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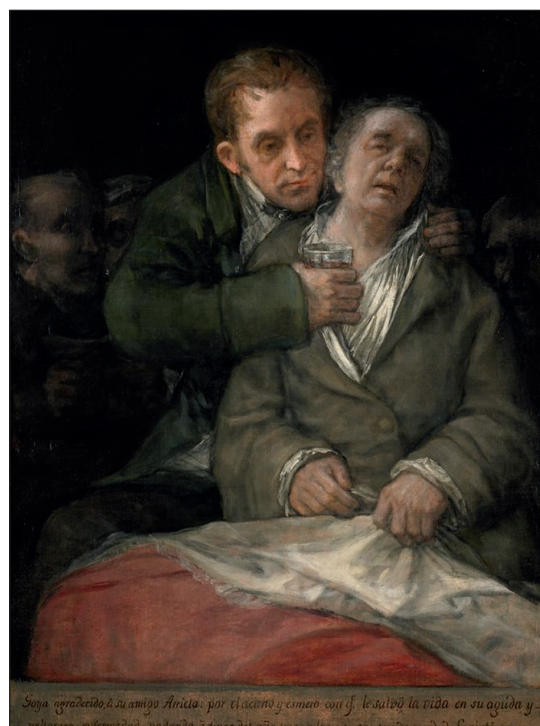
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**Postępy badań i terapii cukrzycy, otyłości, miażdżycy,
endokrynopatii oraz innych zaburzeń metabolicznych**

**Metabolic Medicine - advances in research and therapy of diabetes mellitus,
obesity, atherosclerosis, endocrinopathies, metabolic diseases**

- **Odrobina filozofii – wizja i wartości życiowe człowieka a praktyka medyczna. jak uniwersytety medyczne mogłyby kształcić lekarzy**
- **Jak Narodowy Fundusz Zdrowia finansuje opiekę diabetologiczną. Psychologiczny i społeczny stres planowania ciąży i macierzyństwa w cukrzycy typu 1**
- **Postępy profilaktyki cukrzycy w badaniach – zaniedbania w praktyce:**
 - nowe predyktory ryzyka
 - paradoks inercji profilaktycznej w cukrzycy typu 2
- **Edukacja terapeutyczna, liberalizacja żywienia i jakość życia**
- **Profilaktyka zespołu stopy cukrzycowej**
- **Sprawozdawcze impresje:**
 - 50-ty Annual Meeting, Europejskiego Towarzystwa Badania Cukrzycy – EASD, Wiedeń, 15-19.09.2014
 - XV Zjazd Naukowy Polskiego Towarzystwa Diabetologicznego, Gdańsk, 15-17.05.2014 (List do Redakcji)
- **Informacje różne**
- **Regulamin publikacji**



Reprodukcja obrazu Francisco Goya
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PROTECTIVE, BIOACTIVE SOCKS ARE USEFUL IN THE PROPHYLACTICS OF THE FOOT SKIN INJURIES AND DIABETIC FOOT SYNDROME

OCHRONNE, BIOAKTYWNE SKARPETKI SĄ POŻYTECZNE W PROFILAKTYCE USZKODZEŃ SKÓRY STÓP I ZESPOŁU STOPY CUKRZYCOWEJ

Towarzystwo Edukacji Terapeutycznej, Warszawa.

PHYSIOLOGICAL, PROTECTIVE FUNCTIONS OF THE FOOT SKIN

The biomechanical function of the feet and the pertinent adaptation in their structure perfectly fulfils the criteria of highly specialized body organ. This locomotor organ is externally protected by the skin.

The main – general and local – functions of the feet skin as a highly specialized “biological instrument” protecting the foot are:

1. Forming layer protecting against external injuries to the internal foot structures. In this respect the skin acts as an external “cover” relatively resistant to the mechanical, thermic, toxic and other traumas.
2. Participation of the skin in the regulation of the foot tissue temperature related to the sensitive regulation of the blood flow in the subcutaneous, microcirculatory beds and to the changes in the local secretion and evaporation of sweat.
3. Reactive regulation of the foot adaptive changes in the quantity and in the chemical composition of its sweat to the status of the general metabolism of water and electrolytes – often disturbed in diabetes mellitus. The pathological foot skin is dry and not covered by the sebaceous glands secretion.
4. Anti-infectious action of the skin due to the local, sensitive inflammatory reactions.
5. Nervous sensing of the touch, temperature and pressure due to the location of the specific, nervous receptors. Skin is the place of starting the reflexive locomotor, reactions of the whole body.

In medical practice one may observe a constant increase of the clinical significance of the perturbations in the above presented, protective functions of the foot skin.

This, tendency is caused by many medical and social events.

CLINICAL INDICATIONS FOR USING THE PROTECTIVE SOCKS

One of the most important reason of the demand for protective socks is the increasing epidemics of diabetes mellitus, obesity, different traumatic injuries, degenerative bones changes connected with old age, osteoporosis and also several, modern social circumstances in the real life style (1, 2, 3, 4).

As underlined by several clinical epidemiological observations the world population of the persons with diabetes mellitus reached in 2013 the level of 382 millions (6th edition of the IDF Diabetes Atlas, Brussels, 2014), obesity affects 50-60% of the whole adult population, traumatic experience – 20-30%.

The early skin pathological changes may be revealed in prediabetic persons - for example with laser – doppler testing – also in the absence of any clinical signs.

All these large population groups need the protective care of the foot (4, 5, 6).

Due to this facts the planned, objectively verified prophylactic actions protecting the foot skin should be approached as the priority standard in medical and social care at all early clinical stages and forms of increased risk as well as in the symptomatic diabetic foot syndrome.

Intensifying of the protection of the foot skin is therefore indicated in diabetes mellitus, obesity, osteoporosis, different deformations of feet after trauma, infections, foot pathology due to aging, circulatory and nephropathic disturbances, pregnancy atopic dermatitis as well as nail infections and deformities.

Such approach and corresponding procedures can be called the multifactorial, pathophysiology-based, prophylactic hygiene.

One of the main component of such programmes is the protection of the skin by external dressings, properly fitting to the skin. special protective socks (7, 8, 9, 10, 11).

The main targets of the protective socks use are the improvements of the skin (12, 13):

1. resistance against mechanical traumas,
2. functional regulation of the skin humidity and sebaceous, secretion,
3. the reactive adaptations of the blood flow within the skin,
4. the anti-infectious action.

There are also other functional and structural attributes of the foot skin, which are exposed to the high risk of injury in diabetes mellitus (1, 2, 3, 4). Chronic angiopathic and neuropathic complications of diabetes mellitus are the major risk factors for foot skin injury resulting in the development of the ulceration, infection and clinical diabetic foot syndrome (3, 6).

DECREASING THE RISK OF FOOT AMPUTATION WITH PROTECTIVE SOCKS

The diabetic foot syndrome is the most frequent cause of the non-traumatic foot amputations in the whole world (1, 2).

There are also other types of foot syndromes – osteopathic, neuropathic, ischemic, geriatric, obesity-related. It could be stated, that these patients present the amputation risk factors.

The primary functional skin injury in these conditions is later complicated by necrotic ulcerations, thrombosis, bullous and infections. Unless effective prophylactics is started early enough, the risk of amputation appears.

Amputations which are caused by such different degenerative foot syndromes are usually a result of earlier negligence of the planned foot skin medical hygiene.

Prophylactic, medical hygiene is of preponderant importance in these real life conditions.

In the diabetic population prophylactic approach to the increased risk of foot amputation is composed of 2 types of management:

1. Reaching the individually optimal targets of diabetes mellitus control (ADA, EASD, PTD) assuring – among general effects - the best possible vitality of the foot functions and structures, especially those of the skin (1, 2, 3).
2. Introduction of local measures fortifying the local, biological resistance of the foot skin into everyday protective and prophylactic procedures.

That is the planned, innovative, medical hygiene (14, 15).

One of the most important procedures within such programme of optimal, hygienic prophylaxis is wearing

protective, skin vitalizing, anti-infectious socks as well as functional shoes.

This practice should be combined with other procedures such as – for example – self-exercise of the feet, education, self observation, self-control and routine medical supervision of the foot skin. In this way the specific clinical syndromes are prevented.

CONCLUSIONS

Based on pathophysiological and clinical evidence, it is expected that the propagation of the use of protective socks by all persons with diabetes mellitus (all are at risk of diabetic foot syndrome by definition) should be widely accepted by both physicians and patients.

The protective socks play the role of a prophylactic “dressing” (7, 8, 9, 10, 11, 12).

Prophylactic, protective socks:

1. Ensure resistance to mechanical micro-traumas,
2. Normalize of the humidity and proper ventilation of the foot skin,
3. Allow for normalization of sweat and sebaceous glands secretion,
4. Decrease the shear and pressure forces acting on the foot skin,
5. Facilitate thermoregulatory, adaptive regulations,
6. Prevent infections,
7. Ensure better mobility of the feet,
8. Decrease the pathological sensations and paresthesias.

On the basis of the long-term, practical experience and on many objective, medical studies assessing very positively the medical influence of protective socks, it should be concluded, that the variety of socks offered by DeoMed® brand:

1. *Silver Sea Cell®;*
2. *DeoMed® Bamboo,*
3. *DeoMed® Bamboo Long,*
4. *DeoMed Cotton,*
5. *Medic Deo® Cotton, and*
6. *Medic Deo® Long.*

should be deemed highly beneficial as an appropriate prophylactic and therapeutic measure (7, 8, 9, 10, 11, 14, 15).

Particularly it is a very favorable, useful measure to use the protective socks as an important component of the medical, hygienic prophylaxis in all persons with diabetes mellitus.

They are available on the medical market at reasonable prices (manufacturer: JJW sp. j., Poland).

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JAK DZIAŁA EURADIA?

EURADIA – związek pozarządowych organizacji oraz firm działających w ochronie zdrowotnej na rzecz rozwoju badań diabetologicznych w Europie.

EURADIA wspomaga badaczy z uniwersytetów i opieki klinicznej w zakresie cukrzycy, organizatorów opieki zdrowotnej oraz działalność organizacji pacjentów z cukrzycą.

EURADIA stara się zwiększać środki finansowe oraz koordynację badań diabetologicznych w Europie.

EURADIA ma priorytety:

1. Stworzenie mapy badań cukrzycy w Europie – lista ośrodków naukowych i tematów badawczych dla lepszej współpracy,
2. Starania o interwencję parlamentu Unii Europejskiej w zwalczaniu epidemii cukrzycy,
3. Współpraca, bez konfliktu interesów, z firmami aktywnymi w ochronie zdrowia,
4. Społeczna propagacja ważności badań cukrzycy.

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