

Imrovised Podiatric Chair

LK Shankhdhar ^{1*}, K Shankhdhar ², S Shankhdhar ³, Kriti Shankhdhar ⁴

¹Chief Diabetologist- LK Diabetes Centre, Lucknow, India.

²Diabetologist and Podiatrist- LK Diabetes Centre, Lucknow, India.

³Junior Diabetologist- LK Diabetes Centre, Lucknow, India.

⁴Student- Loreto Convent Intermediate College, Lucknow, India.

***Corresponding Author:** LK Shankhdhar, Chief Diabetologist- LK Diabetes Centre, Lucknow, India.

Received date: September 01, 2025; Accepted date: September 10, 2025; Published date: September 18, 2025

Citation: LK Shankhdhar, K Shankhdhar, S Shankhdhar, Kriti Shankhdhar, (2025), Imrovised Podiatric Chair, *J, Biotechnology and Bioprocessing*, 6(5); DOI:10.31579/2766-2314/168

Copyright: © 2025, LK Shankhdhar. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Abstract

Color is an important factor in evaluating the quality of meat products. Adding the food color fixatives to meat products, which can optimize their appearance and improve their quality. In traditional meat products, nitrite is usually added as a coloring fixative, which will seriously threaten human health. Nowadays, food coloring substitutes are the popular development direction of coloring fixatives for meat products.

Types of food coloring agents, Natural: as Orange yellow beta carotene from green plants, red color from red beet juice and red oleoresin from paprika. Synthetic as Carmines, and Carmoisine.

Key Words: color; food; traditional meat products; Carmines; nitrite; beta carotene

Introduction

Foremost thing in podiatric care is a podiatric chair which serves many purposes ranging from clinical examination to dressing to many procedures but it is quite expensive and very few physicians, at least in developing countries, can afford it. So, we designed a very economical and affordable improvised device which serves effectively as a substitute for a podiatric chair.

The vast majority of people with diabetes, around 80 %, living in developing countries, shall face the largest increases in the burden of diabetes over the coming decades [1]. Diabetic foot problems are a major cause of morbidity and premature mortality in people with diabetes and contribute substantially to the health care costs associated with diabetes [2,3,4]. Foot problems are a threat to every person with diabetes. Worldwide, more than a million lower leg amputations are performed each year as a consequence of diabetes. Approximately 3–4% of all people with diabetes have a foot problem. In some developing countries, foot problems may account for up to 40% of

available resources [5]. Diabetic foot care is one of the most ignored aspects of diabetes care in developing countries such as India [6,7]. Good foot care includes physicians, specially trained in Podiatry and paramedic staff, besides some gadgets, including special podiatric chair.

Practicing Podiatry in some developing country like India, is a difficult task since infrastructure is missing and many gadgets are unaffordable. Most physicians cannot afford a podiatric chair since it costs thousands of dollars and even a few who can afford it do not see any proportionate return out of it. I saw proper podiatric chair, for the first time, in King's Hospital, London in 2003 when I happen to meet Prof. Mike Edmonds.

When I returned to India, I had a peculiar zest to create some improvised version of the chair. Then the team of physicians in LK Diabetes Centre designed an improvised foot stand, which delivers most features of a podiatric chair [Figure.1].



Figure 1: Proper Podiatric Chair

Parts of Foot Stand:

- 1. Base of Foot Stand: The stand has a solid heavy wooden base to support weight of the foot and leg.
- 2. Column: Flat broad column establishes connection between leg rest and base.
- 3. Leg rest: It is a cut in the column on the top with padding where a patient accommodates his ankle.

4. Pocket: The column has a pocket to accommodate necessary equipment e.g., Monofilament, Wartenberg wheel, Tuning fork, Hammer, Thermo tip, measuring tape, caliper for 2-point discrimination, cotton wool etc. Nail care related instruments can also be placed in the same pocket e.g., calipers and files. The same pocket can accommodate dressing related material too during management of a foot ulcer or lesion.

Utility Of Foot Stand:

- 1. It serves as a good working foot examination platform [Fig.2].



Figure 2: Samadhan Foot Stand



Figure 3: Placing a foot for examination



Figure 4: Tuning for Examination



Figure 5: Monofilament examination



Figure 6: Peripheral Pulse examination

When an observer is sitting in his chair, he has to lean a little to examine the foot in detail. He can undertake neurological examination using a tuning fork and Monofilament. Even peripheral pulses can be easily examined. The examiner can keep all necessary gadgets in the pocket of the foot stand.

Range of foot joint can be assessed to diagnose limited joint mobility (LJM). Skin temperature and deformities of foot can also be checked. Even Audio Doppler can be accommodated in the pocket and Ankle Brachial Index (ABI) can be calculated [Figure.7].



Figure 7: Hand held Audio-doppler



Figure 8: Doctor's Chamber with Samadhan Foot Stand

While patient accommodates his foot in the foot stand, Biothesiometry can also be conducted.

2.The same foot stand might be used for minor surgical interventions too such as ablation of a corn or callus. Full nail care can be rendered while foot is placed in the foot stand.

3.Even dressings can be undertaken while foot is in the foot stand.

4.Even photography of the foot lesions is very convenient while foot is placed in the foot stand.

5.Interestingly, foot stand might be placed in the physician's

chamber anywhere since it occupies little space.

Foot Stand versus Regular Podiatric chair:

1.Foot Stand is very economical compared to a podiatric chair.

2.Foot Stand occupies very small space and can be kept in any chamber while podiatric chair is installed and cannot be shifted from one place to another easily.

3.Being economical foot stand can be placed in many rooms.

4.Price of a foot stand is barely 8 USD while a podiatric chair costs thousands of USDs

Thus, to say that Foot Stand is basic research which is capable of making a sea change in the podiatric care globally.

References:

1. International Diabetes Federation. (2013). Diabetes Atlas. sixth ed. Brussels: International Diabetes Federation.
2. Cavanagh P, Attinger C, Abbas Z, Bal A, Rojas N, Xu ZR. (2012). Cost of treating diabetic foot ulcers in five different countries. *Diabetes Metab Res Rev.* 28(1):107-111

3. Singh N, Armstrong DG, Lipsky BA. (2005). Preventing foot ulcers in patients with diabetes. J Am Med Assoc.293(2):217-228.
4. Cawich SO, Islam S, Hariharan S, Harnarayan P, Budhooram S, Ramsewak S, et al. (2014). The economic impact of hospitalization for diabetic foot infections in a Caribbean nation. Perm J.18(1):101-104.
5. Boulton AJM, Vileikyte L, Ragnarson- Tennvall G, et al. (2005). The global burden of diabetic foot disease. Lancet; 366: 1719-1724.
6. Shankhdhar, K., Shankhdhar, L.K., Shankhdhar, U. et al. (2008). Diabetic foot problems in India: An overview and potential simple approaches in a developing country. Current Diabetes Reports 8: 452-457.
7. Shankhdhar K. (2006). Improvisation Is the Key to Success: The Samadhan System. Advances in Skin & Wound Care



This work is licensed under Creative Commons Attribution 4.0 License

To Submit Your Article Click Here:

Submit Manuscript

DOI:10.31579/2766-2314/168

Ready to submit your research? Choose Auctores and benefit from:

- fast, convenient online submission
- rigorous peer review by experienced research in your field
- rapid publication on acceptance
- authors retain copyrights
- unique DOI for all articles
- immediate, unrestricted online access

At Auctores, research is always in progress.

Learn more <https://www.auctoresonline.org/journals/biotechnology-and-bioprocessing>