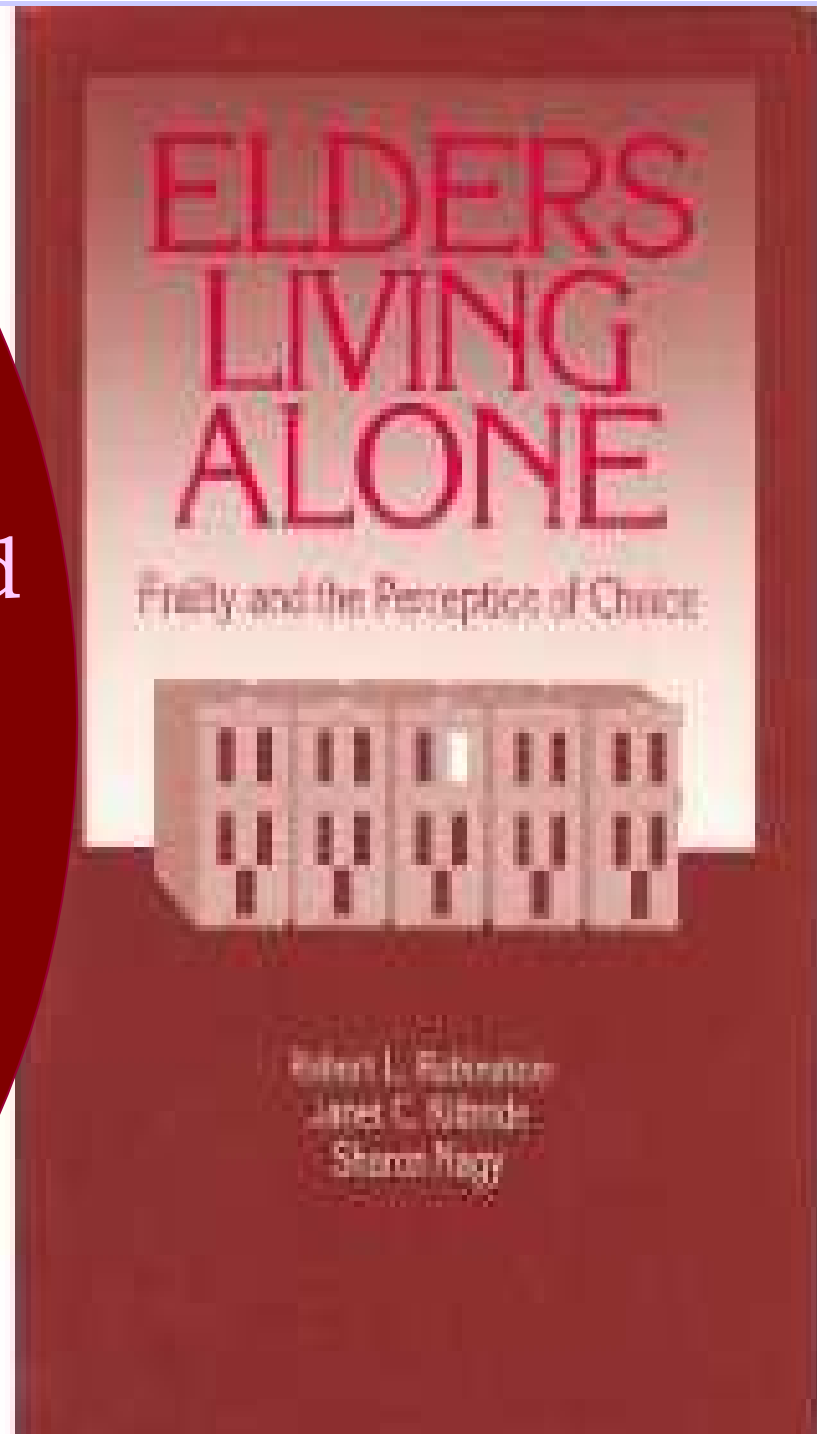


Frailty ...



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The term frailty
is recently employed
In geriatrics .
(**1984** -
Rubenstein)





Frailty

„frail elderly“

anglo-saxon term

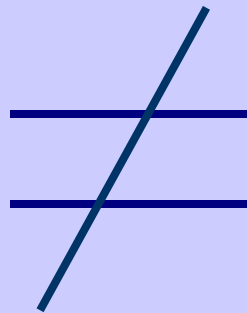
- Can not be mention as a general term of aging
- Is a result between the factors of longevity and senescence
- Is one of the risk components of the advanced age
- Is on the base of the term, named „aging by wearing“

Frailty -



an instable state, characteristic for the subgroup of aged population with a homeostatic systems dezadaptation, which results with a progressive decline of the physiological and cellular functions, with decreasing of the reserve capacity, the early and insidious limitation of the relational and social aptitudes, which represent often the first sign of vulnerability.

The onset of frailty and its evolution are very variable in dependence of the person.



The physiopathology of frailty

Biological mechanisms

The disturbance of the physiological systems

Frailty syndrome

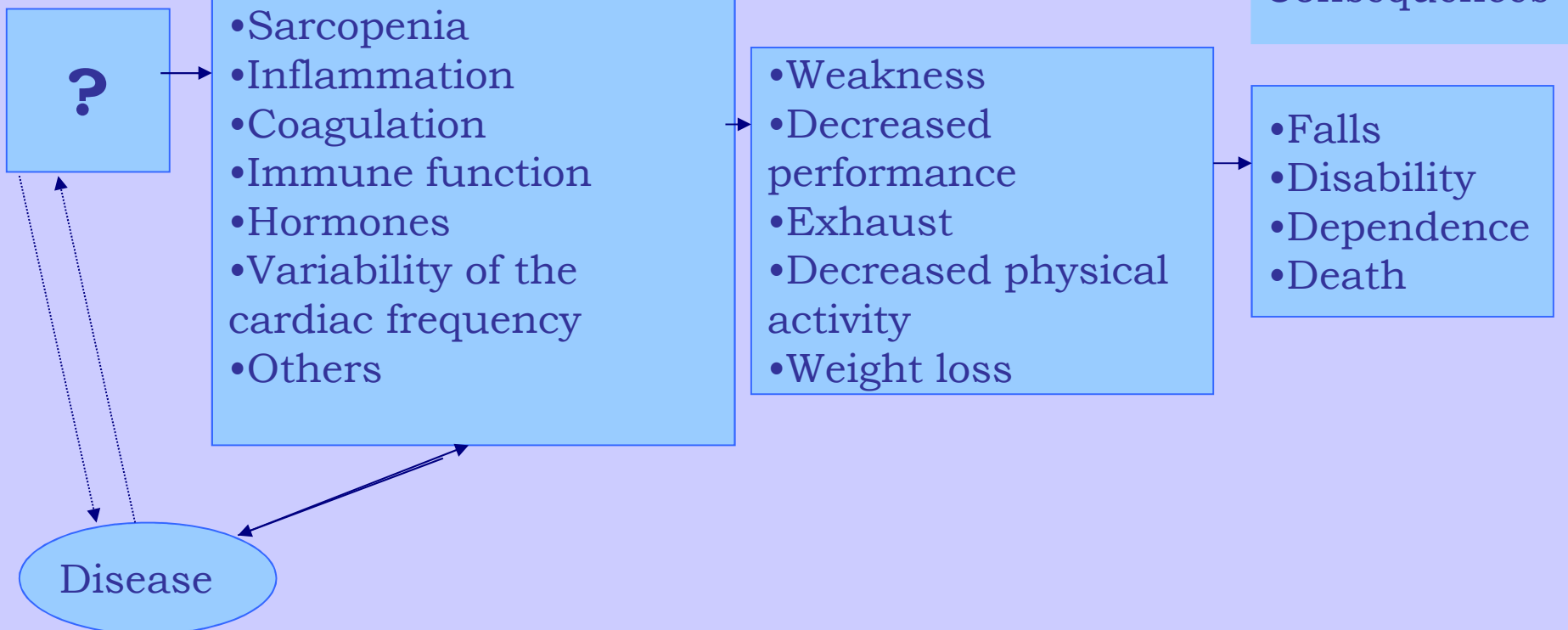
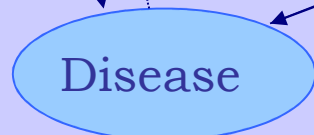
Consequences



- Sarcopenia
- Inflammation
- Coagulation
- Immune function
- Hormones
- Variability of the cardiac frequency
- Others

- Weakness
- Decreased performance
- Exhaust
- Decreased physical activity
- Weight loss

- Falls
- Disability
- Dependence
- Death



The frailty determinants:

- complexe
- multiple
- implicate the intrinsic factors
- implicate the environmental factors



In all the cases 2 fundamental causes are present:

- Functional fatigability
(generates more limited answers)
- Deadaptation on the stress situation

Functional fatigability

Stochastic causes (an errors accumulation, for example under the action of free radicals or under the glycation process)

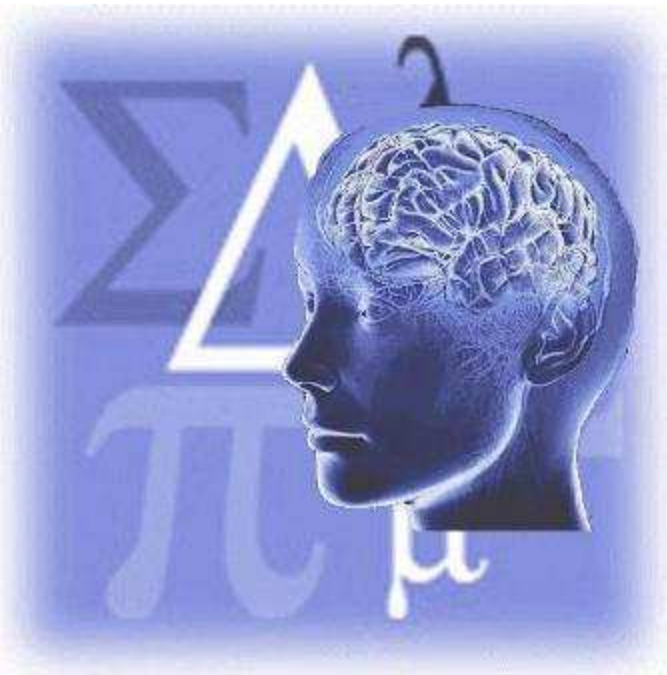
The cause conditioned by genetic determinant

- the variable sensibility to the risk of the somatic mutagenesis;
- variable capacity in the maintenance of the reparation process of DNA;
- the telomere progressive reduction, but in dependence of the age.

As a result there are 3
citophysiological modifications found
out systematically :



- The late response at the answer on one stimuli or a slower kinetic of the response;
- The decrease of the maximal response to the stimuli;
- The incapacity to answer identically to the iterative applied stimuli, and the most early exhaustion.



The desadaptation on the stress situation

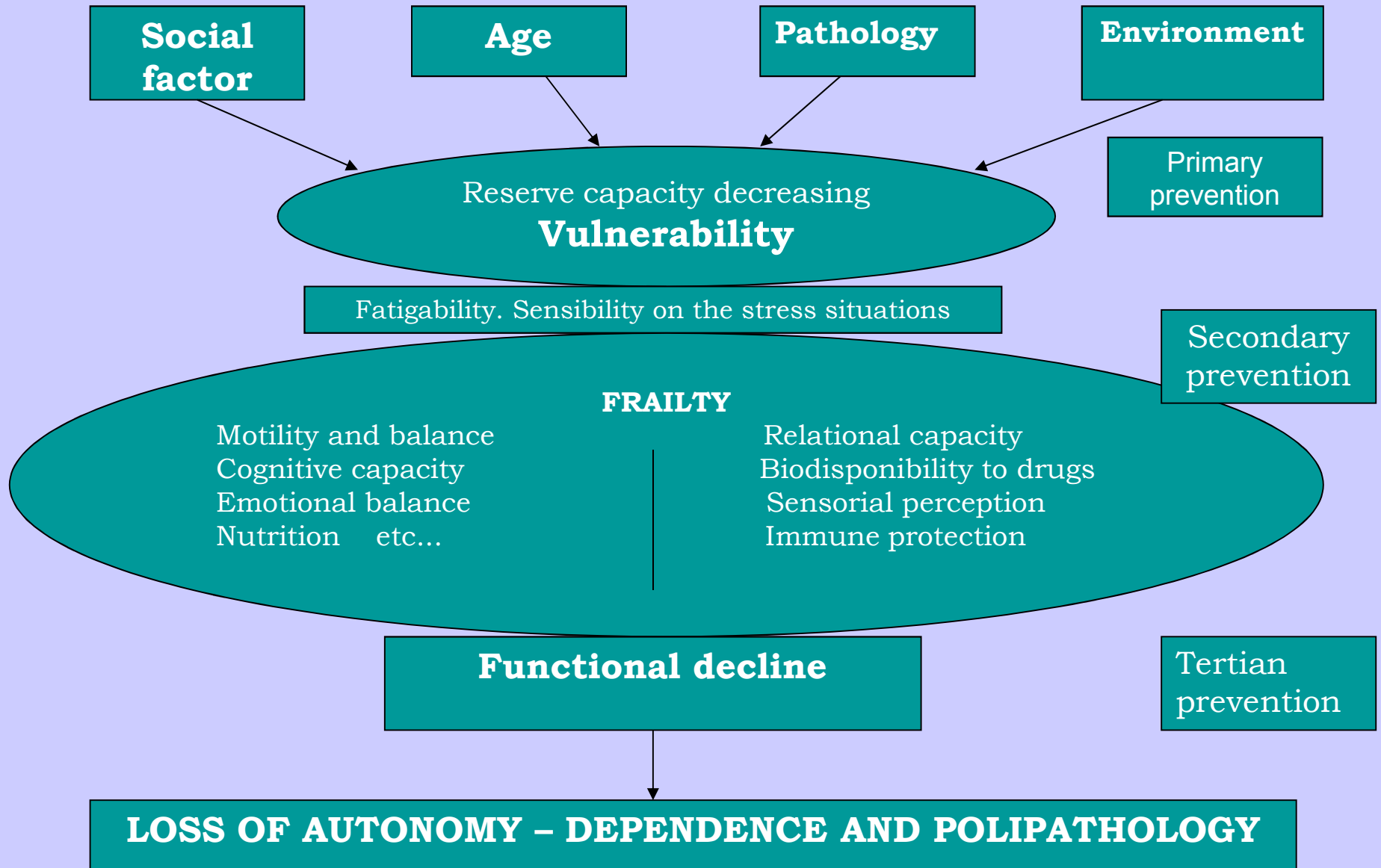
- The decreased cellular capacity to produce stress proteins;
- The altered response of the stress hormones.



There are considered:

- *Intrinsic aging, cellular and tissue fatigability.*
- *the complex of the social and environmental components.*
- *the psychological profile of the old people*
- *the concept of „non utilization“.*

Frailty cascade, K. Rockwood





The need of global evaluation of the old person exists

Pain - is a risk factor of frailty



Frailty modify the
biodisponibility and
farmacokinetic of the drugs

Causes :

- *Digestive frailty .*
- *Modified hepatic metabolism of the drug*
- *Plasmatic transport.*
- *Decreased renal elimination*

Polymedication of the frail elderly is difficult.

The iatrogenic is common.

Criteria of diagnosis (3 or more criteria).

- Not intentional loss of weight (5 kg per year)
- The feeling of general exhaustion
- Muscular weakness
- Low speed of walk
- Low level of physical activity



„Comprehensive Geriatric Assessment”