# Article information:

Microstructural considerations for novel lithium disilicate glass ceramics: A review - PubMed
<https://pubmed.ncbi.nlm.nih.gov/34995008/>

# Article summary:

1. Lithium disilicate based glass ceramic is a popular material for indirect restorations in dentistry due to its esthetic and mechanical properties.

2. Novel LDCs have been introduced to the market, but their microstructure and manufacturing process are not widely known, requiring proper guidelines and protocols for successful use.

3. Clinicians and technicians need to be aware of the differences in manufacturing and resulting microstructure of newer LDC materials to ensure a successful treatment outcome that will last.

# Article rating:

May be slightly imbalanced: The article presents the information in a generally reliable way, but there are minor points of consideration that could be explored further or claims that are not fully backed by appropriate evidence. Some perspectives may also be omitted, and you are encouraged to use the research topics section to explore the topic further.

# Article analysis:

作为一篇综述文章，本文对新型锂二硅酸盐基玻璃陶瓷的微观结构特征、制造过程对其结构的影响以及临床应用进行了回顾。文章提到，锂二硅酸盐基玻璃陶瓷已经成功地用于间接修复物超过20年，并且具有其他间接材料所没有的美学和机械性能，因此成为美学和修复牙科不可或缺的一部分。最近，新型锂二硅酸盐基玻璃陶瓷已经推向市场，但其使用参数和微观结构仍未广泛知晓。本文通过高分辨率扫描电子显微镜图像来回顾这些材料，并强调它们的结构方面及其结果的临床相关性。

从整体上看，本文内容比较客观、中立，没有明显偏见或宣传内容。但是，在具体内容方面还存在一些问题：

1. 文章提到“novel LDCs machinable blocks should be crystallized or heat-treated after milling for superior performance”，但并未给出充分证据支持这个主张。

2. 文章提到“Restorations made from LDCs are reliable and can be predictably used only when proper guidelines and protocols during manufacturing and clinical use are followed”，但并未详细说明这些指南和协议是什么，也没有提供相关的参考文献。

3. 文章提到“With more and newer etchable LDC materials entering the market, clinicians and technicians need to be aware of the differences in manufacturing and the resulting microstructure to ensure a successful treatment outcome that will last”，但并未探讨这些新材料可能带来的风险和挑战，也没有平等地呈现双方的观点。

因此，本文在一些具体内容方面还存在改进的空间。

# Topics for further research:

* Evidence for crystallization or heat treatment of LDCs machinable blocks
* Guidelines and protocols for manufacturing and clinical use of LDCs
* Risks and challenges of newer etchable LDC materials
* Comparison of LDCs with other indirect restorative materials
* Long-term clinical outcomes of LDC restorations
* Future directions for research and development of LDCs

# Report location:

<https://www.fullpicture.app/item/fffb9fa8629d3fba451db9320fb9279c>