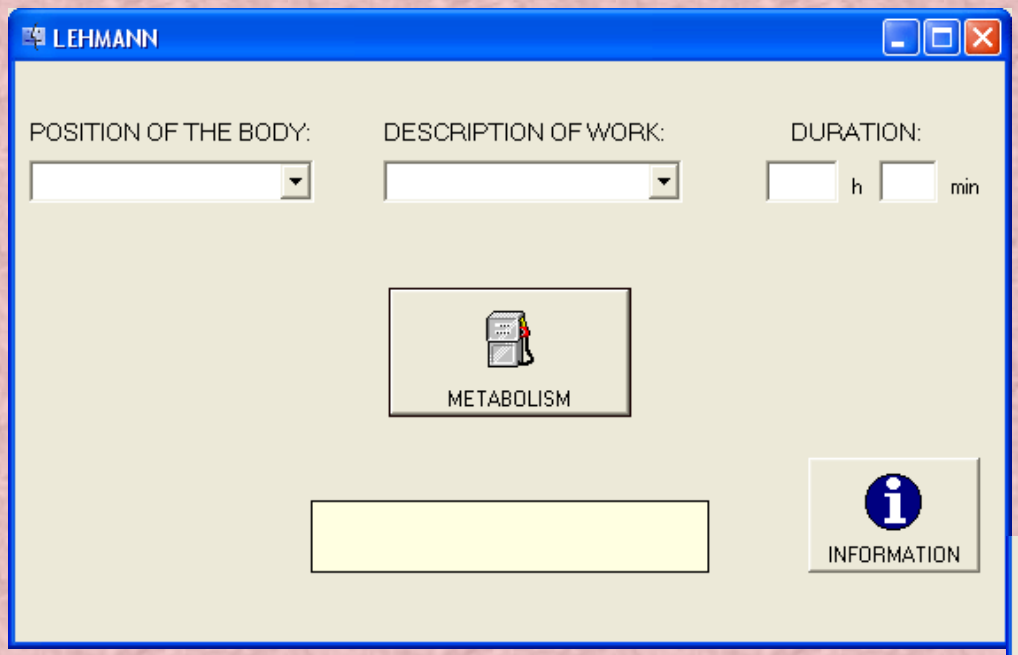
In the part of the body where the worker does not feel discomfort, leave frequency field blank.

QEC (Quick Exposure Check)

QEC (Quick Exposure Check for work-related musculoskeletal risks) was developed by Dr. Guangyan Li and Professor Peter Buckle, with support from researchers at Robens Centre for Health Ergonomics, University of Surrey, and some 150 health and safety practitioners throughout the UK. The QEC system and the full report about its development was published in 1999.



LEHMANN

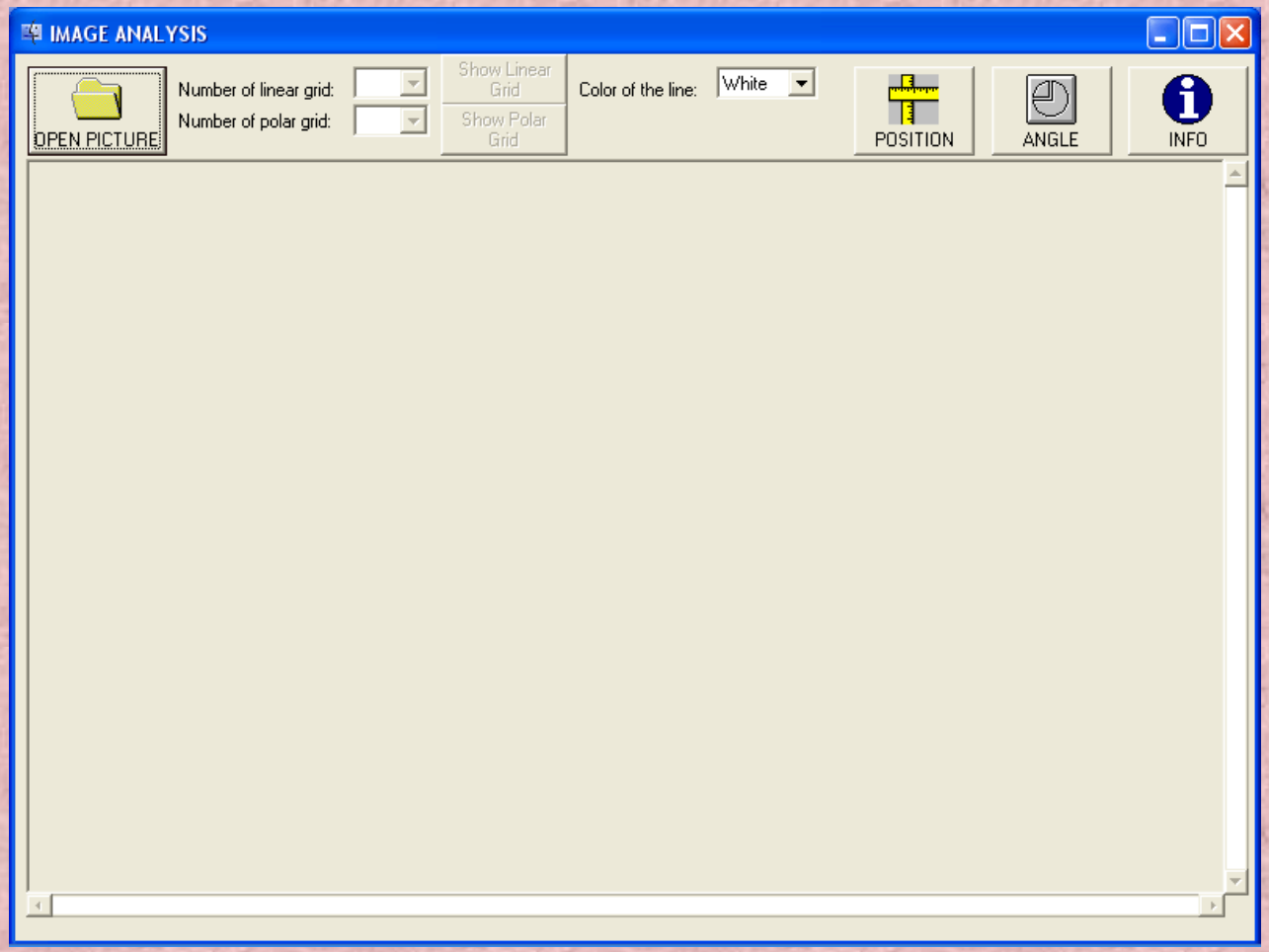


- محاسبه متابولیسم

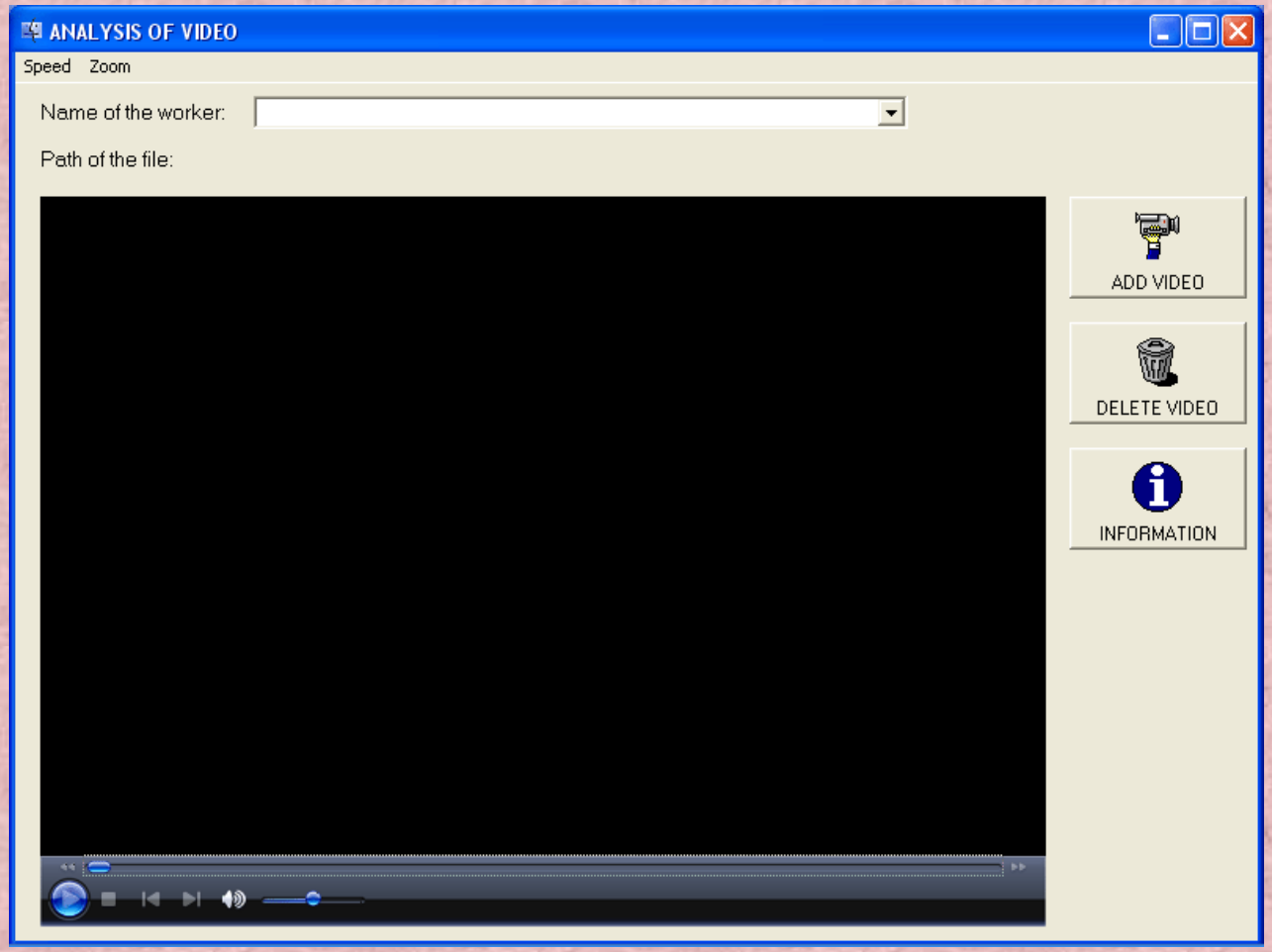
The calculation of metabolism is shown in the table below:

POSITION OF THE BODY		Kcal	
		1 minute	1 hour
Lying / Sitting		0.4	20
Standing		0.8	40
Walking		2.4	120
Climbing		5	250
DESCRIPTION OF WORK		**Kcal**	
		1 minute	**1 hour**
Manual	Light	0.5	25
	Hard	1	50
Upper limb	Light	1.5	75
	Hard	2.5	125
Whole body	Light	4	200
	Fast	6	300
	Hard	8	400
	Very hard	10	500
Metabolism = Metabolism (Position of the body) + Metabolism (Description of work)			

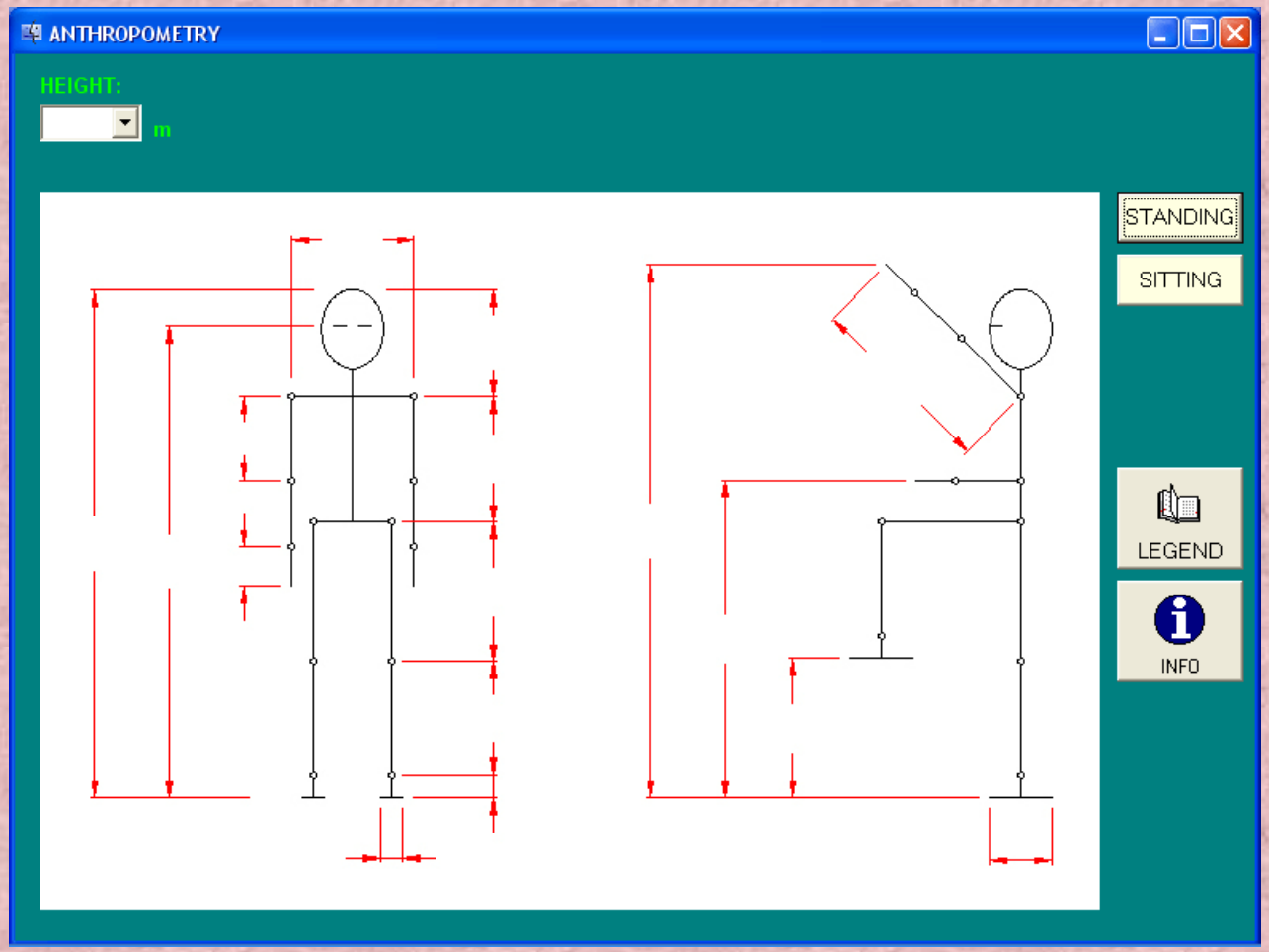
IMAGE ANALYSIS



VIDEO ANALYSIS



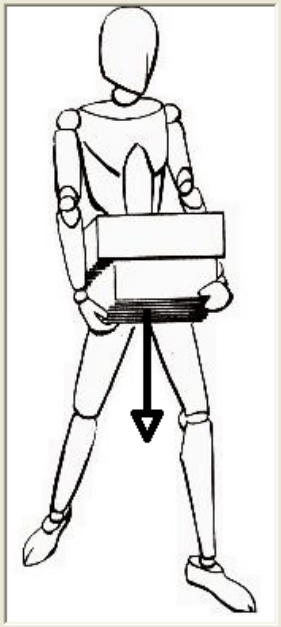
ANTHROPOMETRY



CALCULATION OF FORCE

CALCULATION OF FORCE

Lifting Pulling or pushing (horizontal plane) Pulling or pushing (inclined plane)



The picture is only illustrative.

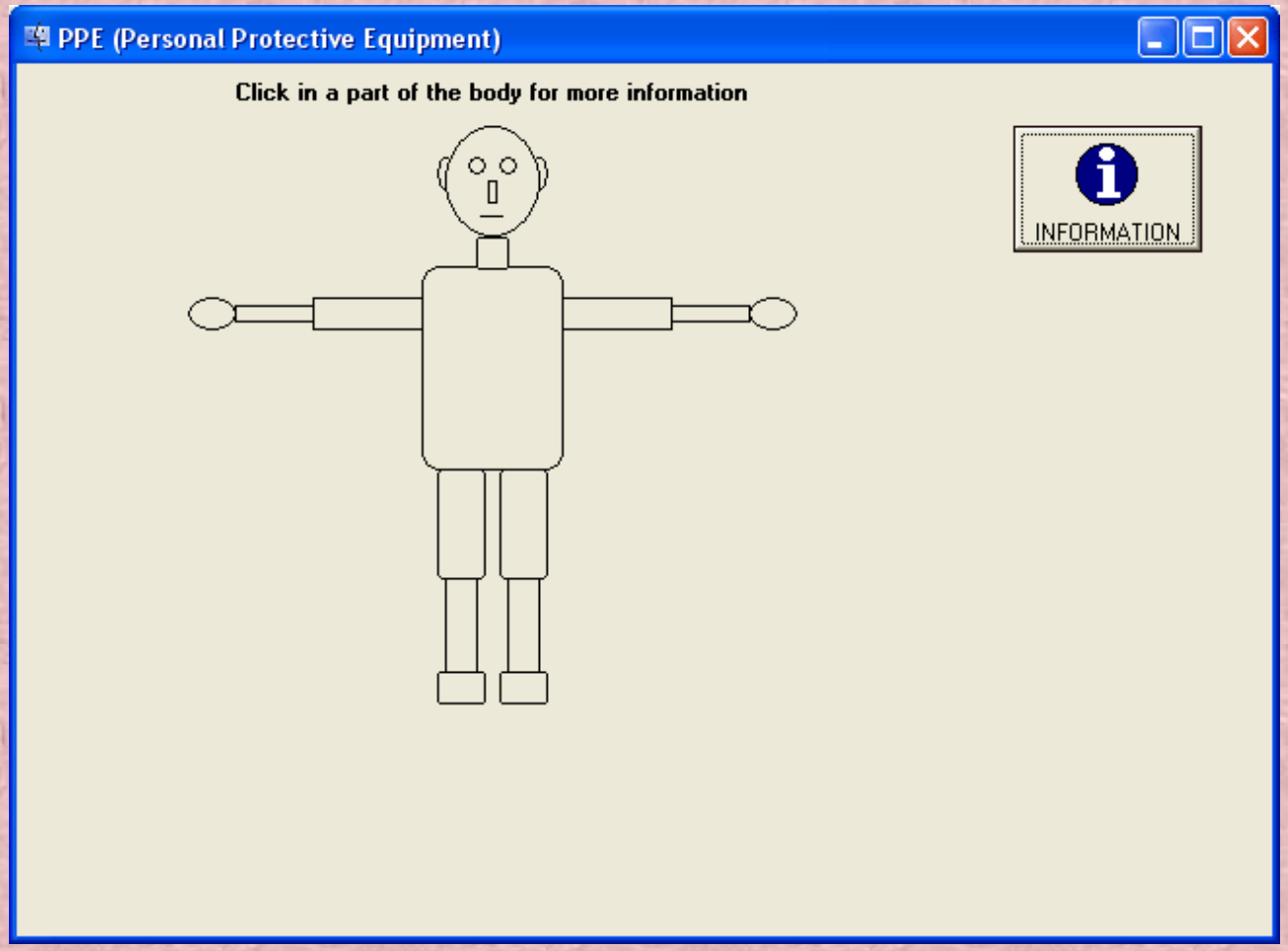
Mass of the object Kg

CALCULATE FORCE

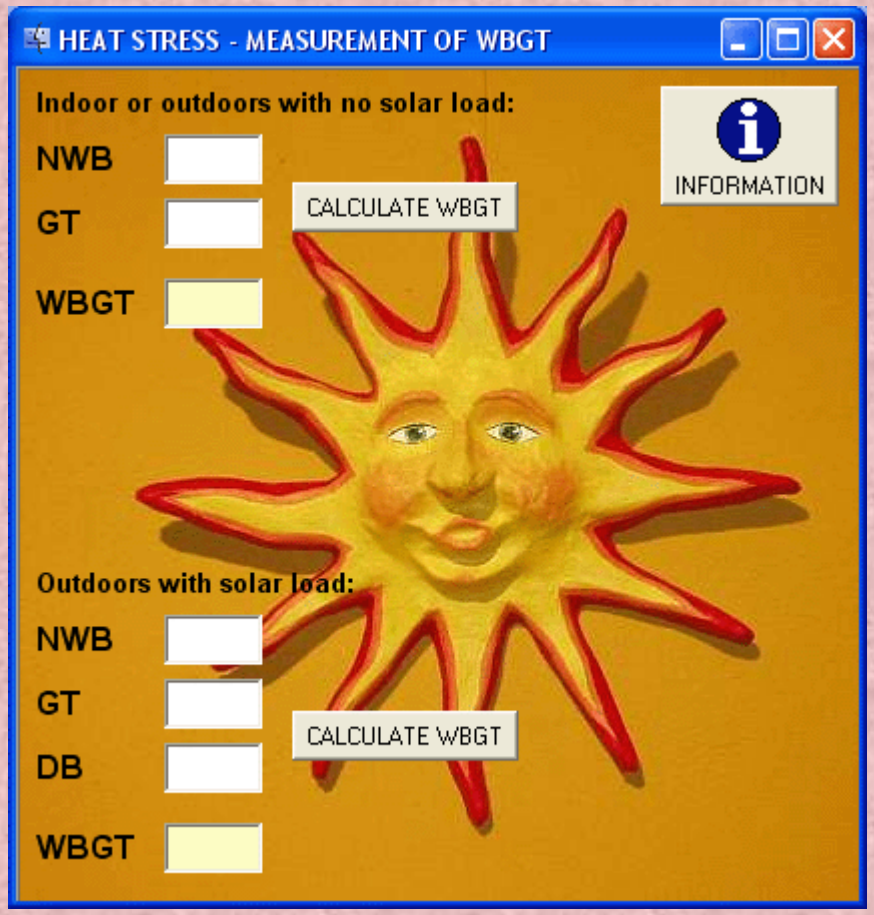
FORCE: N

INFORMATION

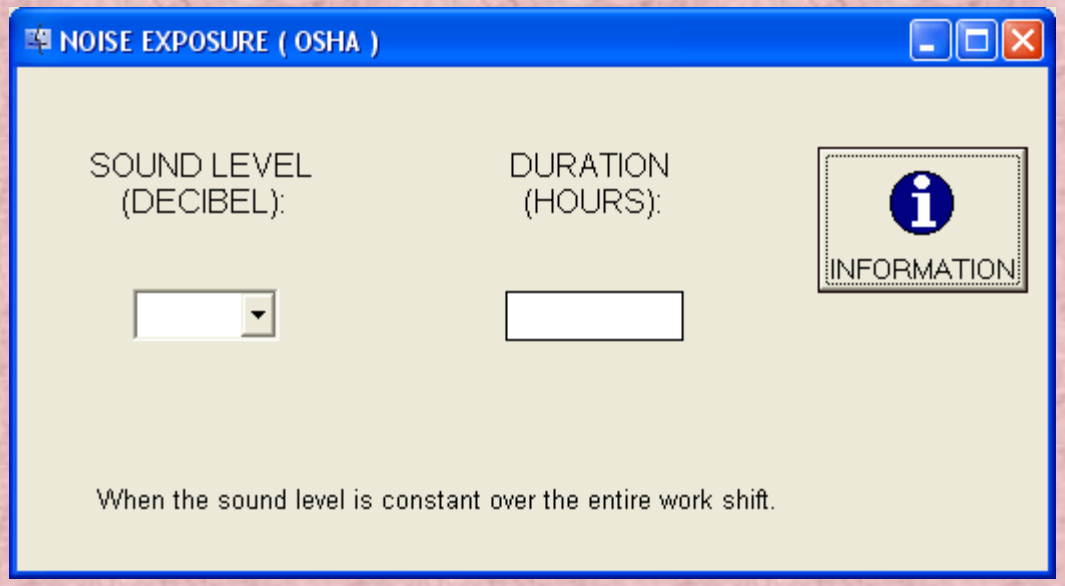
PPE (Personal Protective Equipment)



HEAT STRESS


HEAT STRESS - MEASUREMENT OF WBGT
Indoor or outdoors with no solar load:
NWB
GT
WBGT
CALCULATE WBGT
INFORMATION
Outdoors with solar load:
NWB
GT
DB
WBGT
CALCULATE WBGT

NOISE EXPOSURE (OSHA)



TYPING EVALUATION