

Integrative Medicine

Evidence-based summaries and critical reviews on
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[ALERT]

DIVERSITY

SHORT REPORT

Creating Healing Environments: Band-Aids and Beyond

By Nancy Selfridge, MD

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Dr. Selfridge reports no financial relationships relevant to this field of study.

SYNOPSIS: Because normative messages affecting diversity and inclusion are conveyed by the application of a bandage and its color, healers are called to offer and employ newly available adhesive bandages in a multitude of skin tones.

SOURCE: Oyesiku LO. A plea for making brown bandages stick. *Pediatr Dermatol* 2020;00:1-3.

At the heart of integrative medicine is the concept of optimal healing environments that “surround the individual with elements that facilitate the innate healing process,” including not only a therapeutic relationship with an empathic and compassionate care provider, but also a healing space for context of care.¹

In this eloquent essay, Dr. Oyesiku shares her childhood experience as a person of color, using a brown marker to recolor a “flesh-toned” Band-Aid after a doctor visit. She details the history of adhesive bandages and the failed attempts by various manufacturers (Soul-Aid in the 1970s, Ebon-Aide in 1998, BandShade in 2005, and

Nuditone, Browndages, and Urban Armor more recently) to market and distribute their multiple skin tone products. Finally, the author encourages dermatologists to “step away from this normative cue” of beige-colored bandages and “decolonize healing spaces with a simple yet powerful gesture that shows patients they are seen and not deviations from the norm.”

The Twitter communication by a 45-year-old man of color that was featured on international news, detailing his profound emotional reaction to having a Tru-Color brand (founded in 2014, widely available in United States by 2018) adhesive bandage in his own skin tone, underscores her entreaty.²

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[INSIDE]

A Proinflammatory Diet's Association
with Inflammatory Bowel Disease

page 2

A Prescription for Volunteering

page 5

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Summary Point

- Multiple common “props” in our practice settings can create inclusive or alienating messages for patients. They deserve thoughtful attention and change toward creation of an optimum healing environment.

Indeed, if we think about this in broader terms of all of the therapeutic wraps and bandages we commonly apply in primary care (athletic tape, elastic bandages, splints, braces, graduated compression stockings, etc.), as well as the “props” we have in our practice settings (posters, charts, models, etc.) to support patient education and wellness, we have a very long way to go toward equity in healing. As a manifestation of commitment to optimum healing environ-

ments, clinicians are encouraged to employ therapeutic products that support diversity and inclusion whenever possible — and to advocate for product development toward the same. ■

REFERENCES

- Rakel D, Sakellaris B, Jonas W. Chapter 2: Creating Optimal Healing Environments. In: *Integrative Medicine*. 4th ed. Elsevier; 2018.
- Should the colour of plasters match skin tones? BBC News. Published April 25, 2019. <https://www.bbc.com/news/48060767>

DIET

ABSTRACT & COMMENTARY

A Proinflammatory Diet’s Association with Inflammatory Bowel Disease

By Ghazaleh Barghgir, MD, and Nancy Selfridge, MD

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Dr. Barghgir and Dr. Selfridge report no financial relationships relevant to this field of study.

SYNOPSIS: An analysis of data from three large prospective cohort studies revealed a proinflammatory diet as a risk factor for incident Crohn's disease, but not for ulcerative colitis.

SOURCE: Lo C-H, Lochhead P, Khalili H, et al. Dietary inflammatory potential and risk of Crohn's disease and ulcerative colitis. *Gastroenterology* 2020;159:873-883.

Ulcerative colitis (UC) and Crohn's disease (CD) are the most common chronic inflammatory bowel diseases (IBD) worldwide. Patients with these diseases experience decreased quality of life, significant potential for complications, and high rates of hospitalization during symptom flares.

The public health effect of these diseases is profound. In 1999, there were 1.8 million Americans with IBD, increasing to 3.1 million (approximately 1.3% of the U.S. population) by 2015.¹ The direct costs of

hospitalizations alone were estimated to exceed \$6.8 billion in 2008.²

Although the precise pathogenesis of IBD is not completely understood, it is believed that many risk factors play a role, including diet and other environmental factors, immunologic factors, infectious agents, genetic susceptibility, and alterations in the gut microbiome.

Recently, more than 200 genes have been identified that may increase the risk of

Summary Points

- Dietary proinflammatory potential can be identified by an empiric dietary inflammatory pattern score that correlates consumption of distinct food groups with circulating blood markers of inflammation.
- Dietary patterns associated with higher proinflammatory scores included higher consumption of red meat and refined grains and low consumption of dietary fiber.
- A shift from a lower- to a higher-inflammatory diet and a persistently proinflammatory diet both were associated with a significant risk of Crohn's disease, but not of ulcerative colitis.

IBD. However, that would account for only a modest proportion of the disease variance (~13% for CD, ~7% for UC).³ Given that only a small percentage of cases can be linked to genetic factors alone, the substantial increase in the incidence of IBD in the past few decades points to changing environmental factors, primarily diet, as a potential significant risk.

The standard American diet or Western diet pattern, characterized by low consumption of fruits and vegetables and a high consumption of saturated fat, red meat, refined grains, and processed foods, has been shown to be proinflammatory.²

For example, red meat's role in gut inflammation has been linked to the generation of potentially toxic substances, such as ammonia, amines, and heme, contained in meat products.⁴ Changes in the gut microbiome, altering the homeostasis of the host, and altering T-cell responses are some of the proposed mechanisms by which diet either can worsen or mitigate intestinal inflammation.⁵ Thus, given the potential importance of diet in modulating intestinal inflammation, Lo et al investigated associations between dietary proinflammatory potential, as indicated by empirical dietary inflammatory pattern (EDIP) score, and then associated dietary proinflammatory potential with incident ulcerative colitis and Crohn's disease.

Data was collected from the following three large prospective cohort studies:

- Nurses' Health Study (NHS), 1984-2014 (121,700 female nurses aged 35-50 years);
- Nurses' Health Study II (NHS II), 1991-2015 (116,429 female nurses aged 25-42 years); and
- Health Professional Follow-up Study (HPFS) 1986-2012, (51,529 male health professionals aged 40-75 years).

In all three cohorts, questionnaires were completed by participants upon enrollment, and follow-up questionnaires were completed every two years thereafter to gather longitudinal information about various lifestyle factors, medications, and diet. A validated semiquantitative food frequency questionnaire (FFQ) was used to gather dietary information beginning in 1980, 1991,

and 1986 in the NHS, NHS II, and HPFS, respectively, and was updated every two to four years.

Lo et al used EDIP scores, previously developed in the NHS study and validated in NHS II and HPFS, as well as the Women's Health Initiative, to identify associations between consumption patterns of 39 predefined food groups most predictive of elevations of three plasma inflammatory markers: tumor necrosis factor- α receptor 2 (TNF- α R2), interleukin 6 (IL-6), and C-reactive protein (CRP).⁶

An EDIP score was determined for subject dietary patterns at each data collection, weight-based on 18 of the 39 food groups. The mean daily intake of each group was first divided by a predetermined portion size, then multiplied by a specific inflammatory coefficient derived for that group based upon its previously demonstrated potential to increase plasma inflammatory markers. The final values were then rescaled by dividing by 1,000 to simplify their interpretation, with higher scores representing proinflammatory diets and lower ones indicating anti-inflammatory diets. Food groups associated with higher and lower EDIP scores are shown in Table 1.⁶

Permission to review medical records was obtained from any participants ever diagnosed with UC or CD. Two board-certified gastroenterologists, blinded to the study outcome and subject exposure status, independently reviewed medical records and verified disease status using standardized criteria. Participants who had been diagnosed with CD, UC, or cancer (except for nonmelanoma skin cancer) at the start of follow-up, or who reported calorie intakes of < 600 or > 3,500 kcal/day for women and < 800 or > 4,200 kcal/day for men, were excluded from the study.

Cox proportional hazards models were used to estimate hazard ratios and 95% confidence intervals (CIs), adjusting for age and multiple potential IBD risk factor variables in the collected data. Those variables included race, smoking status, regular nonsteroidal anti-inflammatory drug use, body mass index (BMI), physical activity, oral contraceptive use, and hormone replacement therapy use. The primary outcome of interest was the

Table 1. Food Group Associations with EDIP Scores

Foods Associated with High EDIP Scores*	Foods Associated with Low EDIP Scores**
<ul style="list-style-type: none">• Processed meat• Red meat• Organ meat• Seafood and fish (other than dark-meat fish)• Vegetables other than leafy green vegetables and dark yellow vegetables• Refined grains• High-energy beverages (cola, sugar-sweetened carbonated beverages, fruit drinks)• Low-energy beverages (low-energy carbonated beverages/cola)• Tomatoes	<ul style="list-style-type: none">• Beer (one bottle)• Wine (4 oz)• Tea (1 cup)• Coffee (1 cup)• Dark yellow vegetables (carrots, yellow squash, sweet potatoes, yams)• Leafy green vegetables (spinach, romaine lettuce, head lettuce, leaf lettuce)• Fruit juice (small glass)• Pizza (two slices)• Snacks (1 oz of popcorn, potato chips, crackers)

EDIP: empiric dietary inflammatory pattern

* Food groups positively associated with inflammatory marker concentrations

**Food groups inversely associated with inflammatory marker concentrations

risk of developing CD and UC, and the main exposure was the EDIP score, which was expressed as a cumulative average score from baseline. Change in dietary inflammatory potential over time (measured by changes in EDIP score tertile) and subsequent risk of developing IBD also were explored by using participants maintaining the lowest persistent EDIP scores as the reference group.

Ultimately, this study included an analysis of data from 166,903 female and 41,931 male participants, accounting for 4,949,938 person-years of follow-up. CD cases totaled 328, and UC cases totaled 428, with incidence rates of 6.6 and 8.6 per 100,000 person-years, respectively, and with median age/age-range of diagnosis 55 years (range, 29-85 years). Higher EDIP scores were associated with high BMI and lower physical activity, and a dietary pattern of higher red meat and lower dietary fiber intake was shown to be more proinflammatory.

Subjects with the highest quartile of EDIP scores had a 51% significantly higher risk of CD (hazard ratio [HR] of 1.51 [95% CI, 1.10-2.07]) with an incidence of 8.7 per 100,000 person-years, compared to an incidence of 5.8 per 100,000 person-years in the lowest EDIP score quartile.

Results were subsequently adjusted for dietary intake of fiber. No significant differences were found, suggesting that difference in dietary fiber intake alone is

unlikely to be responsible for the association (HR for fourth quartile vs. first quartile 1.10 [95% CI, 0.83-1.46]; P_{trend} 0.44).

Comparing subjects who maintained the lowest EDIP scores over time to those whose EDIP scores changed from the lowest to the highest tertiles, the latter group experienced a significantly higher incidence of CD (HR 2.05 [95% CI, 1.10-3.79]), amounting to a two-fold increase in incident CD risk. Dietary shift from the highest inflammatory potential to the lowest inflammatory potential over time was associated with risk of CD that was not statistically different than maintaining a low inflammatory diet (HR 1.50 [95% CI, 0.76-2.98]). Of interest, no statistical association between EDIP score and incident ulcerative colitis was noted in any analyses. A summary of these results can be found in Table 2.

■ COMMENTARY

This analysis of pooled longitudinal cohort data has several strengths, resulting in significant contributions to previous research exploring dietary patterns and risk of incident IBD. The study's use of validated FFQs to arrive at EDIP scores allowed for an elegant way of stratifying dietary proinflammatory potential, linked to actual plasma inflammatory markers. The study's statistical analyses adjusted for multiple IBD risk factor variables in subjects, which helped strengthen confidence in the observed associations between diet patterns and incident IBD.

In multiple studies, dietary fiber intake has been shown to be inversely associated with incident CD; this study showed the association between lower EDIP scores and lower risk of incident CD is not solely because of dietary fiber. Another study strength is the analysis of IBD risk associated with changes in dietary inflammatory potential over time, clearly indicating that changing from a lower inflammatory diet to a higher inflammatory diet increases the statistical risk of incident CD.

Although epidemiologic studies have demonstrated a link between red meat intake (which also would increase dietary inflammatory potential and EDIP score) and UC, this study did not find an association between diet and incident UC. The authors hypothesize that intestinal luminal content involving the microbiome or metabolites may be more relevant in the pathophysiology of CD, and systemic factors involving immunologic or epithelial barrier defects may be more relevant in the development of UC.

The health benefits of including more plant-based food in the standard American diet are heavily supported in research literature. This study data supports an additional dietary recommendation to reduce consumption

Table 2. EDIP Score Trends and the Risk of Crohn's Disease and Ulcerative Colitis

Eight-Year Change Trend in EDIP*	Crohn's Disease		Ulcerative Colitis	
	Number of Cases	Multivariable-adjusted HR (95% CI)	Number of Cases	Multivariable-adjusted HR (95% CI)
Low-low	29	1 (reference)	52	1 (reference)
Low-moderate	22	1.34 (0.77-2.35)	29	0.99 (0.63-1.57)
Low-high	16	2.02 (1.09-3.75)	14	1.02 (0.56-1.86)
Moderate-low	16	1.13 (0.61-2.10)	19	0.67 (0.39-1.14)
Moderate-moderate	21	1.01 (0.57-1.79)	29	0.80 (0.51-1.28)
Moderate-high	20	1.34 (0.75-2.39)	19	0.73 (0.43-1.24)
High-low	12	1.50 (0.76-2.98)	11	0.72 (0.37-1.39)
High-moderate	19	1.34 (0.74-2.42)	25	1.00 (0.61-1.64)
High-high	50	1.72 (1.07-2.78)	44	0.91 (0.60-1.38)

EDIP: empiric dietary inflammatory pattern; HR: hazard ratio; CI: confidence interval

*The eight-year change in EDIP score was calculated by subtracting baseline EDIP score from a follow-up EDIP score determined eight years after baseline.

of proinflammatory food groups, including red meat, foods high in saturated fat, refined grains, and most processed and fast foods.

Patients at risk for CD may be advised that higher intake of these foods is associated with an increased risk for this disease. Since these findings suggest that a proinflammatory diet may trigger intestinal inflammation, advising avoidance of such foods may be helpful for disease management for patients with established IBD while awaiting further research evidence to support this specific management recommendation. ■

REFERENCES

1. Dahlhamer JM, Zammitti EP, Ward BW, et al. Prevalence of inflammatory bowel disease among adults aged ≥ 18 Years — United States, 2015. *MMWR Morb Mortal Wkly Rep* 2016;65:1166-1169.

2. Amre DK, D'Souza S, Morgan K, et al. Imbalances in dietary consumption of fatty acids, vegetables, and fruits are associated with risk for Crohn's disease in children. *Am J Gastroenterol* 2007;102:2016-2025.
3. Jostins L, Ripke S, Weersma RK, et al. Host-microbe interactions have shaped the genetic architecture of inflammatory bowel disease. *Nature* 2012;491:119-124.
4. Geypens B, Claus D, Evenepoel P, et al. Influence of dietary protein supplements on the formation of bacterial metabolites in the colon. *Gut* 1997;41:70-76.
5. Manzel A, Muller DN, Hafler DA, et al. Role of "Western diet" in inflammatory autoimmune diseases. *Curr Allergy Asthma Rep* 2014;14:404.
6. Tabung FK, Smith-Warner SA, Chavarro JE, et al. An empirical dietary inflammatory pattern score enhances prediction of circulating inflammatory biomarkers in adults. *J Nutr* 2017;147:1567-1577.

VOLUNTEERING

ABSTRACT & COMMENTARY

A Prescription for Volunteering

By **Ellen Feldman, MD**

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Dr. Feldman reports no financial relationships relevant to this field of study.

SYNOPSIS: This large, observational study of U.S. adults aged older than 50 years found that volunteering ≥ 100 hours yearly is associated with a reduced risk of mortality and several favorable psychosocial outcomes when compared with peers reporting 0 volunteer hours yearly.

SOURCE: Kim ES, Whillans AV, Lee MT, Chen Y. Volunteering and subsequent health and well-being in older adults: An outcome-wide longitudinal approach. *Am J Prev Med* 2020;59:176-186.

Intertwined with history and development in the United States, volunteering dates back to the founding of this country. In 1736, Benjamin Franklin cofounded the first all-volunteer firehouse, which became a model

for communities across the newly formed nation. In the 1800s, the rise of organizations such as the United Way and Red Cross helped expand the reach of volunteer services. Although the rate of volunteering has waxed

and waned over the subsequent years, a record high was recorded in 2017, with more than 77 million adults reporting 9.9 billion hours dedicated to volunteering in the United States.¹

Volunteering has benefits beyond contributing to the health of a community. Many medical studies have shown a link between volunteering and improved personal health measures, but such studies have been inconsistent in methodology and conclusions. Thus, definitive statements regarding this relationship have remained elusive.²

Kim et al approached this problem by narrowly defining the scope of work to an observational study with a specific age group and period of time. Using the data from the Health and Retirement Study (HRS), a longitudinal study beginning in 1992 and encompassing a nationally representative group of people older than age 55 years, enabled a large number of diverse participants.³ HRS participants are surveyed in staggered groups of four years regarding a variety of psychosocial and health measures. For the purposes of this study, respondents in the years 2006 and 2008 were considered “prebaseline”; data from this wave were used to establish covariates, such as gender, age, marital status, household income, geographical location, and education.

In 2010 and 2012, HRS respondents were asked about volunteer hours. These were divided into four quartiles from 0 hours to ≥ 100 hours (or two hours/week). In 2014 and 2016, Kim et al evaluated 34 participant health outcomes, including mortality, number of chronic conditions, obesity, diabetes, hypertension, stroke, cancer, physical function limitations, health behaviors (binge drinking, smoking, sleep problems), psychological well-being and/or distress, and social factors. These outcomes were compared across the volunteer quartile categories.

Using an innovative statistical analytic approach, and controlling for a number of factors, including levels of volunteering during the prebaseline period, Kim et al described being able to isolate the effect of change in volunteer hours on each of these outcomes. The demographics at prebaseline included a group of 12,998 participants with an average age of 66 years. Of the participants, 59% were women and 66% were married. When comparing health outcomes during the four-year follow-up period, and controlling for multiple variables, the results of the group reporting ≥ 100 volunteer hours yearly vs. those who reported 0 hours of volunteer work showed significant differences in the following measures:

- 44% reduced risk of mortality (95% confidence interval [CI], 0.44 -0.71); $P < 0.05$

- 86% greater health self-rating (95% CI, 0.08-0.19); $P < 0.05$
- 87% higher reporting of positive affect (95% CI, 0.08-0.19); $P < 0.05$
- 89% higher purpose in life (95% CI, 0.05-0.16); $P < 0.05$
- 29% less likely to describe loss of contact with friends (95% CI, 0.62-0.80); $P < 0.05$

Several other measures (e.g., an increased likelihood of frequent physical activity, lower depressive symptoms, lower loneliness, and lower hopelessness) in the group reporting ≥ 100 hours volunteering yearly vs. those reporting 0 hours volunteering yearly appeared to be significantly different. However, these differences were no longer significant after applying the Bonferroni correction, a statistical calculation that, in effect, raises the bar on significance when analyzing a sample with multiple comparisons.⁴

There were no noticeable differences between the two groups in development of the remaining health outcomes, including the number of chronic conditions, obesity, cognitive impairment, chronic pain, sleep problems, binge drinking, life satisfaction, and negative affect.

■ COMMENTARY

Lifespan is increasing in the United States as the baby boomer generation of the 1950s drives a population explosion of older Americans at an unprecedented rate. In 2018, there were 52 million Americans older than age 65 years; by 2060, this number is projected to reach 95 million, representing a shift from 16% to 23% of the total U.S. population.⁵ Kim et al, looking specifically at this demographic, brings us important information—not only about volunteering and health outcomes, but also about potential preventive health interventions for these older Americans.

This is not the first study looking at the health benefits of volunteering, but it is unique in its design, scope, and focus on a specific age group. Past observational studies have suggested there are health benefits associated with volunteering, including a reduced risk of hypertension, cardiovascular disease, and cognitive impairment, but causality has been hard to confirm. Furthermore, with small numbers of participants and homogenous populations, generalization of results has been difficult.^{6,7}

Interestingly, results from Kim et al show a significant association with volunteering for more than 100 hours yearly and reduced mortality, but they do not show any association between this frequency of volunteering and at least 10 other physical health outcomes and numerous health behaviors. Similarly, there appears to be an association with perception of good health and positive

Summary Points

- This observational study utilized data from 12,998 respondents from the Health and Retirement Study (a periodic survey of more than 20,000 nationally representative adults aged older than 50 years) to investigate changes in volunteering and its association with any of 34 indicators of physical and emotional health.
- At baseline from 2006 to 2008, psychosocial and medical factors were collected via self-report. Participation in volunteer hours was assessed four years later, and in the subsequent four years, the 34 health outcomes were examined.
- When controlled for multiple variables and compared with 0 hours volunteering yearly, participants who volunteered ≥ 100 hours/year had a significant difference in decreased risk of mortality, better self-rated health status, positive affect, purpose in life, and contact with friends.
- When controlled for multiple variables and compared with 0 hours volunteering yearly, participants who volunteered ≥ 100 hours/year had no significant difference in other health outcomes, including number of chronic conditions, obesity, chronic pain, binge drinking, smoking, sleep problems, and contact with children.

affect for those volunteering for more than 100 hours yearly, but there is no clear association with reduced symptoms of depression.

These results are somewhat puzzling, appear counterintuitive, and may point to a direction for future research in this field. It may be that people who feel healthy are more likely to volunteer, but it also may be that the full scope of health benefits of volunteering is unable to be captured by these traditional measures. Perhaps the most glaring limitation of the study is the reliance on self-reported data, including not only hours volunteering, but also many of the health outcomes. A more objective manner of measurement may strengthen, and perhaps clarify, the conclusions. Additionally, a narrow definition of “volunteering,” rather than the broad term used in most studies, may help reduce discrepancies among study results.

However, even with the stated limitations and areas of uncertainty, there are clear clinical implications from this research. A diverse, nationally representative sampling of Americans aged older than 55 years showed that volunteering for at least two hours a week

is associated with less mortality, better self-rated health, positive affect, a perception of more purpose in life, and greater contact with friends than matched peers who reported no volunteer hours. This health message is straightforward and can become a building block in an overall plan for addressing health and wellness during aging. ■

REFERENCES

1. Corporation for National and Community Service. *Volunteer Growth in America: A Review of Trends Since 1974*. Washington, D.C.; 2006.
2. Yeung JWK, Zhang Z, Kim TY. Volunteering and health benefits in general adults: Cumulative effects and forms. (Published correction appears in *BMC Public Health* 2017;17:736.) *BMC Public Health* 2017;18:8.
3. The Health and Retirement Study Survey Research Center. The health and retirement study. The University of Michigan. <https://hrs.isr.umich.edu/about>
4. Weisstein EW. Bonferroni correction. *MathWorld — A Wolfram Web Resource*. <https://mathworld.wolfram.com/BonferroniCorrection.html>
5. Mather M, Scommegna P, Kilduff L. Fact sheet: Aging in the United States. PRB. July 15, 2019. <https://www.prb.org/aging-unitedstates-fact-sheet/>
6. Burr JA, Han SH, Tavares JL. Volunteering and cardiovascular disease risk: Does helping others get “under the skin?” *Gerontologist* 2016;56: 937-947.
7. Infurna FJ, Okun MA, Grimm KJ. Volunteering is associated with lower risk of cognitive impairment. *J Am Geriatr Soc* 2016;64:2263-2269.



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CME QUESTIONS

1. In the work by Kim et al, volunteering was shown:
 - a. to be associated specific health benefits, including a decrease in alcohol use and an increase in physical activity for adults aged younger than 32 years and adults aged older than 55 years when compared with adults between the ages of 33 and 54 years.
 - b. to be associated with specific health benefits, including a decrease in mortality and better self-perception of health for adults aged older than 55 years.
 - c. to be associated with specific health benefits, including a decrease in mortality and better self-perception of health for men aged older than 55 years, but not for women in that age group.
 - d. to be associated with specific health benefits, including a decrease in alcohol use and an increase in physical activity for men and women aged older than 55 years.
2. Which of the following best describes the incident risk of inflammatory bowel disease associated with a proinflammatory diet in the study by Lo et al?
 - a. Increased risk of Crohn's disease, but not ulcerative colitis
 - b. Increased risk of ulcerative colitis, but not Crohn's disease
 - c. Increased risk of both Crohn's disease and ulcerative colitis
 - d. No increased risk for either Crohn's disease or ulcerative colitis
3. According to the essay by Oyesiku, which of the following best describes the effect of exclusively beige/peach-colored adhesive bandages?
 - a. They make bandaging more obvious on darker skin tones.
 - b. They create a normative cue to patients about skin color.
 - c. They are not aligned with current aesthetic trends.
 - d. They accommodate the largest market of medical consumers.

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