



## Medical socks

### MEDICAL INFORMATION

- ➔ **about a new effective prophylaxis method (EBM) for foot damage** – diabetic foot syndrome – about the application of DEOMED<sup>®</sup> medical socks in all diabetics;
- ➔ **recommending medical socks** means fulfilling goals relating to the reduction of risks of diabetic foot complications – a way to improve the quality of medical care provided by physicians and nurses;
- ➔ **widespread use of medical socks by diabetics** is practically possible, also due to their low price and availability.

### Clinical rationale for recommending medical socks

One of the most serious health hazards for diabetics is the risk of foot damage caused by angiopathy, neuropathy, and other pathophysiological factors. It manifests itself by numerous early or late, hidden or apparent symptoms (1, 2). The high incidence of obesity associated with type 2 diabetes additionally contributes to this condition (3). This creates a problem of an enormous clinical, epidemiological, and socioeconomic significance. According to the International Diabetes Federation, the number of diabetics in Poland is around 3 million. All of them are under a higher risk of foot skin damage (4). However, 10% of them develop symptomatic diabetic foot syndrome.

As part of the necessary doctor and patient prophylactic activities, apart from improving the “internal” skin resistance factors (achieving an optimum metabolic balance of diabetes), additional protective factors are needed to provide the “external” foot skin damage prophylaxis (5). *To this end, specially designed protective shoes and socks are used.*

## **Advantages of DEOMED® medical socks for persons suffering from diabetics and under the risk of diabetic foot syndrome:**

- protection against micro injuries;
- appropriate skin breathability;
- ensuring normal sweating and sweat evaporation;
- buffering the rubbing and pressure forces exerted on the skin by the shoes;
- maintaining the appropriate thermal regulation of the skin;
- stabilization of the skin bacterial flora, prevention of bacterial and fungal infection;
- unrestricted foot mobility;
- elimination of pathological skin pruritus (neuropathy) and burning.

**The above prophylactic properties** of the medical socks presented arise from the following effects:

- protection of the foot skin structure – that is external, physiologically active “coating” of the foot tissues. The medical socks make the foot skin more resistant to mechanical, thermal, and toxic microinjuries;
- supporting the physiological thermal regulation of the feet relying on the regulation of the blood flow in the subcutaneous capillary plexuses, as well as sweating and sweat evaporation.

## **DEOMED® medical socks:**

- constitute also an active barrier against bacterial and fungal infections of the foot skin;
- improve the sensation of touch and warmth on the foot skin – this is particularly important in the diabetic neuropathy prophylaxis;
- ensure special adaptability of the socks’ compression on the foot skin proportionally to the size and shape of the feet.

**Wash-resistant** anti-bacterial and anti-fungal properties are achieved using the following two methods:

- by incorporating the Swiss SANITIZED® anti-bacterial and anti-fungal finish into the sock fibres;
- by using yarn containing zinc oxide or silver ions.

## **Mechanisms of action of DEOMED® medical socks**

Pathophysiologically important mechanisms of action of the medical socks determine the special clinical indications for their widespread use in diabetics (5, 6, 7). They relate specifically to DEOMED® medical socks.

## **Their medical properties result from the special, medically-focused manufacturing process.**

The innovative DEOMED<sup>®</sup> medical socks with special design and functions adapted to medical needs, as well as the materials and manufacturing processes used impart biological and mechanical properties meeting the above-listed expectations to the socks:

- they are seamless or have flat, comfortable seams on the toes, which protects against skin abrasions and damage (protection against injuries);
- they have non-compressive tops and do not damage skin nor impair the blood flow;
- special sock versions made of merino wool have extremely effective thermal properties;
- they are breathable and provide good skin ventilation, making simultaneous sweating and sweat evaporation possible;
- they are very flexible, only slightly compress the feet, and can be put even on swollen legs without restricting their mobility;
- they provide effective anti-bacterial and anti-fungal properties, reducing the risk of foot skin infection and eliminating pathological skin pruritus and burning.

## **DEOMED<sup>®</sup> medical socks – indications for use**

Indications include the following clinical circumstances frequently associated with diabetes (2, 3, 4, 5):

- *diabetes – all the patients are under a higher risk of foot damage due to diabetic foot syndrome;*
- *lower limb arterial insufficiency – arteriosclerosis and foot ischaemia;*
- *lower limb venous insufficiency, varicosities, lower leg oedema;*
- *chronic right heart failure;*
- *leg oedema;*
- *foot skin excessive sweating;*
- *obesity – higher load on the feet;*
- *foot deformity with varied aetiology;*
- *degenerative aging-related foot skin lesions;*
- *recurring fungal infections of the feet;*
- *atopic dermatitis of the foot skin.*

## Summary

DEOMED<sup>®</sup> medical socks are a Polish product manufactured by JJW. The first socks were made almost twenty years ago. Since that time, new models have been designed and improved in collaboration with physicians, physiotherapists, and patients. DEOMED<sup>®</sup> medical socks are registered as medical devices in the Office for Registration of Medicinal Products, Medical Devices and Biocidal Products.

**DEOMED<sup>®</sup> medical socks should be used as a prophylaxis by all persons suffering from diabetes in order to reduce the risk of diabetic foot syndrome. They also provide an effective way to mitigate other foot disorders locally.**

All the properties of DEOMED<sup>®</sup> medical socks listed herein are documented by medical or multi-disciplinary papers and laboratory test reports. Their advantages are also indicated by national and international opinions (2, 4, 5, 6, 7).



*Promote better diabetes care as part of the prophylaxis of diabetes complications and other foot disorders.*

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### Literature

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