

Cardiovascular risk screening within the scope of workplace health promotion with the use of Diaglobal's Vario photometer DP 300

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"During autumn/winter 2005, I tested at different locations ca. 300 employees of a major furnishing house chain for their metabolic and cardiovascular risk profile within the scope of a workplace health promotion project. Anamnestic and biometric data were combined with laboratory parameters which had been examined locally before. Out of this, I identified particularly the employees' risk of the metabolic syndrome as well as the PROCAM score. The PROCAM score allows the legitimate evaluation of the percentage probability of an infarct over the next 10 years. The determination of the laboratory parameters glucose, entire cholesterol, HDL and LDL cholesterol, and triglycerides occurred after the withdrawal of venous blood with the aid of Diaglobal's Vario photometer DP 300 and the corresponding test reagents.

Age distribution:

The group of analyzed people consisted of up to 30% of men and 70% of women. Out of this, 33% were at the age of 20 – 29, 33% between 30 and 39, 24% at the age of 40 – 49, and 9% between 50 and 60 years.

Body Mass Index:

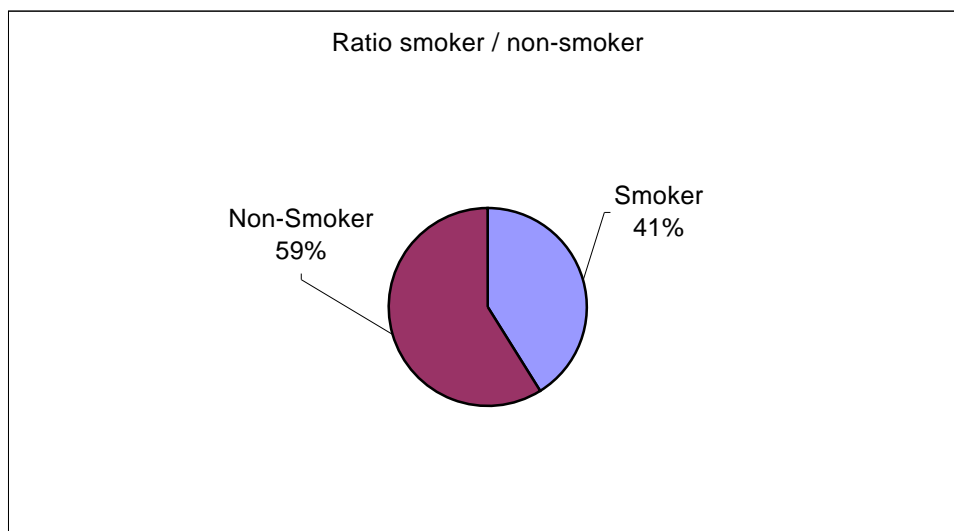
On the basis of the determination of the BMI, the collective was up to 9% underweight, up to 58% weighed the norm, 29% showed an adiposity, and 5% even had an adipositas per magna.

Blood pressure:

During the evaluation of the blood pressure at rest, 50% of the collective showed normal values, 33% had a slightly increased systolic blood pressure (between 125 and 140 mm Hg), and 17% suffered from a remarkably increased blood pressure (> 140 mm Hg).

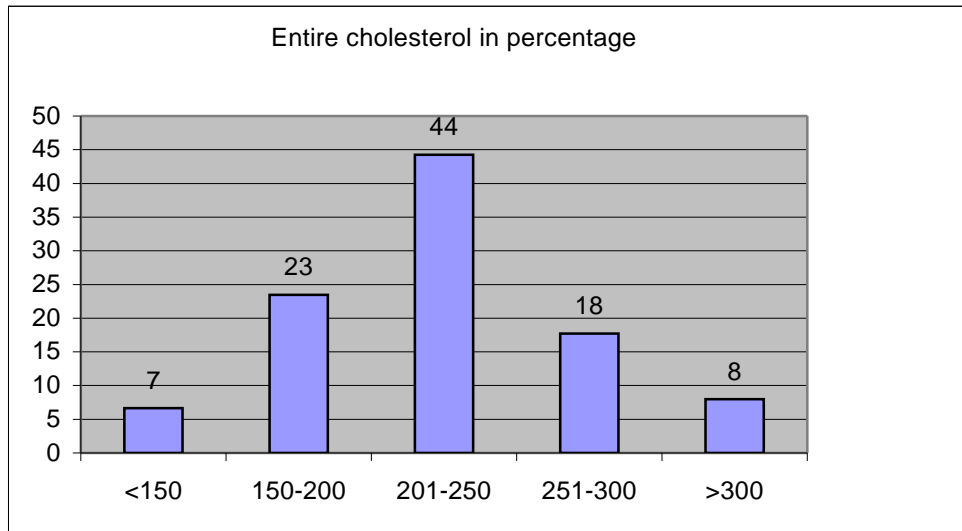
Smoking attitude:

The following illustration arises in regard to the nicotine consumption:



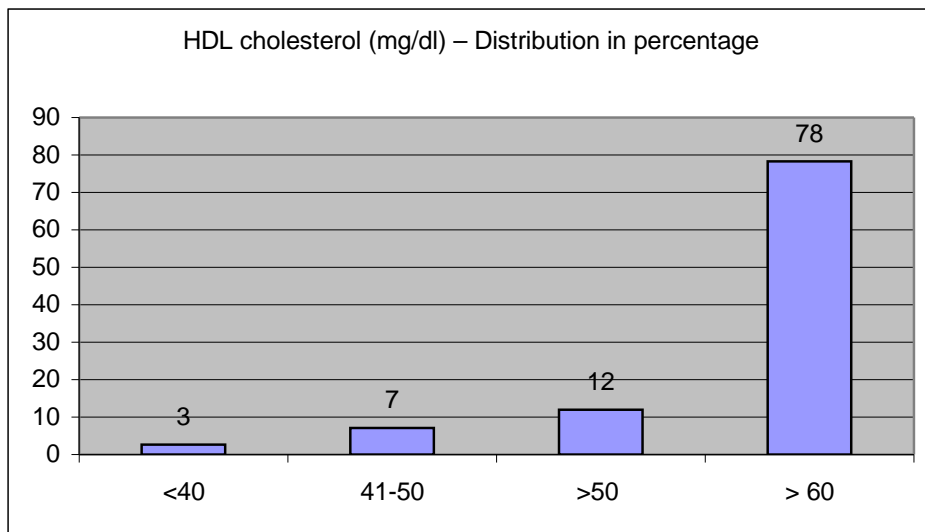
Entire cholesterol:

From the following figure it appears that only 30% of the test persons accounted for a normal cholesterol level, this means, 70% had an increased level, 26% out of this even a significant increased level.



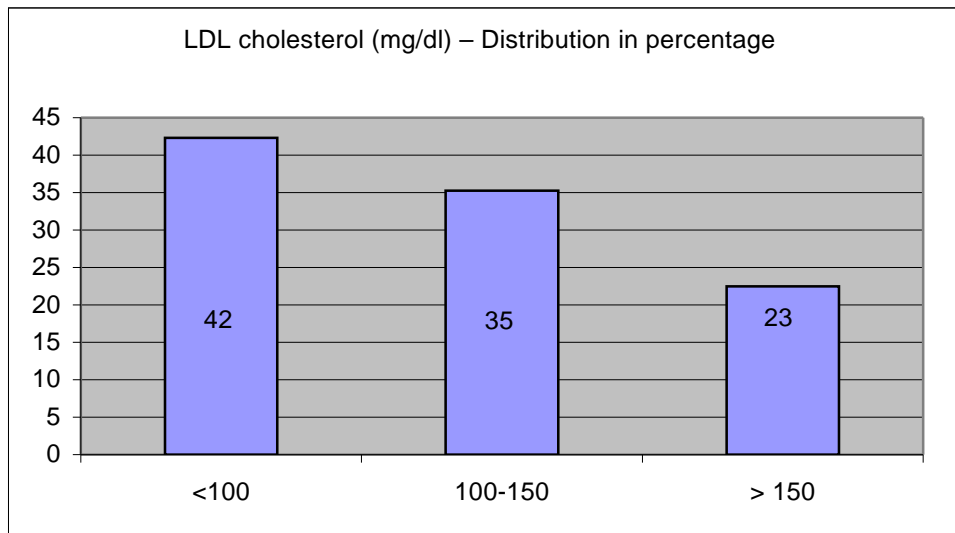
HDL cholesterol:

The distribution of the protective HDL cholesterol was surprisingly good. More than 80% showed a sufficient HDL level.



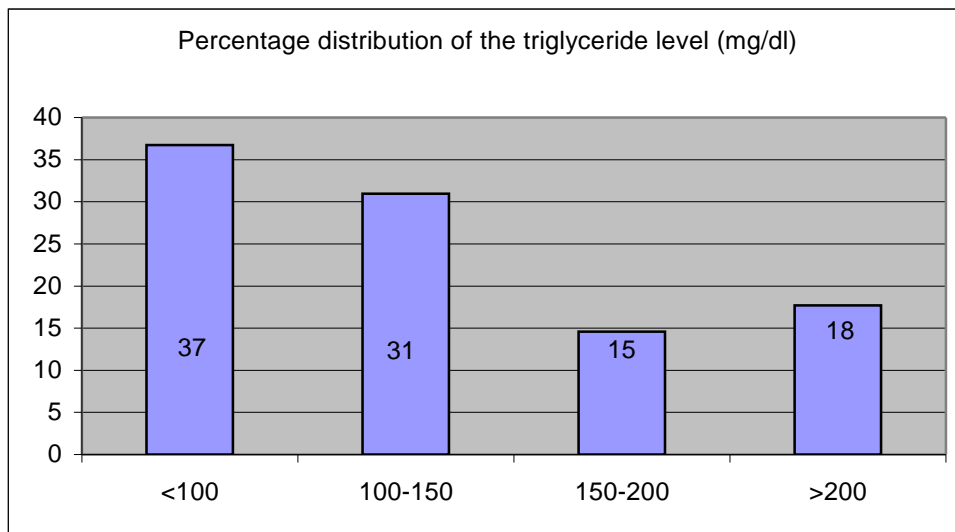
LDL cholesterol:

However, the distribution of the dangerous arteriosclerosis-inducing LDL cholesterol indicated an alarming distribution:



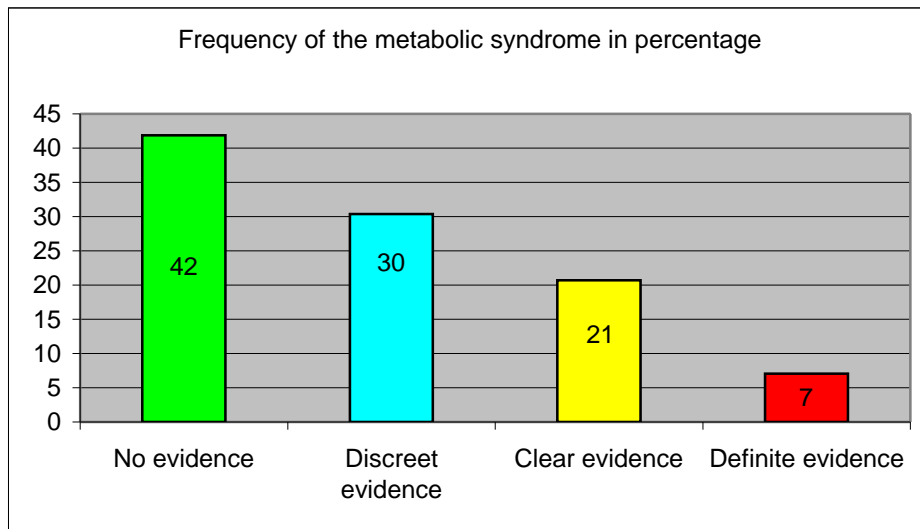
Triglycerides:

Neither the distribution of the triglycerides shows an opportune situation. Merely 37% had a reasonable level under 100 mg/dl whereas 67% evinced increased values.



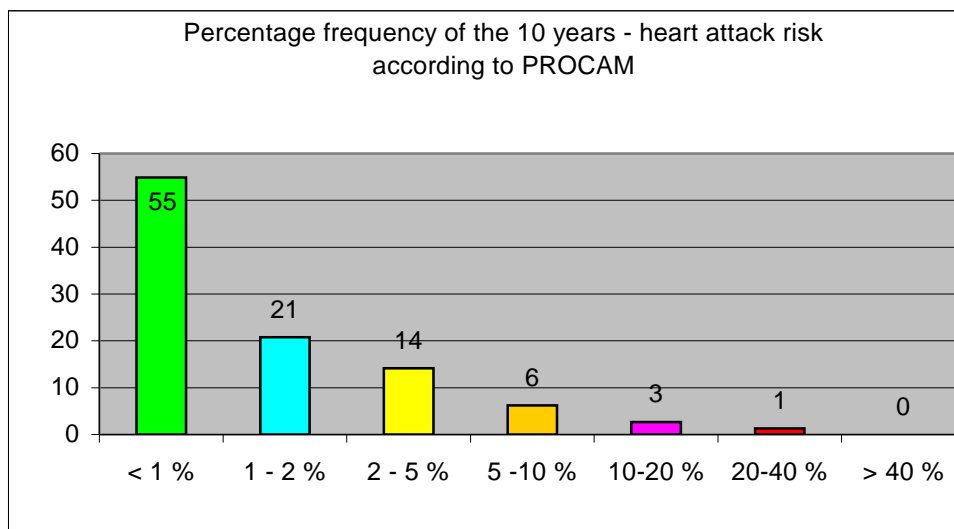
Metabolic syndrome:

Concerning the complete evaluation of the metabolic syndrome, the following distributions could be worked out:



PROCAM risk:

When evaluating the 10 years - infarct risk, the following illustration can be shown:



76% of the researched people showed a reasonable 10 years – infarct risk under 2% according to PROCAM. At nearly a quarter of the test persons emerged a considerable danger of having a heart attack in the future.

Resumé:

The voluntary, occupational-medical offered precautionary examination during labor time was accepted very well. However, there was an almost exclusive registration of people who considered themselves to be healthy, took nearly no drugs, and were looking for recognition for their “healthy way of living”. Many of them had not consulted their physician for years.

The execution, in particular the ambulant on location – determination of the lipid state and the glucose values with Diaglobal’s Vario photometer DP 300 and the corresponding Diaglobal test kits, proceeded easily, fast, certainly reliable, and provided always valid, accurate, and plausible values.

Almost 30% of the researched people already suffered from the metabolic syndrome or were threatened to suffer from it in the future. Nearly 25% of all test persons showed a relevant heart attack risk. All test persons were advised in detail

regarding their feeding habits. Moreover, in case of need a sport medical guidance concerning the selection, commencement, and realization of an adequate endurance training was discussed.

The appliance of the screening parameter for the metabolic syndrome as well as the PROCAM score proved to be an appropriate method to identify and sensitize patients at risk. People who turned out to be exceedingly endangered were advised extensively and sent directly to their physician. As initially demonstrated, clearly more women were willing to be tested than men. This apparently high acceptance is particularly important against the background of the proof of current studies that the heart attack risk has been notably increasing mainly for women in the last years. However, the corresponding early diagnosis quota for women clearly leaves a lot to be desired.

I am convinced to have made a significant contribution to proper early diagnosis and prevention of cardiovascular diseases and diabetes with this project.

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